

Edited by
Karl A.E. Enenkel
Paul J. Smith

Early Modern Zoology

The Construction of Animals
in Science, Literature and the Visual Arts



~~Intersections~~

Yearbook
for Early
Modern
Studies

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BRILL

Early Modern Zoology

Intersections

Yearbook for Early Modern Studies

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INTRODUCTION

Karl A.E. Enenkel – Paul J. Smith

Early modern zoology

‘The cervix of the lion does not consist of cervical vertebrae, but of a single bone’, states Conrad Gesner in his *Historia animalium*, volume I, of 1551, when investigating the intriguing anatomy of the mammals. This short remark contains in a nutshell the dazzling complexity of early modern zoology. It obviously reflects a vivid interest in anatomy, one of the new scientific methods of research which are generally associated with the scientific progress ascribed to the early modern period. This progress is thought to be connected with the replacement of ‘bookish’ knowledge with empirical study. But what was the basis of Gesner’s anatomy of the lion? The lion was present in quite a number of 16th-century menageries – did Gesner, who was a medical doctor and a zoologist at the same time, dissect a lion? Or, did he eventually use the dissection reports of others?

The invention of zoology is only one of the fascinating features that the re-definition of the animal and animal species in the early modern period brought about. The discovery of the new world confronted intellectuals with surprising and hitherto unknown species, which challenged the existing systems of animal classification. By the expeditions into the New World, new information was gathered about a strange and exotic fauna. Exotic and European wild animals, as well, were brought together in new places of knowledge – e.g. courtly menageries, curiosity cabinets or academic collections. Artistic progress in the visual arts offered new options for animal description, which were reinforced by the printing press and the reproduction of identical graphic illustrations and their dissemination among larger audiences.

To us, these features may seem very familiar. They suggest close connections between the early modern and modern periods. Nowadays, zoology, as a main branche of biology, is totally established in the system of sciences. Modern zoology is based on empirical methods

and furnished with highly developed technical means. By these means, zoology participates in the spectacular progress modern science achieves almost on a daily basis. Furthermore, a large popular interest in zoology exists. Books on animals and animal encyclopedias, both enriched with attractive illustrations, belong to the stock of general book stores. Zoos are spread all over the world and form an indispensable part of the modern entertainment sector. Animal films are popular to a degree that television stations came into being which are exclusively dedicated to nature programmes.

Nevertheless, these striking familiarities may be highly deceptive. It is not a given fact that modern zoology did indeed develop from its early modern counterpart. Its general aims, interests, research methods, organisation of knowledge etc. may differ fundamentally. It seems questionable, for instance, whether its scope was identical. Modern zoology, for example, studies animals for their own sake, and it pays much attention to the endangered status of many species. It has become clear that the animals' most dangerous enemy is man, who rules all over the world. Early modern zoology shows a completely different approach: it departs from the dogma that man has the full right to exploit animals – that their only *raison d'être* is that they serve man, providing food, clothes, means of transport, medicines, entertainment and so on. Furthermore, in early modern zoology one may detect a vivid interest in classification which at first sight seems to be similar to the modern science's approach – but are the principles of classification compatible? As a result of Darwin's evolutionary theory, the understanding of classification has changed profoundly. In addition, it is not clear whether early modern anatomy and physiology, especially their methods and organisation of knowledge, really correspond to their modern counterparts.

In the last decades, an increasing interest in the history of science has come into being, which also affects biology. The history of biology has been the scope of a number of larger projects, e.g. Ilse Jahn's *Geschichte der Biologie*¹ (first edition 1982) or Anne Bäumers² (1991) and Ch. Hünemörder's³ works with the same title. Erik Jorink has researched the approach to nature by Dutch scholars and scientists 1575–1715

¹ Hamburg: 2004 (following the second, corrected special issuing Heidelberg – Berlin: 2002 of the third edition Jena: 1998).

² Frankfurt a.M.: 1991.

³ Stuttgart: 1985.

(2006).⁴ Paula Findlen has analysed the representation of ‘nature’ in early modern collections (1994).⁵

In the studies on the history of biology, botany has received considerably more attention than zoology. In his recent monograph, *The Science of Describing. Natural History in Renaissance Europe* (2006), which is almost entirely dedicated to botany, Brian Ogilvy ascribes this emphasis to the ‘preeminence of botany’ over early modern zoology: ‘My periodization has focussed on botany, the chief focus of natural history in the Renaissance. [...] In fact, zoology generally lagged behind botany in the Renaissance; developments that occurred in botany often took a decade or two to appear in zoology’.⁶

Nevertheless, it does not seem adequate to consider early modern zoology only as a kind of appendix to early modern botany. Zoology deals with different topics and the early modern zoologist struggled with problems, difficulties and challenges that differ considerably from the botanist’s. Animals are more complex organisms than plants and they are much more difficult to be analysed and observed. Their mobility and their tendency to hide make observation complicated, to say the least. Their much more complex interior organisation requires advanced research methods, e.g. on the fields of anatomy and physiology. It is also very tricky to captivate and keep animals, especially in the case of exotic and higher organised species. In captivity, they often show a different and atypical behaviour. Empirical anatomy and physiology were comparatively new research interests that required special technical understanding and skills. Just how difficult the understanding of the processes of life was is illustrated by the fact that e.g. the circulation of blood was discovered not earlier than in 1628, by William Harvey.⁷

Already from this small number of arguments it seems rewarding to pay separate attention to zoology. The second volume of Anne Bäumer’s *Geschichte der Biologie*, which offers a first description of the

⁴ Jorink E., *Het Boek der Natuere. Nederlandse geleerden en de wonderen van Gods schepping 1575–1715* (Leiden: 2006).

⁵ Findlen P., *Possessing Nature. Museums, collecting, and scientific culture in early modern Italy* (Berkeley: 1994).

⁶ Ogilvie B., *The Science of Describing. Natural History in Renaissance Europe* (Chicago – London: 2006) 49.

⁷ *Exercitatio anatomica de motu cordis et sanguinis in animalibus* (Frankfurt, G. Fitzer: 1628).

zoological treatises of the ‘Renaissance’, is a pioneering publication in the field.⁸

The editors would like to make clear that the present publication does not have the slightest ambition to compete with this compendium, or the related parts in other compendia, let alone to replace them. It does, however, have the intention to highlight other aspects, to focus attention on different tendencies, to shed light on certain intriguing details and to investigate early modern zoology in connection with the use of animals in various fields, theory and practice alike, such as hunting, horsemanship, veterinary medicine, courtly life, jurisdiction, literature and the visual arts. These aspects are studied by Suzanne Walker, Pia Cuneo, Louise Hill Curth, Annemarie Jordan-Gschwend and Almudena Pérez de Tudela, Susanne Hehenberger, Johan Koppenol, Franziska Schnoor, Vincent Buyens, Paulette Choné and Sarah Cohen. Various aspects of the science of zoology are investigated by Karl Enenkel, Paul Smith, Vibeke Roggen, Erik Jorink, Karin Leonhard, Thea Vignau-Wilberg, Florike Egmond and Rebecca Parker Brienen. The last three articles focus on a specific part of the science, the zoological illustration.

If one looks at general tendencies and methods of approach, the studies in this volume differ in important points from previous works. Ever since Boas’s *The Scientific Renaissance 1450–1630*⁹ there has been a general tendency to interpret the achievements of early modern science in a teleological way, viz. as forerunners of modern science. Many a time, the attention was focused in a one-sided way on aspects that could be used to demonstrate the scientific progress or, vice versa, the failure to effectuate scientific progress.

With this respect, the history of zoology is no exception. The teleological approach is prominently present in Anne Bäumer’s *Geschichte der Biologie*. In general, she interprets the early modern zoologists as forerunners of their modern counterparts. She states that ‘die Entwicklung der modernen zoologischen Disziplinen’ ‘nimmt in der humanistischen Zoologie ihren Anfang’.¹⁰ The ‘bewusste Rückbesinnung auf antike methodische Ansätze’ directly leads to scientific progress, among others to the differentiation of the ‘zoologischen Spezialgebiete

⁸ *Zoologie der Renaissance – Renaissance der Zoologie*, in eadem, *Geschichte der Biologie*, vol. 2 (Frankfurt a.M. – Bern – New York – Paris: 1991).

⁹ (New York: 1962).

¹⁰ Cf. her own summary of her monograph in “Zoologie der Renaissance – Renaissance der Zoologie”, in Döring K. – Wöhrle G. (eds.), *Antike Naturwissenschaft und ihre Rezeption*, Bd. I und II (Bamberg: 1992) (275–295) 279.

Embryologie, Physiologie, Vergleichende Anatomie'.¹¹ In her opinion, the early modern zoological compendia (Pierre Gilles, Michael Herr, Adam Lonitzer, Edward Wotton, Conrad Gesner etc.) 'wiesen in ihren methodischen Ansätzen der zukünftigen Forschung den Weg'.¹² Their attention for anatomy provided the 'entscheidende Kriterien zur Einteilung (classification) der Tiere [...]. Damit waren alle Ansätze für eine adäquate Behandlung des Tierreichs gegeben, die neuzeitliche Zoologie war begründet'.¹³ Bäumer identifies Renaissance zoology with the early modern scientific revolution: 'Die Renaissance der zoologischen Forschung ist hier gleichzusetzen mit dem, was man gemeinhin als wissenschaftliche Revolution bezeichnet'.¹⁴

Progress, however, although one of the best accepted dogmas of modern science, is not an adequate tool for the understanding of the functioning and organisation of *early modern* science. The authors of this volume, therefore, do not depart from a teleological conception of the history of science. They make an effort to investigate the various discourses in which animals are discussed in zoological treatises and other genres of literature and art. Their approach is characterised by awareness that these discourses may differ fundamentally from modern ones, and that they are connected to specific historical contexts, interests, needs, and literary, theological, philosophical and artistic traditions. If one carefully studies these parameters, a rich and complex picture of early modern zoology appears, with a broad spectrum of varieties and differentiations. It is a sparkling and intriguing picture, which is characterized above all by *its striking alterity and discontinuity from modern science*.

The authors of this volume do not think that in early modern zoology there is a clear chronological development from bookish to empirical knowledge, from "traditional" to "objective" description, from symbolical to "realistic" illustration etc. Various methods of animal description may occur at the same time or in "reverse" order. Most important are the specific historical contexts, interests, needs and the literary, theological, philosophical and artistic discourses. By investigating within those discourses and contexts, it appears that early modern men did not so

¹¹ Ibidem.

¹² Ibidem 280.

¹³ Ibidem.

¹⁴ Ibidem 285.

much objectively describe or depict animals; rather, they *construct* animals according to the above mentioned parameters.

Karl Enenkel analyses the discourses in which the mammals were constructed in two most important zoological compendia, Edward Wotton's *De differentiis animalium* and Gesners *Historia animalium*, volume I, with special reference to the species *Panthera leo*; Paul Smith investigates the remarkable descriptions of the exotic toucans and hornbills, which appear to be based to a much higher degree on intertextuality than one may suppose at first sight. Erik Jorink demonstrates that "advanced" microscopical research and "traditional" emblematic understanding of insects existed side by side, at the same time and sometimes by the same person. Suzanne Walker investigates the puzzling construction viz. deconstruction of the stag in early modern hunting treatises such as Jacques du Fouilloux's *La Vénerie* or George Gascoigne's *The Noble Art of Venerie or Hunting*. Pia Cuneo shows how a "traditional" animal like the horse was fundamentally re-constructed in early modern German theory and practice. Karin Leonhard demonstrates in which way the knowledge of shells was organized in early modern curiosity cabinets and chonological treatises. Almudena Pérez de Tudela and Annemarie Jordan Gschwend shed light on the role exotic animals played at the Habsburg courts of Iberia and central Europe.

In general, the editors have made an effort to have represented in this volume the most important categories of animals. *Mammals* are treated in the studies of Karl Enenkel, Rebecca Brienens, Suzanne Walker, Pia Cuneo, Louise Hill Curth, Johan Koppenol, Franziska Schnoor, Sarah Cohen and Vincent Buyens; *birds* by Paul Smith, Vibeke Roggen, Rebecca Brienens, Johan Koppenol and Vincent Buyens; *fishes* by Florike Egmond; *insects* by Erik Jorink and Thea Vignau-Wilberg; lower organised animals by Karin Leonhard.

Because of the discovery of the New World it is of course tempting to understand early modern zoology by the descriptions of exotic species. Indeed, in recent publications exotic animals have received much more attention than species from the "Old World". In this collection of essays, however, we tried to find a kind of equilibrium between exotic and traditionally known species. Indigenous animals like the horse (Cuneo, Hill Curth, Koppenol), the cow (Hill Curth, Hehenberger), the crane, swan and beaver (Buyens), the dog, cat, sheep (Koppenol), the deer (Walker, Cohen, Koppenol) get as much attention as exotic species from the New World (Pérez de Tudela – Jordan Gschwend, Smith, Brienens, Koppenol) or the Old World (Enenkel, Koppenol, Leonhard, Smith). It appears that the species of the New World do not offer us a key to

understand the systems of animal classification used in the early modern period. Much more so, the zoological discourses of the early modern period were dominated by the literary tradition of classical antiquity. The authorisation of zoological knowledge by Aristotle, Pliny, Athenaeus and others even in cases in which empirical knowledge *was* available, forms in fact one of the fascinating features of early modern zoology.

Zoology and the arts

Most studies of animals in early modern literature and the visual arts tend to foreground the symbolic significance of the animals represented, neglecting somehow their zoological reality or their natural-historical conceptualisation. An example of this ‘symbolist’ approach is the recently published *Lexikon der Tiersymbole* (2004) by Sigrid and Lothar Dittrich.¹⁵ Although this impressive work does not totally neglect the animals’ reality and early modern reflection on them, its main accent – as indicated by its title – is on their symbolism. Studies that follow a more ‘naturalistic’ perspective, such as Arianne Faber Kolb’s recent monograph on Jan Brueghel’s *Entry of the Animals into Noah’s Ark*,¹⁶ which looks at the painting as ‘a visual catalogue of animals and birds function[ing] as a type of microencyclopedia’,¹⁷ are indeed rare.

The art historical and literary contributions of the present volume of *Intersections* aim to continue along this naturalistic line of approach: how are the zoological reality and early modern reflection on natural history thematised in the literary and visual arts? How are animals de- and re-constructed, as it were, in the arts? This emphasis on the zoological reality and early modern reflection on the natural world comes to the fore in the article by Johan Koppenol on animals in Dutch poetry of the sixteenth and seventeenth centuries. Although Koppenol also deals with the more traditional symbolic and moralising aspects of animals, his main focus is on the seventeenth-century poets’ vision of ‘wild’ and exotic animals and domestic animals in everyday life.

The contributions to the present volume show that the subject of the de- and re-construction of the animal from natural history to the field

¹⁵ Dittrich S. – Dittrich L., *Lexikon der Tiersymbole. Tiere als Sinnbilder in der Malerei des 14.–17. Jahrhunderts* (Petersberg: 2004).

¹⁶ Kolb A.F., *Jan Brueghel the Elder. The Entry of the Animals into Noah’s Ark* (Los Angeles: 2005).

¹⁷ Kolb, *Jan Brueghel* 27.

of the arts is highly problematic. Indeed, literature and painting are so much closely connected with zoology that it is often impossible to arrive at a clear-cut distinction between the fields. This is, for instance, the case – studied by Paul Smith – with the French eighteenth-century zoologist Buffon, *for whom the ideal zoological description is in fact a literary one*, based upon the predominance of style and stylistic variation. The same confusion can be observed with respect to the borderline between zoological illustrations (i.e. illustrations made for a zoological publication) and more ‘artistic’ paintings. In her contribution, Rebecca Brienen shows how Albert Eckhout and Georg Marcgraf, both appointed to document the newly found *exotica* during Johan Maurits’s expedition to Brazil, come up with very different results: Eckhout with highly artistic oil and chalk sketches, Marcgraf with rather flat but precise watercolours that were intended for publication, but did not end up in print as it should be, because of the inadequacy of the anonymous engraver.

These examples show us how important it is to study in detail the interconnections between watercolours, engravings and zoological texts. The general connections between illustrations and texts are more or less known, since for instance the well documented catalogues by Jan Balis, *Van diverse pluimage. Tien eeuwen vogelboeken* (1968) and Laurent Pinon, *Livres de zoologie de la Renaissance* (1995).¹⁸ These interconnections changed with the growing technical perfection of printing and illustrating – from the rather crude and clumsy woodcuts of the beginnings to the refined ones of the second half of the sixteenth century, and their gradual replacement by other techniques: copper engravings (seventeenth century) and lithography (eighteenth century). In this development the zoological discourse leans more and more on the illustration. This growing dependency can even imply a reversal: the illustration becomes more important than the text – a development also visible in other scientific fields, such as medicine and botany.

From a teleological perspective, this development has sometimes had a negative influence on the history of zoology. There are indeed some well-known examples of inaccurate or fictitious illustrations, such as Dürer’s rhinoceros, which is uncritically reproduced in zoological works until the eighteenth century, or the illustration of the sloth, represented

¹⁸ Balis J., *Van diverse pluimage. Tien eeuwen vogelboeken* (Antwerp – The Hague – Brussels: 1968); Pinon L., *Livres de zoologie de la Renaissance. Une anthologie (1450–1700)* (Paris: 1995).

since Thevet's *Singularitez de la France antarctique* (1557), not as climbing or hanging upside-down in a tree, but as standing on its four legs. Other examples, studied in the present volume, are the imaginary toucan that Gesner constructed out of a bill and some incomplete descriptions of the bird he received from his informants, and the strange 'tattooed tuna', a fish with painted ships on its body, studied in detail by Florike Egmond.

All these instances point to the dangers of quick generalisation and the aforementioned 'teleological' perspective. Indeed, from a *non*-teleological perspective, the case of a zoologist like Pierre Belon shows us in his *Histoire de la nature des oyseaux* (1555) the complexity of the problem of intermediation in zoological works. On the one hand, Belon confesses that he is totally dependent on the work of the painters of his watercolours: 'il n'y a description ni portrait d'oyseau en tout cest oeuvre, qui n'est esté devant les yeux des peintres'.¹⁹ On the other hand, the engravings, based on the watercolours, do nothing but confirm the text. According to Philippe Glardon, in his edition of the *Histoire de la nature des oyseaux* 'tout se passe comme si Belon, et le ou les illustreurs [...], conscients de l'incomplétude foncière de leur mode de représentation, éprouvaient le besoin de mettre l'accent sur ce qui est déjà perceptible au niveau du texte, les marques, pour éviter que l'oiseau ne s'échappe du cadre qui lui est assigné'. This explains the conclusion of Belon, which will make a curious and paradoxical impression on the (modern) reader: 'admonestons le Lecteur, qu'il ait plus desgard à la description que luy en baillerons, qu'aux couleurs du peintre, et traicts du tailleur'. In the last instance, for Belon the printed word seems to be superior to the painted or printed image.

The case of Belon argues in favour of more detailed attention to the role of sketches and watercolours in the process of writing and printing. In her contribution, Thea Vignau-Wilberg studies the illustration of insects in the different media of watercolour, painting and print from Dürer to the generation of Joris Hoefnagel, Ulisse Aldrovandi, Thomas Muffet (or Mouffet) and their successors, while Karin Leonard studies with the same precision the interconnections between conchological sketches, printed illustrations and painted still-lives.

This attention is of recent date: one thinks for instance of the beautiful watercolours on which Aldrovandi based his illustrations, preserved

¹⁹ All quotations are from Pierre Belon du Mans, *L'Histoire de la nature des oyseaux. Facsimilé de l'édition de 1555*, ed. P. Glardon (Geneva: 1997), "Introduction" LXXV–LXXVI.

in the form of albums in the Aldrovandi Museum in Bologna and only recently made available in print and on internet.²⁰ Aldrovandi's albums, however, have another function too: they complete his own cabinet of curiosities, because a collection of *naturalia* alone can never do justice to the richness of Nature. Moreover, these albums are intended to document the collection, which is often composed of very transitory zoological material, due to the imperfections of contemporary taxidermy. The album of watercolours can function as a catalogue, as in the case of the watercolours of the Museum of Rudolph II²¹ and the paintings made by Anselmus De Boodt.²² In some instances these catalogues were put into print, as in the cases of Albert Seba (who had all the printed copies coloured by hand) and Ole Worm. In the present volume the contributions of Rebecca Brienen and Florike Egmond deal with the multifunctionality of this kind of album. Florike Egmond studies in detail the *libri picturati* painted in the Southern Netherlands during the 1560s under the patronage of the aristocratic collector Charles de Saint Omer and the 'Fish Books' made by Adriaen Coenen,²³ whereas Rebecca Brienen focuses on the *libri picturati* of Marcgraf and Eckhout.

Another important lacuna which the present volume tries to fill concerns the 'naturalistic' approach to the arts – an approach that is clearly different from more iconographical approaches. This volume does not pretend to cover the subject in its whole breadth, but it does present some interesting case studies, which will certainly stimulate other research in the field. Moreover, our point of departure differs from most other approaches, because we do not focus on the presence and symbolism of one particular animal species in one or more genres (like H.W. Janson's study of apes and ape lore in the arts, or Michael Bath's monograph on the iconography of the stag),²⁴ nor do we provide an

²⁰ Biancastella A. (ed.), *Les animaux et les créatures monstrueuses d'Ulisse Aldrovandi* (Arles: 2005). Also available on Internet: <http://www.filosofia.unibo.it/aldrovandi/default.htm>.

²¹ See Haupt H. – Vignau-Wilberg T. – Irblich E. – Standinger M., *Le Bestiaire de Rodolphe II. Cod. min. 129 et 130 de la Bibliothèque nationale d'Autriche* (Paris: 1990).

²² Maselis M.-C. – Balis A. – Marijnissen R.H., *De albums van Anselmus De Boodt (1550–1632). Geschilderde natuurobservatie aan het Hof van Rudolf II te Praag* (Tiel: 1989).

²³ See also Egmond F. – Mason P. (eds.), *The Whale Book. Whales and other marine animals as described by Adriaen Coenen in 1585* (London: 2003) and Egmond F., *Het Visboek. De wereld volgens Adriaen Coenen 1514–1587* (Zutphen – The Hague: 2005).

²⁴ Janson H.W., *Apes and Ape Lore in the Middle Ages and the Renaissance* (London: 1976); Bath M., *The Image of the Stag. Iconographic Themes in Western Art* (Baden-Baden: 1992).

exhaustive survey of the presence of all of the animals in the work of one particular artist (like Colin Eisler's study of Dürer's animals)²⁵ or author (like Lazare Sainéan's book on the natural history in Rabelais' novels).²⁶ Our starting point lies more in the work or works themselves and in the way they reflect upon animals.

In her contribution Paulette Choné studies the role of 'natural antipathy' in an illustrated architectural treatise by the French architect Joseph Boillot. This treatise deals with the ways in which the descriptive parameter of antipathy (the relationship of enmity between different zoological species, as explained by Gesner in section D of most of his zoological descriptions) can be used in the decoration of architectural orders.²⁷ Vincent Buyens deals with the perception of natural history in Willem van der Borcht's *Sedighe Sinne-beelden* (1642), a Dutch collection of animal emblems that goes back not to the medieval animal allegories, but to a Latin medical encyclopaedia: the *Historia medica* (1639) by the Brussels doctor Willem van den Bossche. Franziska Schnoor studies how knowledge about, and more generally human contact with animals are thematised in collections of proverbs of the fifteenth and sixteenth centuries, and her conclusion is that human relationships confer on the genre of the proverb its *raison d'être*.

One of the surprising new themes presented in two of the contributions to this volume concerns the much discussed hierarchy between man and animal. In his provocative *Apologie de Raymond Sebond*, the French sceptical philosopher Michel de Montaigne problematises the supposed superiority of humans to animals. Humans and animals are much alike: 'il se trouve plus de difference de tel homme à tel homme que de tel animal à tel homme'.²⁸ In this context Montaigne proclaims a certain empathy with animals: 'Quand je me jouë à ma chatte, qui sçait si elle passe son temps de moy plus que je ne fay d'elle?'²⁹ These provocative statements aroused reactions from, among others, Descartes, who considered the animal as a 'beast-machine'. In her contribution

²⁵ Eisler C., *Dürer's Animals* (Washington – London: 1991).

²⁶ Sainéan L., *L'histoire naturelle et les branches connexes dans l'oeuvre de Rabelais* (Paris: 1921).

²⁷ For the use of the same parameter in the work of Jan Brueghel the Elder, see Smith P.J., "Sympathy in Eden. On Rubens's and Brueghel's *Paradise with the Fall of Man*", forthcoming in *Intersections* 9.

²⁸ Michel de Montaigne, *Oeuvres complètes*, eds. Thibaudet A. – Rat M. (Paris: 1962) 444 (*Essais*, Book II, chap. 12).

²⁹ Montaigne, *Oeuvres* 430.

Paulette Choné demonstrates how, in presenting his animals as powerful, upstanding creatures, but all at man's service, Boillot enters into discussion with Montaigne's ideas on the resemblance between men and beasts. Sarah Cohen demonstrates that the Descartes-Montaigne controversy on animals is echoed in the Netherlandish game piece as practised by painters like Frans Snyders, Jan Fyt and Jan-Baptist Weenix.

The editors hope that the present volume offers a glimpse of the intriguing variety of discourses on animals among early modern scientists, writers and artists and that it will stimulate further research in this fascinating field.

COLOUR PLATES
I – XXXI

[PLATE I. JORINK – Fig. 4, p. 171]





[PLATE III. LEONHARD – Fig. 3, p. 184]



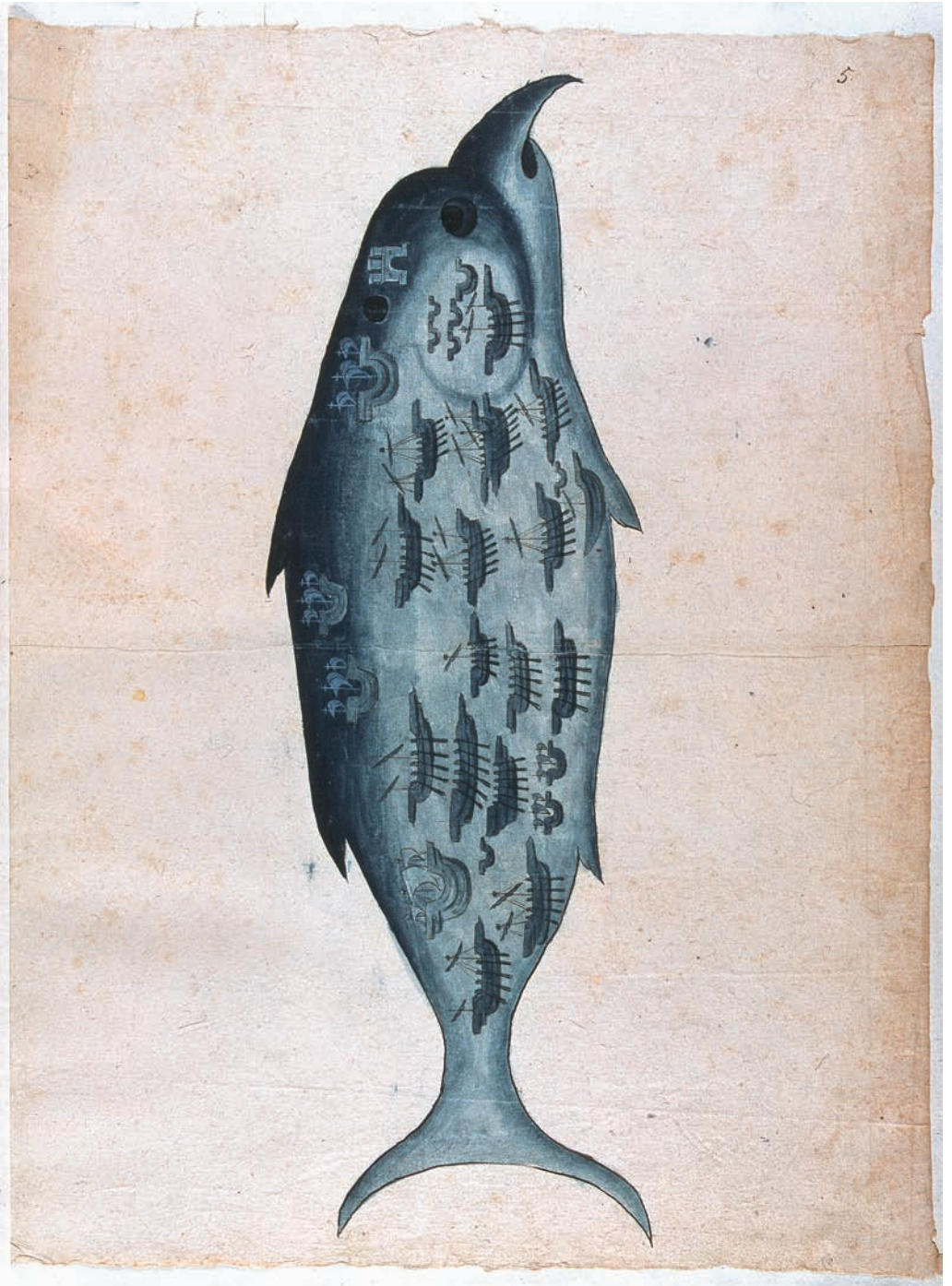


[PLATE V. LEONHARD – Fig. 6, p. 189]










[PLATE IX. EGMOND – Fig. 2, p. 250]



141
150

Die Maen vis

Van desen vis
ghefacen hier
na folio-142
an-143



Orthogoriscus sine
Luna + vis Em.
mon fish.

Den reur
vis of den
mottelvis

Den ruytke vis of den sprottelvis



Orbis brinnii sine
Oceanii facies.

By onse
visscheren
bekeent

Vanden vis of facies
folio quena 143

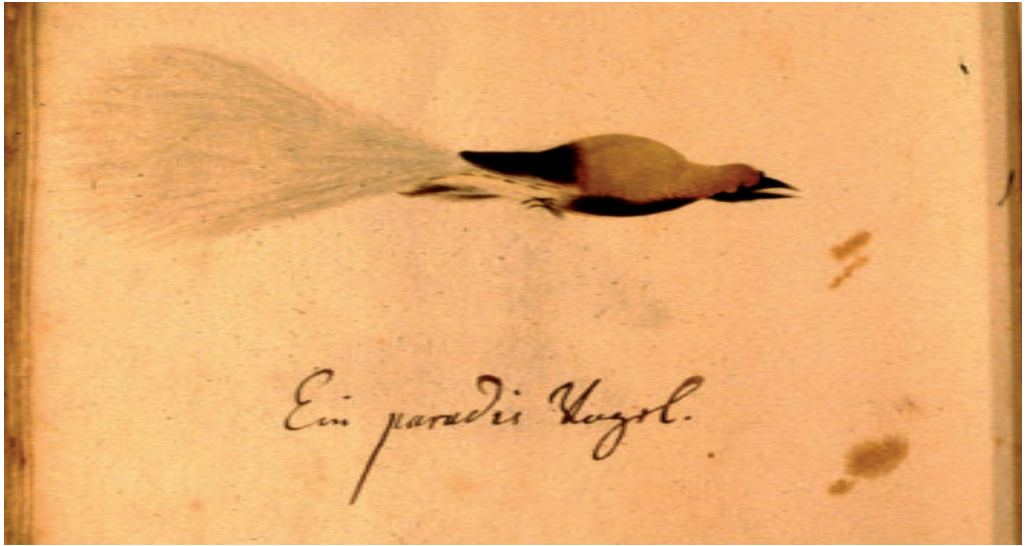
Em lumps
fish

vis van steueninghe wel bekent want sijse onse visscher by
 dant sfont tot Ant werpe want want nase die dant
 aldy sfont dat sy in ende land meer gheuang woude
 z haer onde visse wel merck in haer nette maer want hoort en
 visse niet so seer oet smaecht naden meer vis smaecht sij
 tweeften J hebbe wel so groot gesien die hondert ponden
 wisse wel nimmle merck J hebbe vord gheveek by minne
 leyt moet waets van onsen dooze van steueninghe J dese
 op vord zenaet die groot visse van dese zee bacissen of knoff
 was doen ter tyt vord visscher inden hage gernaent vord
 de hondert ponden En dese verroft sij den Abt van To

Nu sien
 sfont
 den reur vis
 met
 Em lumps

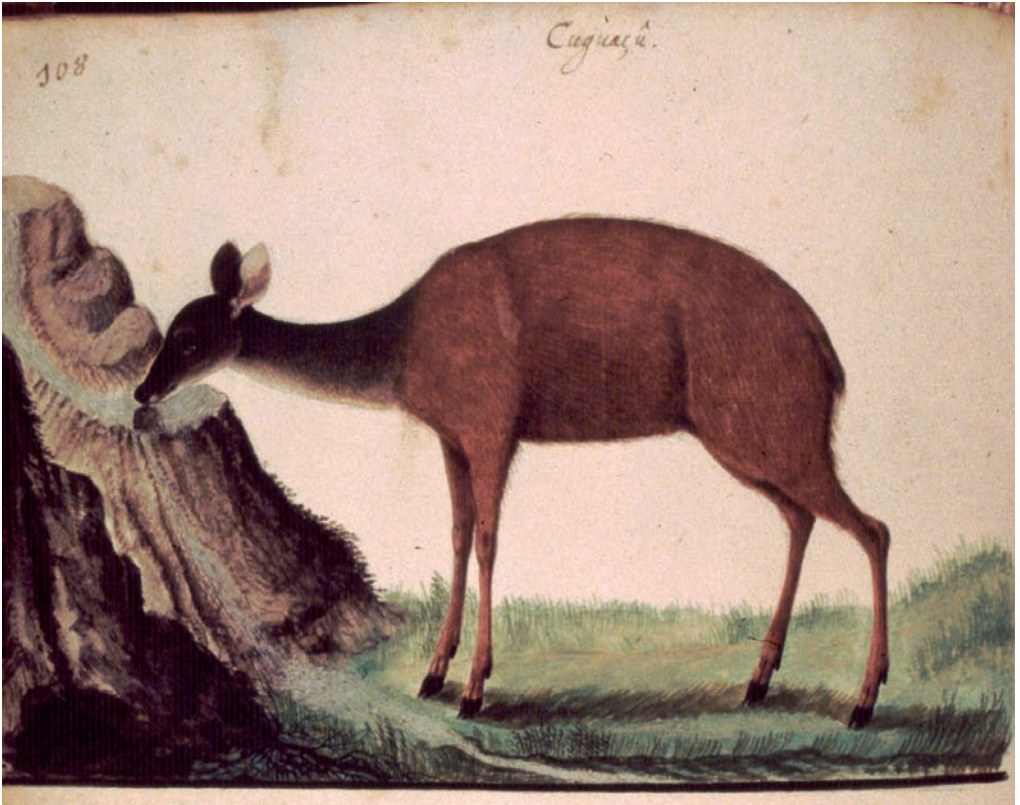
mont dat





[PLATE XV. BRIENEN – Fig. 4 (detail), p. 287; Fig. 5 (detail), p. 289]







Tayassudactylus.

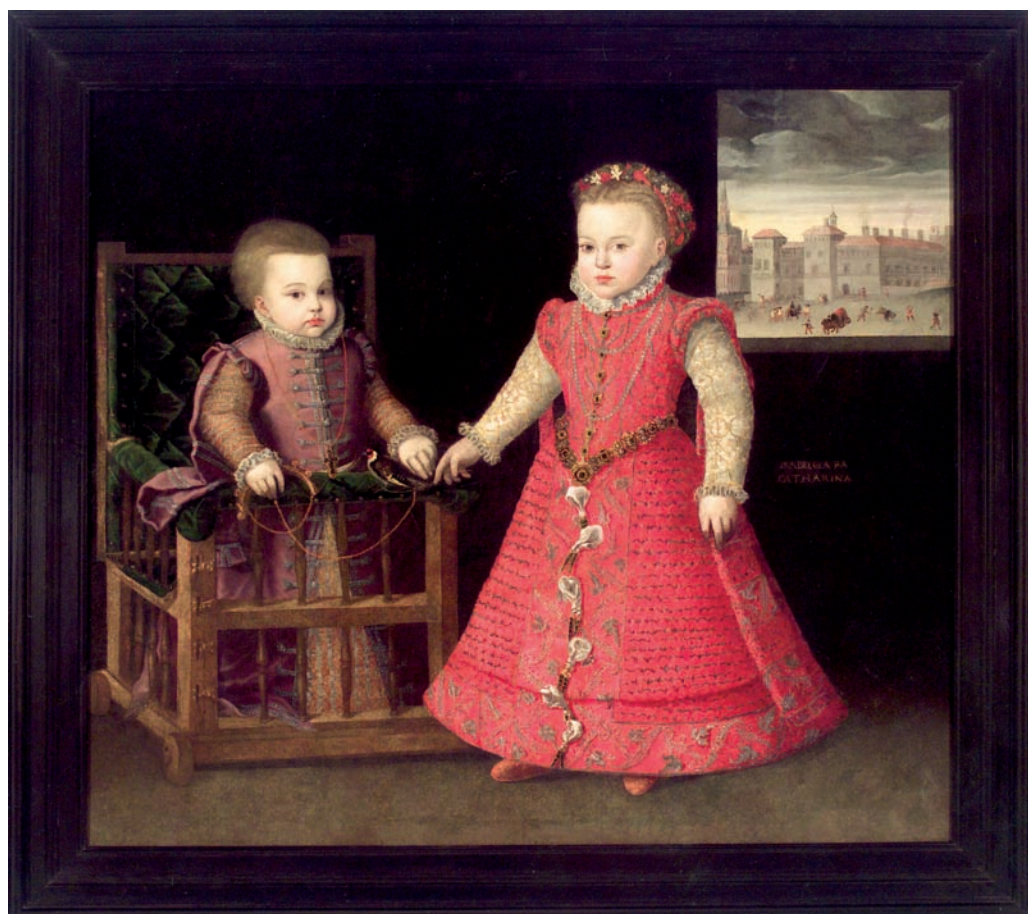


[PLATE XIX. BRIENEN – Fig. 10, p. 301]













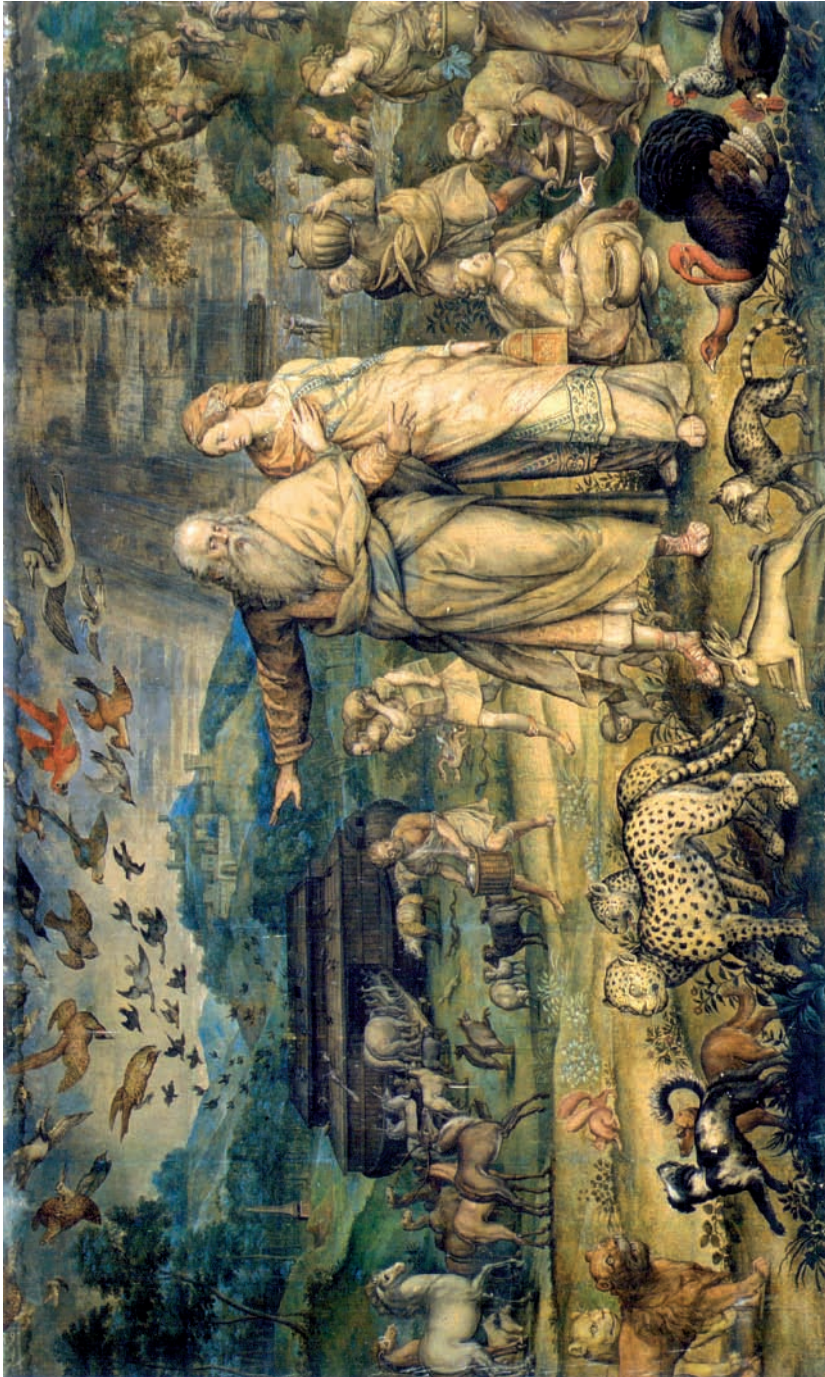
[PLATE XXV. PÉREZ DE TUDELA & JORDAN GSCHWEND – Fig. 6, p. 436]





[PLATE XXVII. PÉREZ DE TUDELA & JORDAN GSCHWEND – Fig. 9, p. 442]







TORPEDO.

Zutterfish



Es schwebt Au
f dem Wasser
großen Zutterfish
der 30. Junij
in See gebracht
hat gebraten sein
Rezept nach
Wittke'scher
Weg in den See
für Ny 60.

Die Torpede
oder Zutterfish
gebräuet
in See
P. 112.

Egen wichtige große gefalt-od
fische hat Dorte Charact
fischer von einem maler
denn die bekommen können
andere fische gefort fang der
Kontinent vor meere an er
fische mit eigentlich abtrakt
kunt worden.

Wird
von Torpedo
P. 191
P. 277
P. 349

Die euse von
euse fische
wunder habe en
fiende von me
reine von den
Wittke'scher
P. 112.

Die fische fische
worden fische fische
in See die fische
Wittke'scher
P. 112.

Die fische
Wittke'scher
P. 112.

Die fische
Wittke'scher
P. 112.



ZOOLOGY:
THE CONSTRUCTION OF AN EARLY MODERN SCIENCE

ZUR KONSTITUIERUNG DER ZOOLOGIE ALS
WISSENSCHAFT IN DER FRÜHEN NEUZEIT:
DISKURSANALYSE ZWEIER GROSSPROJEKTE
(WOTTON, GESNER)

Karl A.E. Enenkel

Einleitung

Conrad Gesner, der Verfasser einer der ersten frühneuzeitlichen Zoologien, leitet seine *Historia animalium* (1551) mit einer umfassenden Verteidigungsrede ein,¹ in der er sich für den entlegenen und merkwürdigen Gegenstand im Zusammenhang mit dem Umfang des Werkes entschuldigt, jedoch dieses mit dem Hinweis auf den vielfältigen Nutzen, den es dem Leser bringe, rechtfertigt. Ins selbe Horn bläst die Titelseite der *Historia animalium*, auf der hervorgehoben wird, dass die Zoologie Intellektuellen unterschiedlicher Bereiche nütze: Philosophen, Ärzten, Grammatiklehrern, Philologen sowie Dichtern [Abb. 1].

Kein moderner Zoologe würde wohl auf den Gedanken kommen, sein Werk auf eine derartige Weise einzuleiten. Die Zoologie ist als Hauptzweig der Biologie im Wissenschaftssystem der Moderne seit dem 19. Jahrhundert etabliert.² Ob oder inwiefern das Tier einen sinnvollen und epistemologisch gerechtfertigten Forschungsgegenstand abgibt, ist keine Frage, die im Wissensdiskurs der Moderne eine Rolle spielt. Es liegt kein Grund vor, die Berechtigung der Wissenschaft mit dem Hinweis auf ihre Nutzenanwendung nachzuweisen, etwa in dem Sinn, dass Schriftsteller daraus ihren Stoff beziehen oder Grundschullehrer daraus ihren Unterrichtsstoff zusammenstellen könnten. Nicht einmal der Popularisierungsfall würde eine solche Rechtfertigung erfordern. Bereits im 19. Jahrhundert, als sich die Zoologie als Wissenschaft zuerst voll entfaltetete, wurde ihr ein so reges Interesse zuteil, dass sie gleich

¹ Conrad Gesner, *Historiae animalium I de quadrupedibus viviparis* [...] (Zürich, Christoffel Froschauer: 1551) fol. B ff. (Vorwort an den Leser: „Conradus Gesnerus candidis lectoribus“).

² Vgl. Jahn I., *Grundzüge der Biologiegeschichte* (Jena: 1990).

CONRADI GESNERI
 medici Tigurini Historiæ Anima-
 lium Lib. I. de Quadru-
 pedibus uiuiparis.

ACADEMIA

OPVS Philosophis, Medicis, Grammaticis, Philologis, Poëtis, & omnibus
 rerum linguarumq; uariarum studiosis, utilissimum sit
 mul iucundissimumq; futurum.

AD LECTOREM.

HABEBIS in hoc Volumine, optime Lector, non solum simplicem animalium historiam, sed etiam ueluti com-
 mentarios copiosos, & castigationes plurimas in ueterum ac recentiorum de animalibus scripta quæ uidere hæcenus nobis
 licuit omnia: præcipuè uerò in Aristotelis, Plinij, Acliani, Oppiani, authorum rei rusticæ, Alberti Magni, &c. de animalibus
 lucubrations. Tum erit, candide Lector, diligentissimum & laboriosissimum Opus, quod non minori tempore quàm
 quidam de elephantis fabulantur, conceptione efformatumq; nobis, diuino auxilio nunc tandem in lucem editum, non modo
 boni consulerè, sed etiam tantis conatibus (ut alterum quoq; Tomum citius & alacrius abfoluamus) ex animo fauere ac be-
 ne precari: & Domino Deo honorum omnium authori seruatoriq;, qui tot tantasq; res ad Vniuersi ornatum, & uarios ho-
 minum usus creauit, ac nobis ut ea contempleremur uitam, ualetudinem, otium & ingenium donauit, gratias agere maximas.



TIGURI APVD CHRIST. FROSCHOVERVM,
 ANNO M. D. LI.

Fig. 1. Conrad Gesner, *Historiæ animalium I de quadrupedis uiuiparis* (Zürich, Chr. Froschauer: 1551), Titelseite. Universiteitsbibliotheek Leiden

auf mehreren Gebieten erfolgreich popularisiert werden konnte. Im deutschsprachigen Bereich ist Alfred Brehms *Illustriertes Thierleben* in sechs Bänden (zuerst Leipzig: 1864–1869) nur ein Beispiel einer erfolgreichen popularisierenden zoologischen Buchproduktion.³ Nebenher kam es im 19. Jahrhundert zum Aufstieg des Zoos als öffentliche Einrichtung und Zeitvertreib der Massen, während naturkundliche Museen dem Publikum die Tore öffneten.⁴ Das Popularisierungspotential der Zoologie ist in der Gegenwart noch angewachsen: Wissenschaftlich fundierte Tierfilme sind ein fester Bestandteil der Unterhaltungsbranche geworden. Es vergeht kein Tag, an dem in der international vernetzten Televisionswelt nicht gleich mehrere prächtige, technisch hochwertige und informationsreiche Tierfilme zur Auswahl stehen, ja es gibt sogar Fernsehsender, die sich ausschließlich auf Tier- und Naturfilme spezialisiert haben. Der Aufstieg der Tierfotographie mit dem damit verbundenen Anwachsen illustrierter popularisierender Buchproduktion sowie die Vernetzung aller Medien mit dem Internet haben ein Übriges dazu beigetragen, dass die Zoologie aus dem Geistesleben der Moderne kaum mehr wegzudenken ist.

Die Selbstverständlichkeit der Zoologie als Wissenschaft hängt mit dem spektakulären Aufstieg der Naturwissenschaften im 19. und 20. Jahrhundert zusammen. Die Forschungsdiskursivität, die damit einhergeht, ist fortschrittsorientiert: Eine Bezugnahme neuer Forschungsergebnisse auf zoologische Diskurse vor dem 19. Jahrhundert ist kein fachimmanentes Desideratum, was angesichts des rapiden empirischen Erkenntniszuwachses, der gewissermaßen täglich verbucht wird, der stets weiter fortschreitenden Spezialisierung und der Technikbezogenheit der modernen Forschungsmethoden verständlich ist.

Aus dieser Sachlage lässt sich ableiten, dass die Beschäftigung mit der Geschichte des Fachs am besten entweder als Spezialdisziplin oder als interdisziplinäre Forschungsrichtung organisiert werden kann. Gerade in den letzten Dezennien lässt sich ein stets wachsendes Interesse an der Geschichte der Naturwissenschaften wahrnehmen:⁵ Lehr- und Forschungsaufträge, Planstellen, Professuren und Institute für die

³ 2. Auflage (Leipzig: 1876–1879, 10 Bde.). Das Werk erlebte – vollständig oder gekürzt – eine Vielzahl von Auflagen, die, obwohl sein Inhalt völlig überholt ist, sich sogar noch im 21. Jahrhundert fortsetzen.

⁴ Jahn I., „Zoologische Gärten – zoologische Museen. Parallelen ihrer Entstehung“, *Bongo* 24 (1994) 7–30.

⁵ Z.B. Brocke B. vom, *Wissenschaftsgeschichte als historische Disziplin* (Berlin: 1994).

Geschichte der Naturwissenschaften wurden ins Leben gerufen. Dieses verstärkte Interesse hat unter anderem dazu geführt, dass die Geschichte der Biologie in einigen groß angelegten Projekten in den Blick genommen wurde, z.B. in Ilse Jahns *Geschichte der Biologie* (Hrsg.; zuerst Jena: 1982),⁶ die mittlerweile mehrfach aufgelegt worden ist, oder Anne Bäumers *Geschichte der Biologie* (Frankfurt a.M.: 1991).⁷ Der große Fortschritt, den die Zoologie seit dem Anfang des 19. Jahrhunderts verbucht hat – man denke nur an die epochemachenden Leistungen Jean-Baptiste de la Lamarcks (*Recherches sur l'organisation des corps vivants* [Paris: 1802]; *Histoire naturelle des animaux sans vertèbres* [Paris: 1815–1822]) oder Charles Darwins (*The Origin of Species* [London: 1859]) – hat dazu geführt, dass sich in der Biologiegeschichte eine schwerpunktmäßige Fokussierung auf das letzte Viertel des 18. Jahrhunderts, auf das 19. und die erste Hälfte des 20. Jahrhunderts erkennen lässt. Die Biologiegeschichte der frühen Neuzeit von ca. 1450–1650 ist zwar von diesem Elan ebenfalls erfasst worden, konzentrierte sich jedoch auf die Geschichte der Botanik. Anne Bäumers *Zoologie der Renaissance – Renaissance der Zoologie*, der wir eine erste Beschreibung der zoologischen Publikationen der frühen Neuzeit verdanken, bildet auf diesem Gebiet eine Pionierleistung.⁸ Brian Ogilvies rezente Monographie *The Science of Describing. Natural History in Renaissance Europe* zeigt, dass die einseitige Gewichtung zur Botanik hin noch keineswegs überwunden ist: Die Arbeit ist fast zur Gänze der Botanik gewidmet. Ogilvie rechtfertigt dies mit der Vorrangstellung, welche die Botanik gegenüber der Zoologie gehabt habe („The Preeminence of Botany“): „My periodization has focussed on botany, the chief focus of natural history in the Renaissance. [...] In fact, zoology generally

⁶ Hier zitiert nach der Auflage Hamburg: 2004 (nach der zweiten, korrigierten Sonderausgabe Heidelberg-Berlin: 2002 nach der dritten Auflage Jena: 1998).

⁷ Vgl. weiter Findlen P., *Possessing Nature. Museums, collecting, and scientific culture in early modern Italy* (Berkeley: 1994); Hünemörder Ch., *Geschichte der Biologie. Wesen und Aufgaben* (Stuttgart: 1985); Jorink E., *Het Boek der Natuere. Nederlandse geleerden en de wonderen van Gods schepping 1575–1715* (Leiden: 2006).

⁸ In Dies., *Geschichte der Biologie*, Bd. 2. Weitere rühmliche Ausnahmen bilden Caroline Gmelig-Nijboers Monographie zu Gesner und einige Einzelstudien Anne Bäumers/ Bäumers-Schleinkofers (siehe Auswahlbibliographie). Laurent Pinon und A.J.J. van der Velde haben über die zoologische Buchproduktion der frühen Neuzeit buchgeschichtliche (Pinon) und bibliographische (van de Velde) Übersichten angelegt: Pinon L., *Livres de zoologie de la Renaissance. une anthologie (1450–1700)* (Klincksieck: 1995) und Velde A.J.J. van de, „Rond Gesner's Historiae animalium liber I van 1551“, *Mededelingen van de Koninklijke Vlaamse Academie voor wetenschappen, letteren en schone kunsten van België. Klasse der Wetenschappen XIII*, 17 (Brüssel: 1951).

lagged behind botany in the Renaissance; developments that occurred in botany often took a decade or two to appear in zoology”.⁹

Während in keiner Weise an der Bedeutung der Botanik als frühneuzeitliche Wissenschaft gezweifelt werden soll, erscheint es verfehlt, die frühneuzeitliche Zoologie als schwachen Abklatsch der Botanik zu betrachten. Sie behandelt einen andersartigen Gegenstand und muss sich mit anderen Problemen als die Botanik auseinandersetzen. Tiere stellen weitaus komplexere, ungleich schwieriger erfassbare Organismen als Pflanzen dar, und ihre Beobachtung stellt durchaus andere, zum Teil viel höhere Ansprüche an den Forscher. Während sich Pflanzen ruhig dem Auge des Beobachters darbieten, entziehen sich ihm Tiere vielfach mit Hilfe des leistungsfähigen Bewegungsapparats, der evolutionsgeschichtlich ihre Überlebensgrundlage bildet, während sie in Gefangenschaft selbst mit hohem Aufwand entweder nur schwer gehalten oder nachgezüchtet werden können und selbst, wenn dies gelingt, andere Verhaltensmuster zeigen als in freier Wildbahn. Diese Probleme treten natürlich in verstärktem Maß bei exotischen Species auf. Desgleichen konfrontiert die analytische Untersuchung des tierischen Organismus den Zoologen sowohl mit anderen Problemen als auch anderen Möglichkeiten als den Botaniker die Analyse der Pflanzen.

Ein Beispiel bildet die Neukonstituierung der medizinischen Anatomie als empirische Wissenschaft um das Jahr 1520. Sie ist für den Botaniker unbedeutend, während sie dem Zoologen bisher ungekannte Möglichkeiten bietet, in das Innere des komplexen tierischen Organismus vorzudringen und die Lebensvorgänge (Physiologie) zu erforschen. Der Einstieg ins Innere des tierischen Organismus lässt sich mit der Entdeckung eines neuen Kontinents vergleichen. Die frühneuzeitliche Zoologie legte auf diesem Gebiet eine außerordentlich weite Strecke zurück, die unter anderem zur Entdeckung des tierischen Blutkreislaufs führte (William Harvey, *Exercitatio anatomica de motu cordis et sanguinis in animalibus*, 1628). Diese und andere Forschungen fanden jenseits der Botanik statt. Schon aufgrund dieser einfachen Tatsachen verdient die Zoologie der frühen Neuzeit eine Aufmerksamkeit, die nicht vom Interesse an der Botanik gesteuert wird.

Was die Herangehensweise betrifft, ist die Erforschung der Zoologie einem bestimmten Druck ausgesetzt, welcher den Gang der Forschung

⁹ Ogilvie B., *The Science of Describing. Natural History in Renaissance Europe* (Chicago – London: 2006) 49.

steuert. Dieser wird von dem modernen Fortschrittsbewusstsein hervorgebracht, welches dazu führt, dass man explizit oder implizit die Leistungen der Vergangenheit als Entwicklungsschritte zur modernen Wissenschaft hin teleologisch einordnet. Diese Verstehensfigur trifft man auch in Bezug auf die Geschichte der Zoologie der Renaissance (1300–1600) an. Anne Bäumer, die in ihrer sonst äußerst wertvollen *Renaissance der Zoologie* schwerpunktmäßig die *Entwicklung zur modernen Wissenschaft* in den Blick nimmt und dabei ein Dreierschema ihres Lehrmeisters Fritz Kraft anwendet,¹⁰ definiert die *Verdienste* der frühneuzeitlichen Zoologie vielfach im Hinblick auf die moderne Zoologie.

Ihrer Ansicht nach „nimmt die Entwicklung der modernen zoologischen Disziplinen in der humanistischen Zoologie ihren Anfang“.¹¹ Die „bewusste Rückbesinnung auf antike methodische Ansätze“ führt zum wissenschaftlichen Fortschritt, unter anderem zur Herausbildung der „zoologischen Spezialgebiete Embryologie, Physiologie, Vergleichende Anatomie“ usw.¹² Die „zoologischen Kompendien“ (Pierre Gilles,¹³ Michael Herr,¹⁴ Adam Lonitzer,¹⁵ Edward Wotton, Conrad Gesner usw.) „wiesen in ihren methodischen Ansätzen der zukünftigen Forschung den Weg“.¹⁶ „Auch die Anatomie musste Bestandteil dieser Darstellung sein, da sie entscheidende Kriterien zur Einteilung der Tiere lieferte. Damit waren alle Ansätze für eine adäquate Behandlung des Tierreichs gegeben, die neuzeitliche Zoologie war begründet“.¹⁷ „Die

¹⁰ Vgl. *Zoologie der Renaissance*, bsd. 405–422 „Übergang von der ersten zur zweiten Phase der humanistischen Zoologie“ 405–407; „Die zweite Phase der humanistischen Zoologie“ 407–411; „Übergang von der zweiten zur dritten Phase der humanistischen Zoologie“ 411–414; „Die dritte Phase der humanistischen Zoologie“ 414–417.

¹¹ Siehe die Zusammenfassung ihrer Monographie „Zoologie der Renaissance – Renaissance der Zoologie“, in Döring K. – Wöhrle G. (Hrsg.), *Antike Naturwissenschaft und ihre Rezeption*, Bd. I und II (Bamberg: 1992) (275–295) 279.

¹² Ebd.

¹³ Pierre Gilles, *Ex Aeliani historia per Petrum Gyllium latini facti itemque ex Porphyrio, Heliodoro, Oppiano, tum eodem Gyllio luculentis accessionibus aucti libri XVI de vi et natura animalium. Eiusdem Gyllii liber unus de Gallicis et Latinis nominibus piscium* (Lyon, Sebastian Gryphius: 1535).

¹⁴ Michael Herr, *Gründtlicher Unterricht, wahrhafft und eygentliche beschreibung wunderbarer seltamer art, natur, krafft und eygenschafft aller vierfüßigen thier, wild und zahm, so auff und in der erden oder wassern wonen [...]* (Straßburg, Balthasar Beck: 1546).

¹⁵ Adam Lonitzer, *Naturalis historiae opus novum, in quo tractatur de natura et viribus arborum, fructuum, herbarum animantiumque terrestrium, volatilium et aquatilium, item gemmarum, metallorum succorumque concretorum* (Frankfurt a.M., Christoph Egenolph: 1551–1555).

¹⁶ „Zoologie der Renaissance – Renaissance der Zoologie“ 280.

¹⁷ Ebd.

Renaissance der zoologischen Forschung ist hier gleichzusetzen mit dem, was man gemeinhin ‚als wissenschaftliche Revolution‘ bezeichnet“.¹⁸

Ich kann mich dieser Herangehensweise nicht anschließen. Sie birgt die Gefahr in sich, reduktionistisch zu wirken, unsere Aufmerksamkeit einzuengen und uns den Blick auf die Eigenheiten der frühneuzeitlichen Wissenschaftsausübung zu verstellen. Gerade diese sollte m.E. den Mittelpunkt des Interesses bilden. Das Konzept der in groben Zügen linearen, progressiven Wissenschaftsentwicklung scheint mir gerade für die frühe Neuzeit wenig brauchbar, da es sich um eine Periode handelt, die von gesteigerter Diversifizierung und Pluralität des intellektuellen Lebens gekennzeichnet ist. Es gibt keine einheitliche Entwicklung, geschweige denn eine zukunftsorientierte homogene Entwicklung. Es existieren verschiedene Diskurse nebeneinander, die sich keineswegs in einem progressiven Entwicklungsverhältnis zur Moderne hin befinden.

Zum Beispiel scheint es mir nicht richtig, die „Entwicklung“ der Zoologie in der frühen Neuzeit als kontinuierliche Hinwendung zur Empirie zu fassen. Wolfgang Franzius' *Historia animalium sacra* aus dem Jahre 1612¹⁹ bietet keineswegs mehr Empirie als Edward Wottons *De differentiis animalium* aus dem Jahre 1552 oder Gesners *Historia animalium* aus dem Jahre 1551. Die letzten beiden Werke müssten, da sie ungefähr gleichzeitig entstanden sind, dieselbe wissenschaftliche ‚Entwicklungsstufe‘ repräsentieren. Sie unterscheiden sich jedoch, wie in diesem Aufsatz gezeigt werden soll, wesentlich von einander. In der vorliegenden Studie möchte ich daher von teleologischen und linear-fortschrittsbezogenen Herangehensweisen absehen. Es geht mir schlicht darum, die Diskurse nachzuzeichnen, die die Konstituierung der Zoologie als Wissenschaft in zwei Großprojekten, die um 1550 publiziert wurden, bestimmten.

Dabei werde ich übersichtsmäßige Erfassungen moderner zoologischer Forschungsergebnisse heranziehen,²⁰ die jedoch lediglich einen heuristischen Zweck haben. Der Vergleich soll helfen, *die diskursiven Eigenheiten*

¹⁸ Ebd. 285.

¹⁹ *Historia animalium sacra, in qua plerorumque animalium praecipuae proprietates in gratiam studiosorum Theologiae et ministrorum verbi ad usum eikonologikon breviter accommodantur, in Academia Wittenbergensi [...] dictata* (Wittenberg, Zacharias Schurer und Johannes Gormann: 1612). Zu diesem Werk vgl. in vorliegendem Band den Aufsatz von Vibeke Roggen „Biology and Theology in Franzius' *Historia animalium sacra* (1612)“.

²⁰ Z.B. aus Macdonald D. (Hrsg.), *Enzyklopädie der Säugetiere* (Königswinter: 2003; urspr. englisch, Oxford: 2001). Gould E. – McKay G., *Enzyklopädie der Tierwelt. Säugetiere* (München: 2002; urspr. englisch, Sidney: 1990).

der frühmodernen Zoologie zu orten. Dabei schien es am zweckmässigsten, diese anhand einer bestimmten Tierklasse und des konkreten Beispiels einer Species herauszuarbeiten. Dafür wurde die Klasse der *Mammalia* und die Species *Panthera leo* (Löwe) ausgewählt. Der Vorteil dieser Species ist, dass sie die Hauptprobleme zu Tage fördert, welchen der frühmoderne Zoologe begegnete: Es handelt sich um ein hochentwickeltes exotisches Tier, das komplexe Verhaltensmuster aufweist, bei lebendigem Leib nicht leicht untersucht werden, zudem in freier Wildbahn nicht leicht beobachtet werden konnte, jedoch in verschiedenen Menagerien Europas gehalten wurde, wodurch es prinzipiell möglich war, neue empirische Daten zu erheben und eventuell auf anatomischem Weg sogar in das Innere des Tierkörpers vorzudringen.

*Zur Heuristik der Säugetiere (Mammalia):
einige Diskursmerkmale der modernen Zoologie*

Die moderne Zoologie versteht sich als eine systematische Wissenschaft, für die die Taxonomie ein wichtiger Ausgangspunkt ist. Die Taxonomie ordnet die Species (Tierarten) innerhalb eines feinmaschigen Klassifizierungssystems ein, in welchem sie die Verwandtschaftsverhältnisse der unterschiedlichen Arten festlegt.²¹ Die moderne Taxonomie ist kein Wissenschaftszweig, der sich als rein formale Festlegung der heute lebenden Arten versteht. Ihr Diskurs wird von der Evolutionstheorie bestimmt und ist mit einer Methodenpluralität verknüpft. Die Klassifizierung geschieht unter anderem mit Hilfe der Paläontologie, welche die Tierwelt der weit zurückliegenden Vergangenheit untersucht und die die in der Gegenwart lebenden Arten auf diese zurückführt. Z.B. werden die heute lebenden *Mammalia* (insgesamt ca. 4250–4700 Arten) in einen Stammbaum eingliedert, der aus der Abspaltung der *Theria* von den eierlegenden *Protheria* vor ca. 200 Millionen Jahren emporwächst. Dasselbe von der Evolutionsbiologie und der Paläontologie gespeicherte Prinzip liegt der Einteilung der *Mammalia* in Unterklassen (2), Ordnungen (28), Familien (132–139) und Gattungen (ca. 1050–1100) zugrunde. Die Species *Löwe/Panthera leo* etwa wird der Unterklasse der *Eutheria*, der Ordnung

²¹ Sowohl Macdonalds *Enzyklopädie der Säugetiere* (Vorwort, XII; XVI–XVIII) als auch Goulds und McKays *Säugetiere* (19–21) fangen bezeichnenderweise mit Ausführungen zur Taxonomie an.

Carnivora (Fleischfresser: 11 Familien;²² ca. 100 Gattungen; ca. 240–270 Arten), der Familie der *Felidae* (Katzenartige: insgesamt 4 Gattungen; 37 Arten) und der Gattung Großkatzen-*Panthera* (5 Arten) zugeordnet. Die Katzenartigen leiten sich von den *Viverravines* her und spalteten sich im Oligozän, vor ca. 30 Millionen Jahren, von den Hyänen (*Hyaenidae*) ab. Die zoologische Taxonomie gilt keineswegs als abgeschlossen, sondern ist Gegenstand einer fortlaufenden Forschungsdiskussion. Da die Interpretation der gattungs- und artenspezifischen Merkmale subjektiv ist, variieren die taxonomischen Angaben. Diese Diskursorientierung spiegelt sich selbst in den überblicksmäßigen Erfassungen wider: Die *Carnivora* beispielsweise gliedern sich nach Goulds und McKays Enzyklopädie (1990) in 106 Gattungen und 270 Arten, nach Macdonalds *Enzyklopädie der Säugetiere* (2001) in 94 Gattungen und 239 Arten.

Die evolutionsbiologische Herangehensweise, die der modernen Zoologie zugrunde liegt, wird mit diversen Forschungsmethoden und -zweigen verknüpft, u.a. der *Vergleichenden Anatomie*, der *vergleichenden und experimentellen Physiologie*, der *Neuroendokrinologie*, *Mikrobiologie*, *Biochemie*, *Genetik*, *Gentechnologie* und *Verhaltensbiologie*.

Die von Methodenpluralität bestimmte Forschungsdiskursivität spiegelt sich z.B. in der modernen Definition der Säugetiere wider: Es handelt sich um warmblütige (Physiologie; Thermoregulation: Biochemie) Wirbeltiere (Vergleichende Anatomie), die ihre Jungen mit Milch säugen (Physiologie; Verhaltensbiologie; Biochemie), einen behaarten Körper (Thermoregulation: Biochemie, Zellbiologie/Mikrobiologie) und ein einteiliges Kiefergelenk besitzen, wodurch der Unterkieferknochen direkt mit dem Schädel gelenkt wird (Vergleichende Anatomie).

Der zoologische Deskriptionsdiskurs wird von einer wesentlich *funktionsanalytischen Methodik* gekennzeichnet. Das Körpermerkmal der Behaarung etwa wird nicht als rein morphologisches Fakt, sondern in Bezug auf seine physiologische Funktionalität – die Thermoregulation – beschrieben: Eine wesentliche Eigenschaft der Säuger ist, dass sie ihre Körpertemperatur von innen heraus (Endothermie) durch einen *biochemischen Vorgang* – durch Oxidation von Nahrung im Körper – regeln. Dies hat den Vorteil der Unabhängigkeit und der biochemischen Stabilität des Organismus, jedoch den Nachteil, dass dieses Energiesystem relativ kostspielig ist. Die Maßnahmen, die

²² Nach Macdonald, *Enzyklopädie der Säugetiere* 3, werden die *Carnivora* in 9 Familien unterteilt.

erforderlich sind, um das System rentabel zu gestalten, werden evolutionsbiologisch als ‚Anpassungen‘ gedeutet: Solche ‚Anpassungen‘ der Säugetiere stellen Behaarung, Talgdrüsen (die beide der Wärmeerhaltung durch Isolation dienen) und Schweißdrüsen (die der Wärmeabfuhr durch Wasserausscheidung/Verdampfung/Kühlung dienen) dar. Die Anpassung der Behaarung beispielsweise kann durch die Forschungsmethoden der Mikrobiologie weiter erklärt werden. Eine Analyse der Zellstruktur des Haares zeigt, dass die innerste Schicht des Haares aus toten Zelltrümmern besteht, welche Luft enthalten. Die Zellstruktur des Haares ist also so angelegt, dass dieses eine starke isolierende und daher thermoregulierende Wirkung hat.

Ebenso fasst man die Reduktion auf einen Unterkieferknochen nicht einfach als morphologisches Fakt auf, sondern deutet sie evolutionsbiologisch als Anpassungsschritt zur Entwicklung höherer Lebensformen: Die Reduktion auf *einen* Unterkieferknochen ermöglicht, dass sich die Knochen, die das Gehirn umgeben, verstärken konnten – dies macht eine Vergrößerung des Gehirns und eine Ausdehnung des Nervensystems möglich, und bildet somit die Voraussetzung zur Entwicklung höherer Intelligenzen.

Ähnlich wird die Fortpflanzungsart sowohl evolutionsbiologisch als auch funktionsanalytisch beschrieben: Die meisten Säugetierarten sind Plazentatiere (*Eutheria*), die sich vor etwa 90 Millionen Jahren von den *Metatheria* (Beuteltieren) abgespalten haben. Ein Vorteil der „Anpassung“ der Plazentatiere ist, dass die Plazenta durch den intensiven Austausch von Nähr- und Abfallstoffen sowie Atemgasen zwischen dem Kreislaufsystem von Mutter und Kind längere Tragzeiten möglich macht. Diese ermöglichen ihrerseits eine längere und damit höhere Entwicklung des Kindes. Das Säugen mit Milch bewirkt sowohl eine größere Unabhängigkeit von der Umwelt (die Mutter produziert auch bei Nahrungsmangel weiter Milch) als auch eine Differenzierung in der Investition bei der Fortpflanzung. Z.B. können Männchen länger und besser gesäugt werden, wodurch sie sich rascher entwickeln: Dadurch wird die Voraussetzung zu einer Rangdifferenzierung der Männchen in Bezug auf ihre evolutionsbiologische Fitness geschaffen. Dies besitzt z.B. für die Species *Panthera leo* große Bedeutung, die sich durch einen ausgeprägten Geschlechtsdimorphismus auszeichnet: Die Männchen, die 30–50% größer und schwerer als die Weibchen sind, bestimmen wesentlich die Modalitäten der Weitergabe des genetischen Materials. Diese erfolgt aufgrund eines hierarchischen Ausleseprinzips: Die stärksten und größten Männchen besitzen ungleich größere Chancen, ihr genetisches Material weiterzugeben.

Bei der Beschreibung der Sinne der Säugetiere werden sowohl biochemische Methoden als auch jene der Verhaltensforschung angewendet: Die meisten Säugetiere besitzen ein hervorragendes Geruchsvermögen, das mit ihrer speziellen Art der Thermoregulation zusammenhängt und ihr komplexes Sozialverhalten mitbedingt. So besitzt die thermoregulierende Haut der endothermen Säuger Talg-, Schweiß- und Duftdrüsen, die komplexe Gerüche erzeugen, welche ein reiches Spektrum an Information über Geschlecht, Rang, Alter, Paarungsbereitschaft und Ernährung des Geruchsabsenders vermitteln. Die Raubtiere (*Carnivora*) etwa sind wahre Geruchskünstler: Ihr Geruchsvermögen bestimmt ihr hochentwickeltes Sozialverhalten: ihr Territorialverhalten, ihr Jagdverhalten, das Zusammenleben im Rudel mit Sozialhierarchie (z.B. Löwen, Wölfe) und ihr Fortpflanzungsverhalten. Löwen etwa leben in Rudelverbänden auf einem bestimmten Territorium, das von den führenden Männchen mit Duftmarken versehen wird. Die Mitglieder des Rudels erkennen einander individuell am Geruch. Individuen, die nicht zum Rudel gehören, können an den Duftmarken erstens ablesen, dass sie ein besetztes Territorium erreicht haben, zweitens, welches Alter der Territoriuminhaber besitzt, und drittens, wie stark dieser ist.

Der Diskurs der modernen Zoologie wird weiter von einer Fokussierung auf genaue Messdaten, Zählungen und andere auf empirischem Weg erhobene Daten gekennzeichnet. Die Körperlänge, Schulterhöhe, Schwanzlänge, das Körpergewicht der erwachsenen Tiere (mit Geschlechtsdifferenzierung), der Neugeborenen, der einjährigen, zweijährigen usw. werden genau gemessen; weiter wird die Nahrung bestimmt und gewogen, differenziert nach Geschlecht und Alter. Die Geschlechtsreife wird in Monaten, die Tragzeit in Tagen, die Lebenserwartung in Jahren (ev. differenziert nach freier Wildbahn und Menschenobhut) angegeben. Territorien werden vermessen, Verbreitungsgebiete kartographisch beschrieben, die Verbreitungsdichte durch Zählungen bestimmt. Da viele Wildtier species vom Menschen zurückgedrängt und bedroht werden, wird der jeweilige Gefährdungsgrad (IUCN-Status) angegeben.

Löwenmännchen etwa besitzen eine Körperlänge von 110–250 cm, eine Schulterhöhe von 120 cm und ein Gewicht von 150–240 kg;²³ Löwenweibchen eine Körperlänge von 160–190 cm, eine Schulterhöhe von 110 cm und ein Gewicht von 120–185 kg. Weibchen brauchen ca. 5 kg Fleisch pro Tag, Männchen ca. 7 kg. Die Lebenserwartung des Löwen

²³ Für die Daten vgl. Macdonald (Hrsg.), *Enzyklopädie der Säugetiere* 11.

beträgt 18 Jahre in freier Wildbahn, in Menschenobhut bis zu 25 Jahre. Weibchen sind mit 36–46 Monaten geschlechtsreif. Die Tragzeit beträgt zwischen 100 und 119 Tage. Die Neugeborenen bringen 1,2 – 2,4 kg auf die Waage. Nach ca. 2,5 Jahren sind sie erwachsen und selbständig.

*Die Zoologie Edward Wottons (1552): Klassifizierung, Induktion und
Komparatistik als Faszinationen der neuen Wissenschaft*

Die Analyse der frühneuzeitlichen Zoologien soll mit dem Werk des aus Oxford stammenden Edward Wotton (1492–1555) anfangen.²⁴ Zwar ist sein *De differentiis animalium* (1552) ein Jahr nach Gesners *Historia animalium* erschienen, jedoch ist Wotton, der an seinem Projekt viele Jahre hindurch gearbeitet hat, eine Generation älter als Gesner und er hat sich früher als jener mit der Zoologie auseinandergesetzt. Weiter brachte Wotton sein Werk zum Abschluss, noch bevor er Gesners *Historia animalium* konsultieren konnte. Der Widmungsbrief an den englischen König Edward VI., der geraume Zeit nach der Vollendung des Werkes geschrieben wurde, trägt das Datum des 22. 10. 1551.²⁵ Im Widmungsbrief geht Wotton davon aus, dass sein Werk sich in Paris im Druck befand. 1551 musste jedoch noch ein Verleger gefunden werden. Wie aus dem Brief hervorgeht, hatte Wotton das Werk 1551 seinem Freund John Mason übergeben, der es auf eine europäische Reise mitnahm und in Paris einen Verleger gewann.

Wottons Zoologie zeichnet sich durch eine Herangehensweise aus, bei der die ordnende Klassifizierung des Tierreichs und die Deskription der einzelnen Arten innerhalb des Klassifizierungssystems eine herausragende Rolle spielt. Die Bedeutung dieses zoologischen Darstellungsprinzips spiegelt sich bereits im Titel wider: Das Werk soll die „Unterschiede“ zwischen den einzelnen Species beschreiben. Auf den ersten Blick ähnelt Wottons systematischer zoologischer Klassifizierungsdiskurs dem taxonomie- und systematikorientierten Diskurs der modernen Zoologie. Anne Bäumer betrachtet in teleologischer Herangehensweise seine Leistung dann auch als viel fortschrittlicher als z.B. jene Gesners, der nicht auf die Klassifizierung fokussierte: „Wottons

²⁴ Edward Wotton, *De differentiis animalium libri decem* (Paris, Michel de Vascosan: 1552).

²⁵ *De differentiis animalium* fol. a ii r. „Ad Serenissimum Angliae Regem Eduardum, eius nominis sextum“.

erste Systematisierungsversuche haben alle späteren Klassifikationen beeinflusst. Die von Conrad Gesner [...] vorgelegte Systematik war eher künstlich [...], sodass seine Klassifizierung insgesamt einen Rückschritt gegenüber Wotton darstellte. Ulisse Aldrovandi hingegen bemühte sich ganz bewusst um ein natürliches System [...]. Er setzte damit die von Wotton eingeschlagene Richtung fort“.²⁶ Im Gegensatz zu Gesner habe Wotton „auf dem Gebiet der Methodik und Systematik neue Wege gefunden, die die nachfolgende Entwicklung der Zoologie entscheidend beeinflussten“.²⁷ Sein Systematisierungsversuch stelle „einen entscheidenden Neubeginn“ dar. Seine wissenschaftsgeschichtliche Leistung sei diesbezüglich mit Copernicus vergleichbar.²⁸

Nach welchen Gesichtspunkten richtete Wotton sein Werk ein? Dieses zeichnet sich zunächst durch einen ordnenden, systematisierenden und einer schlüssigen Klassifizierung zustrebenden Aufbau aus. Es setzt sich aus zehn Büchern zusammen: In den Büchern 1–2 liefert Wotton zunächst eine listenartige Aufstellung der einzelnen Unterscheidungsmerkmale zwischen den Tierarten. Buch 3 ist der allgemeinen Beschreibung der Bluttiere gewidmet, Buch 4 den Unterschieden zwischen Mensch und Tier.²⁹ Die Bücher 5–10 stellen den Hauptteil dar, in dem Wotton die einzelnen Species aufgrund der Merkmale, welche ihnen eignen, beschreibt („per species“). Die Unterschiede werden als intentional vollständiger Katalog der relevanten äußeren („exteriora“) und inneren („interiora“) Körpermerkmale formuliert. In den Büchern 5–10 werden die Species in ein gültiges Klassifizierungssystem eingeschrieben. Die Bücher 5–8 sind den Species der Bluttiere gewidmet, die Bücher 9–10 den Species der „blutlosen Tiere“.

Da die Klassifizierung vom physiologischen Merkmal des Blutes ausgeht und da die inneren Körpermerkmale feste, immer wiederkehrende Bestandteile von Wottons Tierbeschreibung sind, rücken sowohl die Physiologie als auch die auf die Anatomie gestützte Morphologie verstärkt ins Blickfeld. Wenn man diese Orientierung teleologisch betrachtet, könnte es scheinen, als ob Wotton auf „fortschrittliche Weise“ den Weg zur Vergleichenden Anatomie und Physiologie geebnet hat. Bei näherer

²⁶ „Zoologie der Renaissance – Renaissance der Zoologie“ 290.

²⁷ *Zoologie der Renaissance* 41.

²⁸ Bäumer Ä., „Das erste zoologische Kompendium in der Zeit der Renaissance: Edward Wottons Schrift ‚Über die Differenzen der Tiere‘“ *Berichte zur Wissenschaftsgeschichte* 13 (1990) (13–29) 28.

²⁹ Zu der Beschreibung des Aufbaus vgl. Bäumer, „Das erste zoologische Kompendium“ 17 und *Zoologie der Renaissance* 34–35.

Betrachtung stellt sich jedoch heraus, dass Wottons Deskriptionsdiskurs weder von der Vergleichenden Morphologie noch der Vergleichenden Physiologie bestimmt wird. Vielmehr ist ihm – nach der Einordnung in eine grobmaschige Klassifizierung – die möglichst detaillierte Beschreibung der Arten in ihrer Einzigartigkeit oberstes Gebot. Seiner Klassifizierung liegt, wie sich noch zeigen wird, keine systematische empirische anatomische Forschung zugrunde (vgl. unten).

Wottons Interesse für die Zoologie leitet sich aus dem Studium des Aristoteles ab, dessen Werke er 1506–1514 während seines Philosophiestudiums am Magdalen College in Oxford kennen lernte. Für die zoologische Methodik von Wottons *De differentiis animalium* finden sich die ausschlaggebenden Ansätze in Aristoteles' zoologischen Werken, besonders in der *Historia animalium* (*Peri zoon historiai*; 10 Bücher), in *De generatione animalium* (*Von der Fortpflanzung der Tiere*; *Peri zoon geneseos*; 5 Bücher) und im ersten Buch der Schrift *De partibus animalium* (*Von den Körperteilen der Tiere*; *Peri zoon morion*; 4 Bücher).

Der Diskurs der aristotelischen Zoologie zeichnet sich durch eine eingehende und umfängliche Anwendung des Induktionsverfahrens auf das Tierreich aus. Während Aristoteles anfänglich von der dichotomen und privativen platonischen Diarese³⁰ ausging (zum Beispiel im ersten Teil der *Historia animalium*), wich er nach und nach von ihr ab, indem er sie durch eine mehr- und vielteilige Diarese ersetzte.³¹ Wie Aristoteles im ersten Buch der Spätschrift *De partibus animalium*, welche in gewissem Sinn die Summe seines zoologischen Denkens bildet, auseinandersetzt, ist es die vordringlichste Aufgabe der Zoologie, die einzelnen Erscheinungsformen des Tierreichs – die einzelnen Arten, ihre Körperteile, Lebensfunktionen, Verhaltensweisen usw. – zu beschreiben. Er entwickelte dafür ein komparatistisches Beschreibungsverfahren, bei dem er verschiedenartige Information (morphologische, physiologische; Äußeres, Inneres usw.) berücksichtigte und zudem durch Anatomie gewonnene Daten heranzog. Eine Tierart definiert sich nicht durch ein einzelnes Merkmal im Sinn einer privativen Gegenüberstellung, sondern durch eine Reihe unterschiedlicher Eigenschaften.³² Wichtig ist, dass

³⁰ Vgl. dazu Herter H., „Platons Naturkunde. Zum *Kritias* und anderen Dialogen“, *Rheinisches Museum* 121 (1978) 103–131.

³¹ Vgl. Lloyd G.E.R., „The Development of Aristotle's Theory of the Classification of Animals“, *Phronesis* 6 (1961) 59–81; Bäumer A., *Die Biologie von der Antike bis zur Renaissance*, in dies., *Geschichte der Biologie*, Bd. 1 (Frankfurt a.M. – Bern – New York – Paris: 1991) 48.

³² Vgl. Aristoteles, *De partibus animalium* I 2–3, 642b–643a.

Aristoteles das Induktionsverfahren nicht vorrangig zur Erstellung einer geschlossenen klassifizierenden Beschreibung des Tierreichs nach Species angewendet hat.³³ Sein Hauptwerk, die *Historia animalium*, zeichnet sich durch seine thematisch angeordnete Komparatistik aus. Buch 1 ist den Teilen der Tiere, Buch 3 den gleichteiligen Stoffen (feste Teile, flüssige Teile), Buch 4 ab Kapitel 11 den Funktionen der Teile, Buch 5–7 den Zeugungs- und Entwicklungsarten der Tiere, und Buch 8 und 9 dem äußeren und inneren Leben der Tiere gewidmet. In dieser thematisch orientierten Behandlung werden die zahlreichen Unterschiede zwischen den insgesamt etwa 500 behandelten Species erarbeitet.

Obwohl diese Art der Datenerhebung Aristoteles wichtiger war als die Erstellung einer Klassifizierung, hat er dennoch das Tierreich in Kategorien unterteilt. Er gliedert es in blutlose und blutführende Tiere; die blutführenden in Menschen, lebendgebärende Vierfüßer, eierlegende Vierfüßer, fußlose Tiere, Vögel, Fische und Cetaceae; die blutlosen Tiere in Caphalopoden, Crustaceen, Testaceen und Insekten.³⁴ Diese Einteilung baut auf unterschiedliche Informationskategorien auf. Obwohl die Erhebung der äußerlich wahrnehmbaren Information – wie sich aufgrund der geringen technischen Möglichkeiten leicht verstehen lässt – damals weitaus vielversprechender war, geht aus der Klassifizierung Aristoteles' großes Interesse für das Innere der Tiere hervor. Z.B. bildet ein physiologisches Merkmal (Blut) die Grundlage seiner Klassifizierung, das zu einer dichotomen Zweiteilung des Tierreichs in *blutführende* und *blutlose* Tiere führt (*Historia animalium*, Buch 2–4). Bei der weiteren Unterteilung spielen jedoch die äußerlich wahrnehmbaren morphologischen und physiologischen Merkmale die Hauptrolle.

Diese Diskursorientierung lässt sich z.B. anhand der Einordnung der *Mammalia* illustrieren. Aristoteles' Definition unterscheidet sich stark von der modernen. Für ihn ist weder der äußerlich nicht klar wahrnehmbare Vorgang der Thermoregulation (Warmblüter-Kaltblüter) noch die mit der Thermoregulation verbundene Physiologie (Säugen als Anpassung an die Energierechnung) noch das aus systematischer vergleichender Anatomie hervorgehende morphologische Merkmal des einteiligen

³³ Vgl. Lennox J.G., „Between Data and Demonstration: the Analytics and the *Historia Animalium*“, in ders. *Aristotle's Philosophy of Biology: Studies in the Origins of Life Science* (Cambridge: 2001) 39–71; Balme D.M., „Aristotle's use of division and differentiae“, in Gotthelf A. – Lennox J.G. (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge: 1987) 69–89.

³⁴ Bäumer, *Die Biologie von der Antike bis zur Renaissance* 48–49.

Kiefergelenks Grundlage der Klassifizierung (eine systematische anatomische Datenerhebung hat Aristoteles nicht erstrebt), sondern ein äußerlich leicht wahrnehmbares morphologisches („Vierfüßigkeit“) und physiologisches Merkmal („lebendgebärend“).

Wottons zoologische Methode *De differentiis animalium* geht in mehrfacher Hinsicht von Aristoteles aus. Die Klassifizierungsansätze, die er unter anderem in der *Historia animalium* antraf, regten ihn an, diese in ein *beschreibendes zoologisches Kompendium* umzusetzen. In Anbetracht der Tatsache, dass Aristoteles' umfassende Beschreibung des Tierreichs eben nicht als systematische Klassifizierung angelegt war, erschien Wotton gerade ein dergestalt eingerichtetes zoologisches Handbuch als Desideratum. Diese Diskursorganisation lässt sich in Bezug auf die *Mammalia* beobachten. Wotton übernimmt die aristotelische Kategorie der Vierfüßer³⁵ („quadrupes“), die er wie dieser in „lebendgebärende Vierfüßer“ („quadrupes viviperi“) und eierlegende Vierfüßer (vierfüßige Reptilien), die *quadrupes viviperi* in Mehrzeher³⁵ („multifida“), Paarhufer („bisulca“) und Unpaarhufer („solipedes“) unterteilt. Andere Unterscheidungen verlieren demgegenüber ihren klassifizierenden Wert.³⁶

Wottons Klassifizierungsdiskurs hat den wissensorganisatorischen und didaktischen Vorteil der eindeutigen Zuordnung, jedoch den Nachteil der Grobmaschigkeit und der einseitigen Überbewertung einzelner Merkmale. Die Kategorie, der er in seiner Zoologie den Löwen zurechnete, die Mehrzeher, ist dafür bezeichnend. Damit entstand ein Klassifikationssammelbecken, das völlig Unterschiedliches auffängt. Die Kategorie der Mehrzeher (fol. 56v–57v) vereint sowohl vom äußeren Erscheinungsbild als auch von der Anatomie, der Physiologie und vom Verhalten her – und zwar bereits aufgrund der zu Wottons Zeit

³⁵ Die Übersetzung von „multifida“ in „Vielzeher“ ist weniger zutreffend, da es bekanntlich um maximal fünf Zehen geht.

³⁶ Nach Bäumer, „Das erste zoologische Kompendium“ 18 habe Wotton „durchgehend [...] die Unterscheidung zwischen Land- und Wassertieren“ durchgeführt (Bluttiere: A. Landtiere. B. Wassertiere; Blutlose Tiere: A. Landtiere. B. Wassertiere). Es ist jedoch fraglich, ob Wotton diese Unterscheidung in der Tat „durchgehend“ durchgeführt hat. Z.B. bei den „lebendgebärenden Vierfüßern“, von denen Bäumer berichtet, Wotton habe sie insgesamt als „Landtiere“ aufgefasst, finden sich Tiere, die Wotton selbst explizit als Wassertiere bezeichnet, u.a. die Robbe („Seekalb“), der Otter, das Flußpferd und der Biber. Vgl. Wotton, *De differentiis animalium* V, fol. 70r–v „De quadrupedis aquaticis ut de fibro, lutro et quibusdam aliis“; fol. 70v–71r „De vitulo marino“ und fol. 81v. Für die Definition der Robbe und des Flußpferdes als Wassertier erachtet Wotton als entscheidend, dass sich diese Species die meiste Zeit im Wasser aufhalten und ihre Nahrung aus dem Wasser holen.

bekanntesten Fakten – eine unglaublich bunte Ansammlung von Tieren: den Elefanten (fol. 56v–57v), die Affenarten (fol. 57v–58v), die Hundarten (fol. 58v–61v), die Wolfsarten (fol. 62r–63r), die Hyäne (fol. 63r–v), den Löwen, Tiger (fol. 65r), Leoparden („panthera pardus“, fol. 65r–v), Bären (fol. 65v–66r), Fuchs (fol. 66v–67v), weiter das Stachelschwein („hystrix“), den Igel („erinaceus“) und den „scyurus“ (fol. 66r–v), den Hasen (fol. 66v–67v), die Katze und die Wieselartigen („mustelarum genera“, fol. 67v–68v), die Maus und die Mäuseartigen (fol. 68v–69v), den Biber („fiber“) und den Otter („lutra“, fol. 70r–v), die Robbe („vitulus marinus“, fol. 70v–71r), den Maulwurf, die Fledermaus („vespertilio“, fol. 71r–v) und verschiedene Fabeltiere Indiens und Äthiopiens (fol. 71v–72r).³⁷ Affen (Ordnung: Primates) unterscheiden sich morphologisch, physiologisch und verhaltensbiologisch stark von Raubtieren (Ordnung: Carnivora) oder Elefanten (Ordnung: Proboscidea). Ähnliches gilt mutatis mutandis für Elefanten und Nagetiere (Ordnung: Rodentia), Fledermäuse (Ordnung: Chiroptera) und Raubtiere, Igel (Ordnung: Eulipotyphla) und Affen, Raubtiere und Hasentiere (Ordnung: Lagomorpha) usw.

Diese Ausführungen haben nicht den Sinn, Wottons Klassifizierung im Hinblick auf die moderne Taxonomie als unhaltbar abzutun. Vielmehr soll die Orientierung seines zoologischen Diskurses sichtbar gemacht werden. Wotton versuchte, Aristoteles sowohl nachzuahmen als auch im Hinblick auf die klassifikatorische Präsentationssystematik zu übertreffen.³⁸ Von dieser Diskursorientierung ausgehend ist er von vorneherein bereit, Ungereimtheiten, Dissonanzen und Diskontinuitäten in Kauf zu nehmen. Was die Mehrzeher betrifft, fällt auf, dass er sich nicht bemüht, weitere kategorieimmanente Gemeinsamkeiten festzustellen. Daraus darf man nicht den Schluss ziehen, dass Wotton dazu nicht imstande gewesen wäre. Diese interessierten ihn einfach zu wenig. Es erscheint mir zu einfach, Wotton wissenschaftsteleologisch die ‚fortschrittliche‘ ‚Errungenschaft‘ zuzuschreiben, ein „natürliches Klassifizierungssystem“ entworfen zu haben. Man müsste die Frage stellen, wie „natürlich“ und empiriebezogen diese Ordnung denn eigentlich

³⁷ In Bäumers „Das erste zoologische Kompendium“ 24 findet sich überraschenderweise der Bericht, dass Wotton in seiner Darstellung der Mehrzeher den Biber, Otter, die Katze, den Panther und das Wiesel weggelassen hätte, obwohl Aristoteles diese Species behandelte. Diese Tiere werden von Wotton sehr wohl behandelt.

³⁸ Bäumers Formulierung „aristotelischer als bei Aristoteles“ trifft diesbezüglich zu; vgl. *Geschichte der Zoologie* 40.

sei. Wie aus dem Untenstehenden hervorgehen wird, hat Wotton zur Erstellung seines Klassifikationssystems im Grunde keine empirischen Beobachtungen angestellt. Interessant ist nicht die Frage, wie ‚fortschrittlich‘ Wotton gewesen sei, sondern was den Diskurs ausmacht, in dem er operierte. Die systematisierende Weiterführung des von Aristoteles autorisierten Wissensschatzes war für Wotton offensichtlich ungleich bedeutender als die Verlagerung des Wissens zur Empirie hin.

Das gilt auch überraschenderweise auch für die empirienahen Methoden der Induktion und der Komparatistik. Beide Methoden gehen von der empirischen Deskription der wahrnehmbaren Wirklichkeit aus. Wotton war von der Induktion und der Komparatistik fasziniert. Daraus folgt jedoch nicht automatisch, dass er sich verpflichtet fühlte, seine Angaben auf *eigene empirische Beobachtungen* zu gründen, obwohl ihm Bäume solche zuzuschreiben scheint.³⁹ Interessanterweise hat er gleichwohl den Versuch gemacht, sein Vorbild Aristoteles im Hinblick auf die induktive und komparatistische Erfassung der Tierarten zu übertreffen. Induktion und Komparatistik sind die Methoden, mit denen Aristoteles durch das möglichst genaue Feststellen der Unterschiede zwischen den Tieren die Definition derselben in einzelne, nicht weiter teilbare Arten vorgenommen hat.⁴⁰ Dass Wotton die aristotelische Komparatistik als Grundlage verwendete, zeigt schon der Titel seiner Zoologie (*De differentiis*) an. Interessant ist, dass er sich bemühte, die einzelnen, von Aristoteles unterschiedenen Tiersorten weiter zu differenzieren bzw. in Arten oder Unterarten⁴¹ zu gliedern.

Das Kapitel über den Löwen ist ein Musterbeispiel für diese Diskursorientierung. Das Kapitel trägt bezeichnenderweise nicht den Titel

³⁹ Bäumer, „Das erste zoologische Kompendium“ 17 schreibt Wotton zu, dass er die antike Zoologie „durch eigene Beobachtungen ergänzt“ habe. Es ist wahrscheinlich, dass sie damit empirische Beobachtungen meint. Letzte lassen sich jedoch schwerlich feststellen und widersprechen Wottons eigenen Angaben aus dem Vorwort (s. unten).

⁴⁰ Balme, „Aristotle’s use of differentiae in zoology“.

⁴¹ Der Artenbegriff soll an dieser Stelle bewusst offen formuliert werden. Wotton kannte weder einen genau definierten Artenbegriff, wie ihn die moderne Zoologie – von genetischen Grundlagen ausgehend – hantiert, noch machte er einen systematisch fundierten Unterschied zwischen Art (Species) und Unterart (Subspecies). Die problematisierende Diskussion des Artenbegriffs (als Korrektur des Darwinschen Artenkonzepts) fand erst gegen die Mitte des 20. Jahrhunderts statt. Grundlegend dazu: Mayr E., *Systematics and the Origin of Species* (New York: 1942) und *Animal Species and Evolution* (Cambridge Mass.: 1963).

„Vom Löwen“ („De leone“), sondern „Von Löwen“ („De leonibus“),⁴² d.h. „Von Löwenarten“. Diese von der Titelei ausgehende Diskursorientierung lässt sich mehrfach beobachten, z.B. beim Hund („Von Hundarten“ – „De canibus“)⁴³ und beim Wolf („Von Wolfsarten“ – „De lupis“).⁴⁴ Gleich der erste, vergleichsweise sehr ausführliche Abschnitt des Kapitels „Von Löwen“ (etwa ein Drittel) ist der Differenzierung des Tieres in 7 Arten gewidmet, die durch die komparatistische Feststellung verschiedener Merkmale definiert und geographisch eingeordnet werden.

Wotton unterscheidet im Gegensatz zu Aristoteles zwei europäische, eine parthische und armenische (vorderasiatische), eine arabische (Verbreitungsgebiet: arabische Halbinsel), eine afrikanische (= nordafrikanische) und zwei äthiopische Arten des Löwen. Der gemeine europäische Löwe soll stärker als der afrikanische und der vorderasiatische sein. Daneben gibt es die Species des Donaulöwen (sic), der ebenso schwach wie der vorderasiatische sein soll. Der vorderasiatische (parthische und armenische) Löwe zeichne sich durch einen großen Kopf, „funkelnde, leuchtende Augen“ („oculis splendore radiantibus“), durch „lange, bis auf die Nase herabhängende Augenbrauen“ („superciliis extantibus et fere ad nares usque propendentibus“) und eine dichte, reiche Mähne aus. Vom vorderasiatischen Löwen unterscheide sich der arabische Löwe, der sonst ähnliche Körpermerkmale besitze, durch seine weitaus größere Aggression und einzelgängerische Lebensweise. Der afrikanische Löwe zeichne sich im Unterschied zu den europäischen, vorderasiatischen und arabischen Löwenarten durch eine schwarze bzw. schwarzblaue Körperfarbe aus: „Sie besitzen am ganzen Körper eine schwärzliche und sehr dunkle Färbung, jene Farbe, die entsteht, wenn man blau und schwarz mischt“ („Totius corporis color nigricans his fuscusque, ac si nigrum coeruleo permisceas“). Außerdem hat er eine kürzere Mähne als der europäische, der vorderasiatische und der arabische Löwe. Die eine äthiopische Löwenart hat einen schwarzen Körper und ein rötlichgelbes Gesicht, die andere ist in etwa so groß wie ein Hund oder ein ägyptischer Wolf („magnitudo Aegypti luporum“), während sie ein glattes, kurzhaariges und goldbraunes Fell, jedoch *keine Mähne*

⁴² *De differentiis animalium* fol. 63v–64r.

⁴³ Ebd. fol. 58v–61v.

⁴⁴ Ebd. fol. 62r–63r. Wotton unterscheidet 10–14 Wolfsarten.

besitzt, sehr schnell ist, Luftsprünge macht und im Boden lebende Tiere ausgräbt.⁴⁵

Wottons Streben nach einer weiteren Differenzierung und Verfeinerung der Klassifizierung in einzelne Arten und Unterarten ist umso auffälliger, als er dafür über *keine empirischen Beobachtungen* verfügte. Er hat die betreffenden Gebiete nie besucht noch frühneuzeitliche Reise- oder Forschungsberichte systematisch ausgewertet. Schon deswegen würde ein Versuch, Wottons Löwenarten mit heute bekannten Subspecies⁴⁶ des Löwen zu identifizieren, auf nichts hinauslaufen. Auch spielt die Tatsache, dass der Löwe in nahezu allen Gebieten, die Wotton einbezieht, heute ausgestorben ist, keine wesentliche Rolle.⁴⁷

Wotton hat seine Unterteilung in Arten/Unterarten vielmehr aus einigen antiken Schilderungen des Aussehens des Löwen abgeleitet, welche weder systematischen Klassifizierungsversuchen gewidmet sind noch überhaupt als zoologische Forschungsberichte einzustufen sind, besonders aus einem Gedicht des griechischen Schriftstellers und Redners Oppian von Apameia (3. Jh. n. Chr.), *Von der Jagd (Kýnegetika)*, einem Lehrgedicht, in welchem der Löwe als Jagdobjekt dargestellt wird. In diesem Gedicht findet sich die ‚Information‘, dass der afrikanische Löwe zu schwärzlicher Körperfarbe neige. An derselben Stelle stellt der Dichter die Löwen Äthiopiens als schwarz mit einem rötlichgelben Gesicht⁴⁸ und die arabischen Löwen als außerordentlich angriffslustig dar. Offensichtlich hat Oppian bei seinen Schilderungen des afrikanischen Löwen und der einen äthiopischen Löwenart den Löwen mit der Species *Panthera pardus* (Leopard) verwechselt, welche auch rein schwarz auftritt.⁴⁹ Ebenso dürfte der „hundegroße“, kurzhaarige und mähnenlose Löwe Äthiopiens auf eine Verwechslung mit einer anderen Species zurückzuführen sein, am ehesten wohl mit dem Karakal (*Felis*

⁴⁵ Ebd. fol. 64r. Diese zweite äthiopische Löwenart soll auch in den Wüstengebieten Indiens vorkommen.

⁴⁶ Katangalöwe (*Panthera leo bleyenbergii*: Simbabwe, Angola, Demokratische Republik Kongo); Asiatischer Löwe (*Panthera leo persica*: Gir-Nationalpark); Massailöwe (*Panthera leo massaicus*: Kenia, Tansania, Uganda); Senegallöwe (*Panthera leo senegalensis*: West-Afrika); Transvaallöwe (*Panthera leo krugeri*: Transvaal).

⁴⁷ Mit Afrika meint er das ans Mittelmehr grenzende Nordafrika. Seine Konzeption von „Äthiopien“ ist ungenauer und weitläufiger als das heutige Äthiopien: Wottons „Äthiopien“ zieht sich tief nach Mittelafrika hinab.

⁴⁸ Oppian, *Kýnegetika* IV, 147.

⁴⁹ Macdonald (Hrsg.), *Enzyklopädie der Säugetiere* 28. Leoparden gibt es übrigens auch noch heute in Nordafrika, den sog. Berberleopard (*Panthera pardus panthera*: Marokko, Algerien, Tunesien).

caracal; Wüstenluchs). Der Karakal weist ein glattes, gelbbraunes Fell und eine Körperlänge auf, welche in etwa einem Hund oder einem kleinen Wolf⁵⁰ entspricht, macht Luftsprünge und gräbt im Boden lebende Tiere aus.

Ähnlich ist Wotton in Bezug auf andere Tierarten vorgegangen, etwa den Wolf (Species: *Canis lupus*). Auch dort bemüht er sich, das Tier in möglichst viele Arten bzw. Unterarten zu gliedern (ca. 10–14), die er wiederum ausschließlich aus der antiken Literatur bezieht.⁵¹ Um die Differenzierung möglichst vielgliedrig zu gestalten, ist er bereit, Hybriden (Mischwesen), potentiell artfremde Tiere und anderes Ungereimtes aufzunehmen. Beispiele sind der „Thos“ oder Äthiopische Wolf, ein Mischwesen, das aus der Paarung eines Wolfsmännchens und eines Leopardeweibchens („ex lupo et panthera prognatus“) hervorgehen soll (mit Wolfsgesicht und Leopardenkörper),⁵² der Gepard („*Lycaon*“),⁵³ zwei Luchsarten (eine große und eine kleine), der „*lupus canarius*“, der zugleich ein Panther sein soll, oder der „*Chaus Rhapsilus*“, ein in Gallien vorkommendes Mischwesen zwischen Wolf und Leopard.⁵⁴ Auch in Bezug auf den Wolf ist es müßig, Wottons Arten mit den heute bekannten Subspecies des Wolfes (z.B. Europäischer Wolf; Steppenwolf; Tundrawolf)⁵⁵ identifizieren zu wollen. Unter Wottons Wolfsarten befinden sich mindestens fünf Species aus der Familie der Katzenartigen (*Felidae*). Obwohl Wotton natürlich nicht über die heute bekannten Daten verfügen konnte, war ihm dennoch klar, dass hier etwas nicht stimmen könne: Denn er wälzt die Verantwortung für die Zuschreibungen auf andere Gewährsmänner ab. „Manche zählen die Luchse dieser Tiergattung (sc. Wolf) zu“.⁵⁶ Es ist bezeichnend für die Klassifizierungsverliebtheit seines zoologischen Diskurses, dass er die fragwürdigen oder unglaubwürdigen Arten dennoch in seine Liste aufnimmt.

⁵⁰ Unter einem „Ägyptischen Wolf“ verstand man eine kleine Wolfsart; vgl. Plinius, *Naturalis historia* VIII 80. Für dieses Buch der *Naturalis historia* siehe C. Plinius Secundus d. Ä., *Naturkunde. Lateinisch – deutsch. Buch VIII. Zoologie: Landtiere*. Herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Gerhard Winkler (Kempten: 1976).

⁵¹ *De differentiis animalium* fol. 62r–v.

⁵² Ebd. 62r.

⁵³ Ebd. 62v.

⁵⁴ Ebd.

⁵⁵ Vgl. Macdonald (Hrsg.), *Enzyklopädie der Säugetiere* 43.

⁵⁶ *De differentiis animalium* fol. 62v.

*Vorstoß ins Innere der Tiere:
Der Anatomiediskurs zwischen Empirie und Antiempirie*

Auffällig ist, dass in Wottons Beschreibungsmethode die inneren Körpermerkmale betont werden. Immer wieder macht Wotton Angaben zu Muskeln, Knochen, Sehnen, Innereien usw. Die Annahme liegt nahe, dass Wottons Interesse am Inneren der Tiere mit seiner Ausbildung und seinem Beruf verbunden war. Wotton war Doctor in der Medizin und übte in London den Beruf eines praktischen Arztes aus. Als Mediziner war er sowohl theoretisch als praktisch mit der Anatomie vertraut. Von besonderer Bedeutung ist, dass er in Norditalien studiert hatte (Padua, 1523–1526): Die medizinischen Fakultäten Paduas und Bolognas waren Hochburgen der Anatomie und befanden sich in einem wissenschaftlichen Wettlauf um den Kompetenzprimat in diesem Wissenschaftszweig.⁵⁷ Die Leichensektion gehörte zum Studienprogramm. Außerdem publizierten die Anatomen Paduas und Bolognas lateinische Handbücher, in denen sie ihre empirischen Erkenntnisse darlegten. Als Wotton mit dem Studium anfang, waren kurz zuvor zwei Lehrgänge erschienen, welche die Anatomie durch systematische Leichensektion und Vivisektion auf eine neue, empirische Grundlage stellten: Berengario da Carpis (um 1460–um 1530) *Commentaria cum amplissimis additionibus super anatomia Mundini* [...] (Bologna: 1521), welche die herkömmliche Schulanatomie des Raimondo Mondino de' Luzzi (ca. 1275–1326) berichtigte, und die *Isagoge brevis* (Bologna: 1522) desselben Autors. Berengario da Carpi, der wie schon sein Vater ein Chirurg war und in den nämlichen Jahren diese Disziplin an der Universität Bologna unterrichtete, setzte die Empirie als unverzichtbare, absolute Grundlage anatomischen Wissens voraus.⁵⁸ Er forderte vom Anatomen, dass er möglichst häufig Sektionen betreiben sollte.

Von besonderem Interesse ist, dass Tiere als Forschungsobjekte eine sehr wichtige Rolle spielten. Das erhellt erstens daraus, dass man sie leichter beschaffen konnte und zweitens, dass in Bezug auf sie ethische Einwände, die sich der Sektion von Menschen in den Weg stellten, nicht galten. Berengario forderte den Anatomen auf, so viele Tierarten wie möglich auf den Seziertisch zu legen, und zwar sowohl männliche als

⁵⁷ Vgl. French R.K., „Bologna and Padua: Anatomical Rationalities“, in ders., *Dissection and Vivisection in the European Renaissance* (Aldershot: 1999) 73–100.

⁵⁸ Ebd. 94.

auch weibliche, sowohl alte als auch junge Individuen.⁵⁹ Berengario hat Hunderte Tiere seziiert, sowohl tote als auch – ein modernen Tierliebhabern unerträglicher Gedanke – lebende. Unter anderem inspizierte er die Beschaffenheit des Gehirns und der Herzkammer durch Vivisektion: „und ich habe lebende Tiere seziiert: und sofort beim ersten Eingriff, wenn das Leben noch da ist, wollte ich die Herzkammer betrachten, und ich traf darin ein große Menge Wasser an, während sich das Herz noch stark bewegte“ („et ego anatomizavi animalia viva: et statim in primo occurso, dum adhuc staret vita, volui videre pericardium, et vidi multam aquam in ipsa adhuc stante forti motu cordis“).⁶⁰

Man darf also annehmen, dass der Mediziner Wotton schon von seinem Studium her mit der Sektion von Tieren vertraut war. Es scheint daher auf der Hand zu liegen, dass er seine anatomischen Kenntnisse auf seine zoologischen Beschreibungen anwendete.

Das Interesse Wottons am inneren Bauplan der Tiere tritt im Kapitel über die Löwen klar hervor: Unter anderem behandelt er das Skelett und den Knochenbau des Löwen, das Knochenmark, die Zunge und die Zähne.⁶¹ Zum Skelett gibt Wotton an, dass der Löwe keine Halswirbel besitze, sondern stattdessen einen einzigen Knochen („cervix osse uno rigida constat nec vertebrae ulli iungitur“; „Der starre Hals setzt sich aus einem Knochen zusammen und wird nicht mit Wirbeln verbunden“). Außerdem seien die Knochen des Löwen insofern merkwürdig, als sie nur einen winzigen Hohlraum und kaum Knochenmark aufwiesen. Die Knochen seien so hart, dass man sie wie Feuersteine zum Feuermachen verwenden könne. Von seinen Zähnen soll der Löwe nur die vier Reißzähne (Eckzähne, dentes canini) wechseln, und zwar im sechsten Monat. Übrigens unternimmt Wotton keinen Versuch, diese Merkmale funktionsanalytisch zu deuten. Er stellt nicht die Frage, welchen Sinn diese anatomischen Besonderheiten haben sollen, z.B., was der Vorteil des „starren“ Nackens aus einem Bein oder des mangelnden Hohlraums im Knochen sei. Die Angaben bleiben als lose morphologische Daten im Raum stehen.⁶²

⁵⁹ *Commentaria cum amplissimis additionibus super anatomia Mundini* [...] (Bologna: 1521) fol. 3r.

⁶⁰ Ebd. fol. 439r.

⁶¹ *De differentiis animalium* 64r.

⁶² Das gilt übrigens auch für die treffende Beschreibung der Zunge des Löwen, die rau wie eine Feile sein und „ziegelartige“ Erhebungen aufweisen soll.

Aus ihnen wird interessanterweise ersichtlich, dass Wotton, obwohl er als Arzt mit der Sektion von Tieren vertraut war, weder seine Daten aus empirischer Forschung bezogen hat noch sein tieranatomisches Wissen in seinem zoologischen Deskriptionsdiskurs anwendete. Wenn er jemals einen Löwen seziiert oder empirische Erkenntnisse eines anderen frühneuzeitlichen Anatomen verwertet hätte, hätte er die Angaben unschwer falsifizieren können. Er hätte z.B. erkennen können, dass die Löwen sehr wohl Halswirbel besitzen (sieben, wie alle Karnivoren und die meisten Säugetiere).⁶³ Auch hätte er wahrscheinlich wahrgenommen, dass es andere Eigenschaften gibt, die das Skelett des Löwen auszeichnen: z.B. dass das Schlüsselbein gegenüber anderen Säugern stark reduziert ist und Elle und Speiche sowie die Handwurzelknochen verwachsen sind. Die moderne Zoologie interpretiert diese Besonderheiten evolutionsbiologisch und funktionsanalytisch als Anpassungen an das Jagdverhalten: Die Verwachsungen wirken stabilisierend und beugen Verdrehungen bei Jagdsprints vor,⁶⁴ die Reduktion des Schlüsselbeins wirkt sich günstig auf die Laufschnelligkeit aus.

Es wäre möglich, dass Wotton auf die Sektion des Löwen verzichtete, einfach weil keiner vorrätig war. Jedoch hätte er in diesem Fall auf analoge Beobachtungen über die Anatomie anderer leicht erwerbbarer Karnivoren, etwa des Hundes oder der Hauskatze, zurückgreifen können. Denn bei Aristoteles traf er einen klaren Hinweis an, dass sich eine solche Untersuchung lohnen würde: „Die Anatomie des Löwen ähnelt in jeder Beziehung der des Hundes“. Obwohl Wotton diesen interessanten Satz in seinem Kapitel „Von Löwen“ zitierte („interiora item omnia canibus similia continet“, fol. 64r), unternimmt er bezeichnenderweise keinen Versuch, die Daten durch empirische Augenschau zu überprüfen.⁶⁵

Aus Wottons Beschreibung des Löwen lässt sich ableiten, dass um die Mitte des 16. Jahrhunderts zwischen dem medizinischen anatomischen Wissen und der zoologischen Beschreibungspraxis auffällige Diskursunterschiede vorhanden waren. Wottons Fall ist diesbezüglich umso aussagekräftiger, als er Arzt und Zoologe in Personalunion war.

⁶³ Die Tatsache, dass die meisten Säugetiere 7 Halswirbel besitzen, war Wotton übrigens bekannt. Vgl. *De differentiis animalium* fol. 14r „In collo septem vertebrae sunt“.

⁶⁴ Vgl. Macdonald (Hrsg.), *Enzyklopädie der Säugetiere* 4.

⁶⁵ Dasselbe gilt für den Wolf, der wie der Löwe keine Halswirbel besitzen soll. Wotton hat weder einen Wolf seziiert noch Daten von Wolfssektionen anderer verwendet noch die anatomischen Daten über den Wolf systematisch mit denen des Hundes zusammengeführt. Vgl. *De differentiis animalium* fol. 62r.

Während der Arzt Wotton von der Bedeutung der Empirie überzeugt war, bildete für den Zoologen Wotton empirischer Datenerwerb offensichtlich keine wesentliche Grundlage.

Denn die Angaben zur Anatomie des Löwen gehen sämtlich auf Aristoteles und andere antike Autoren zurück. Es war Aristoteles, der die merkwürdige Behauptung in die Welt gesetzt hat, der Löwe besitze keine Halswirbel, sondern nur einen einzigen Knochen.⁶⁶ Andere antike Autoren – z.B. Aelian und Plinius d. Ä. – haben sie übernommen.⁶⁷ Auch die scheinbar aus der Empirie gewonnene Beobachtung, dass Löwen nur ihre Reißzähne wechseln, und zwar im sechsten Monat, geht auf Aristoteles zurück.⁶⁸ Sie ist übrigens nicht richtig: Löwen wechseln ihr gesamtes Milchgebiss. Schließlich fußt auch die Bemerkung, man könne mit Löwenknochen Feuer schlagen, nicht auf einer empirischen Beobachtung Wottons. Die Quelle der – freilich unrichtigen – Behauptung, die übrigens auch Plinius überlieferte,⁶⁹ ist abermals Aristoteles.⁷⁰

Den Mangel an authentischen empirischen Beobachtungen zur Anatomie darf man nicht als Unfähigkeit auffassen. Wenn Wotton gewollt hätte, hätte er sehr wohl neue empirische Daten sammeln oder empirische Forschung verrichten können, zumal er ein geschulter Mediziner war und sich in der Anatomie auskannte. Er hat dies jedoch wissentlich und willentlich vermieden. Denn im Vorwort zu seiner Zoologie hielt er sich zugute, dass das Wissen, das er vermittele, nicht auf eigener, ursprünglicher und empirischer Forschung beruhe: „Du wirst in dem Werk so gut wie nichts antreffen“, sagt er im Widmungsvorwort, „was aus meinem Kopf entsprungen ist“ („Neque hic fere quicquam invenies, quod e meo capite natum statuatur“).⁷¹ Was er hier wiedergebe, beschränke sich auf die an sich als wertvoll eingestuften Lehrmeinungen („sententiae“) der antiken Autoren.⁷²

⁶⁶ Aristoteles, *Historia animalium* II 1, 497b 16; *De partibus animalium* IV 10, 686 a 22.

⁶⁷ *Naturalis historia* VIII 177; Aelian, *Historia animalium* IV 34.

⁶⁸ Aristoteles, *Historia animalium* VI 31, 579b 13; *De generatione animalium* V 8, 788b 16.

⁶⁹ Plinius, *Naturalis historia* IX 214. Für dieses Buch der *Naturalis historia* siehe C. Plinius Secundus d. Ä., *Naturkunde. Lateinisch – deutsch. Buch IXI. Zoologie: Insekten. Vergleichende Anatomie*. Herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Joachim Hopp (München-Zürich: 1990).

⁷⁰ Aristoteles, *Historia animalium* III 7, 516b 10; *De partibus animalium* II 9, 655a 15.

⁷¹ *De differentiis animalium* fol. a iii v.

⁷² Ebd.

*Wottons Diskurs frühneuzeitlicher zoologischer Datenerhebung:
Das Verbreitungsgebiet des Löwen*

Insgesamt fällt in Wottons Beschreibung der Mangel an genauen Mess- und Zähl-daten sowie empirischen Daten auf. Der Leser kann der Beschreibung nicht entnehmen, wie lang, hoch und schwer der Löwe ist, wie lange er lebt, wie viele Tage die Tragzeit dauert usw. Für dieses Diskursmerkmal sind Wottons Angaben zum Verbreitungsgebiet des Löwen besonders bezeichnend. Bäumer gibt an, dass Wotton das antike zoologische Wissen aktualisiert, „den Bedürfnissen der eigenen Zeit angepasst“ und „durch eigene Beobachtungen ergänzt“ habe.⁷³ Es erscheint mir fraglich, inwiefern dies in der Tat der Fall war. Im Kapitel „De leonibus“ berichtet Wotton z.B., dass sich der Löwe „eher in Europa als in Asien aufhalte“ („in Europa potius quam in Asia inveniuntur leones“).⁷⁴

Diese Angaben sind überraschend weit von den realen Gegebenheiten entfernt. In Europa war der Löwe um die Mitte des 16. Jahrhunderts längst ausgestorben (jedenfalls seit der römischen Antike), während er jedoch in Asien ziemlich häufig war.⁷⁵ Wotton wertete klar ersichtlich keine Reiseberichte aus. Hätte er dies getan, hätte er ersehen können, dass Löwen in rezenter und subrezenter Zeit in Asien nachdrücklich attestiert waren (vgl. unten). Das ‚Fakt‘, dass es in Europa Löwen gebe, hat Wotton aus antiken Quellen erhoben, z.B. aus Aristoteles, Plinius d. Ä. oder Aelian. Plinius teilt mit, dass es nach Aristoteles „in Europa nur zwischen den Flüssen Acheloos und Mestos Löwen gebe“ („Is [Aristoteles] tradit [...] in Europa [...] inter Acheloum tantum Mestumque amnes leones esse“).⁷⁶ Es ist übrigens kein Zufall, dass

⁷³ „Das erste zoologische Kompendium“ 17.

⁷⁴ *De differentiis animalium* fol. 63v. Zusätzlich findet sich die Angabe, dass europäische Löwen stärker seien als die afrikanischen und sie syrischen, jedoch mit Ausnahme der Löwen, die im Donaugebiet leben („Qui vero prope Istrum Europae amnem [...] procreantur, non adeo viribus pollent“, ebd.). Vgl. weiter fol. 25r „Item leones in Europa potius sunt“. In diesem Kapitel (28) macht Wotton theoretische Angaben zum Verbreitungsgebiet der Tiere. Daraus geht hervor, dass die europäischen Species „stärker“ („fortiores“), die asiatischen wilder („efferaiores“) und die afrikanischen „vielfältig“ („multiformes“) sein sollen.

⁷⁵ Der asiatische Löwe (*Panthera leo Persica*) ist in der Gegenwart auf ganz geringe Bestände im Gir-Nationalpark (Indien) zusammengeschmolzen und akut vom Aussterben bedroht. Keller vermutet, dass der europäische Löwe möglicherweise schon in mykenischer Zeit ausgestorben war (Keller O., *Die antike Tierwelt* I (1909) 36).

⁷⁶ Plinius, *Naturalis historia* VIII 45; Aristoteles, *Historia animalium* VI 31, 579b 7; VIII 28, 606b 15.

Plinius die Verantwortung für die Angabe seinem Gewährsmann („is tradit“ „er überliefert“) überträgt: Plinius war sich nicht sicher, ob sie richtig sei. In der Tat war der Löwe schon zu Plinius' Zeit in Europa ausgestorben, ja nicht einmal Aristoteles (* 384) stützte seine Angabe auf Autopsie, sondern bezog sie – wie die enge intertextuelle Verknüpfung zeigt – aus dem Geschichtswerk des ca. 100 Jahre vor ihm geborenen Herodot.⁷⁷

Der zoologische Diskurs Wottons scheint also – im Gegensatz zu Aristoteles – überhaupt nicht wesentlich darauf ausgerichtet gewesen zu sein, das Tier in der Gegenwart und aufgrund authentischer empirischer Beobachtung festzulegen. Anstatt des Verbreitungsgebiets zu seiner eigenen Zeit vermittelt er das (von ihm für wahr gehaltene) Verbreitungsgebiet der Löwenarten in der Antike, einer Periode, die sich in einem Abstand von ca. 2550–ca. 1350 Jahren zu Wottons Zeit befindet. Dies darf man nicht als Nebensächlichkeit oder Unzulänglichkeit oder Unfähigkeit zu empirischer Forschung abtun. Es liegt vielmehr eine bewusste Diskursorientierung vor.

Humanistische Wissensverwaltung und humanistisches Sammeln

Es ist von grundlegender diskursregulierender Bedeutung, dass Wotton seine Zoologie wesentlich als ein Projekt der Wissensverwaltung verstanden hat. Wie er im Widmungsvorwort an Edward VI. mitteilt, ist es sein Hauptziel, den in den Schriften der Antike vorhandenen Wissensschatz zu bergen und dem modernen Leser in der Form eines gut zugänglichen Kompendiums zu vermitteln.⁷⁸ Da sowohl der zoologische Diskurs Wottons als auch die zoologische Information vielfach auf Aristoteles zurückgeht und die zoologischen Schriften des Aristoteles vorrätig waren, stellt sich natürlich die Frage, was den Mehrwert seines

⁷⁷ Herodot, *Historiae* VII 125; vgl. Steier A., „Löwe“ 970, 19 ff. Herodots Angabe wurde auch von Aelian, *Historia animalium* XVIII 36 und Pausanias, *Periegesis* VI 5,3 übernommen. Herodot teilt mit, dass beim Durchzug des Xerxes durch Makedonien (480 v. Chr.) die Kamele des Trosses von Löwen angegriffen wurden. Daran knüpft er die Bemerkung, dass es zwar in dieser Gegend viele Löwen gebe, ihre Verbreitung in Europa sich aber auf das Gebiet zwischen den Flüssen Nestos, der das Gebiet von Abdera durchfließt, und des Acheloos in Arkanien beschränke. Durch die präzise Intertextualität zwischen der Herodot-Stelle und den Aristoteles-Stellen kann man ausschließen, dass sich Aristoteles' Angaben auf Autopsie stützen, was Steier („Löwe“, 970) überraschenderweise für möglich hält.

⁷⁸ *De differentiis animalium* fol. a ii r.

Werkes im Vergleich zu Aristoteles ausmache. Wotton beantwortet sie in dem Sinn, dass sein Werk eine *systematische Sammlung* darstelle, die weiter Vollständigkeit erstrebe und nach humanistischen Prinzipien angelegt sei. *Er erhebt den Anspruch, nicht nur das aristotelische, sondern das gesamte zoologische Wissen der Antike aufbereitet zu haben.* Das Problem, das er zu lösen versucht, liegt in der Tatsache, dass dieses Wissen in vielen sehr unterschiedlichen Werken verstreut war. Wotton beschränkt seine Quellen dabei keineswegs auf naturwissenschaftliche Werke: Er zitiert gleichermaßen Historiker, philosophische und belletristische Prosa und stets auch Dichter. Für sein Kapitel „Von Löwen“ hat er beispielsweise Ovids epische Mythologie, die *Metamorphosen*, des griechischen Dichters Oppian von Apameias Lehrgedicht *Kynegetika* (in Hexametern), das Werk des griechischen Historikers Herodot (5. Jh. v. Chr.) und die *Geographika* des griechischen Gelehrten Strabon aus dem 1. Jh. v. Chr. herangezogen.⁷⁹ Weiter war es Wotton ein besonderes Anliegen, die antiken medizinischen Autoren zu erschließen. Diese Texte stufte er sowohl als außerordentlich wertvoll als auch als schwer zugänglich ein. Wer soll diese spezialistischen Werke heutzutage noch lesen und verstehen? In ihnen ist ein Schatz zoologischen Wissens vorhanden, jedoch in völlig verstreuter und unsystematischer Form.⁸⁰ Als gelernter Mediziner und Humanist sei er, Wotton, in der Lage, diesen Schatz zu heben. Z.B. im Kapitel „Von Löwen“ zitiert er zwei medizinische Schriften, als deren Autor der griechische Arzt Galen geführt wurde.⁸¹

Zoologie bedeutet für Wotton also wesentlich: das eifrige und systematische Sammeln der verstreuten antiken Information. Diesbezüglich nimmt er für sich in Anspruch, unter den Intellektuellen der frühen Neuzeit der erste zu sein.⁸² Das Unternehmen Gesners, das sich diesbezüglich ähnliche Aufgaben stellte, war ihm zu diesem Zeitpunkt aller Wahrscheinlichkeit nach nicht bekannt.⁸³

Weiter ging Wotton davon aus, dass das Sammeln nach *humanistischen Gesichtspunkten* stattzufinden habe: Die humanistische Belesenheit in der

⁷⁹ Ebd. fol. 63v.

⁸⁰ Ebd. fol. a ii r.

⁸¹ *De usu partium* und *De simplicibus medicinis*; siehe *De differentiis animalium* fol. 63v.

⁸² Ebd. fol. a ii v.

⁸³ Jedenfalls gehörte Wotton nicht zu den Wissenschaftlern, mit denen Gesner über Zoologie korrespondierte (Vgl. Gesner, *Historia animalium* I, „Catalogus doctorum virorum [...]“).

antiken Literatur („eruditio“) bildet die Grundlage der zoologischen Wissenschaft. Weiter müssten die antiken Schriften „kritisch“ betrachtet werden. Damit meint Wotton keineswegs, dass man ihre Aussagen durch empirische Forschung überprüfen müsse, sondern dass man die Quellenautoren als Grundlagen des Wissens einem „Urteil“ („iudicium“) in Bezug auf ihren Wert und ihre Autorität zu unterziehen habe. Diesbezüglich gilt ihm als Faustregel, dass die ältesten Autoren („antiquissimi“) grundsätzlich „die besten“ („optimi“) sind. Das bedeutet, dass griechische Quellen grundsätzlich Vorrang gegenüber lateinischen erhalten. Das Kapitel „De leonibus“ kann auch in dieser Hinsicht als Beispiel dienen: Wotton gibt in der Kapitelüberschrift 8 griechische Werke, jedoch nur 2 lateinische als Quellen an. Durch diese Diskursgestaltung wird der zoologische Hauptautor Plinius von Wotton bis zu einem gewissen Grad *ent-autorisiert*. Das zeigt sich sehr augenfällig im Kapitel „De leonibus“: Obwohl Wotton Plinius’ Ausführungen⁸⁴ mehrfach, zum Teil in extenso benutzt und einige Male sogar wörtlich übernommen hat,⁸⁵ nennt er ihn in der Kapitelüberschrift nicht als Autor.

Für Wotton war es oberstes Gebot, dass ein guter Humanist das Griechische beherrschen soll. In der Tat verfügte er über ausgezeichnete Griechischkenntnisse. 1526, nachdem er von Bologna nach Oxford zurückgekehrt war, dozierte er Griechisch am Corpus Christi College. Der humanistisch geschulte, griechischkundige Wotton macht die griechischen Quellen einem breiteren Publikum von Intellektuellen zugänglich, indem er sie entweder ins Lateinische übersetzt oder, wo bereits lateinische Übersetzungen vorhanden waren, diese kontrolliert und, wenn nötig, korrigiert. Als Beispiel von Übersetzungen aus dem Griechischen, die gründlich korrigiert werden müssen, nennt er die Werke des um die Mitte des 15. Jh. tätigen Aristoteles-, Theophrast-

⁸⁴ *Naturalis historia* VIII, 41–60.

⁸⁵ Einige Beispiele für wörtliche oder nahezu wörtliche Übernahmen aus Plinius’ *Naturalis historia*: fol. 63v: „in Europa [...] inter Acheloum tantum et Mestum amnes [...] ii viribus longe praestantiores sunt iis, quos Africa aut Syria gignant [...]; fol. 64r: „parit [...] catulos informes [...] magnitudine mustellarum [...], ut semestres vix ingredi possint nec nisi bimestres moveri [...]“ (alle: Plinius, *Naturalis historia* VIII, 45); fol. 64v: „mingit crure elato ut canes (Plinius, *Naturalis historia* VIII, 46); [...] prostratis parcut [...] in viros potius quam in feminas saeviunt: infantes non nisi magna fame perimunt (Plinius, *Naturalis historia* VIII, 48). [...] Immota enim cauda est placido, clemens blandientique similis, quod rarum est. [...] In principio terra verberatur. Incremento terga seu quodam incitamento flagellantur [...] vis summa leoni in pectore est“ (Plinius, *Naturalis historia* VIII, 49).

und Alexandros von Aphrodisias-Übersetzers Theodor Gaza.⁸⁶ Die Übersetzungen sollten grundsätzlich nach humanistischen Gesichtspunkten angefertigt werden, d.h. sie müssen *ad sententiam* und nicht *verbatim* (Wort-für-Wort-Übersetzung) angelegt und in idiomatisch einwandfreiem Latein, das nach den Spielregeln der antiken Rhetorik strukturiert ist („orationis luce“), gestaltet werden. Als sorgfältiger Gräzist registriert Wotton die Tatsache, dass man nicht alle griechischen idiomatischen Ausdrücke geradewegs ins Latein übersetzen konnte. In diesen Fällen gibt er in einer Fußnote den griechischen Wortlaut wieder. Wichtig ist weiter, dass die antiken Quellen textkritisch überprüft werden. Die Kontrolle der Überlieferung steht dabei im Vordergrund. Dem Leser soll ein Text präsentiert werden, der der Kritik standhält. Nur kontrollierte Texte können den autoritativen Wahrheitsanspruch erheben, der die Grundlage der frühneuzeitlichen Zoologie bildet. Als Beispiele von stark korrupten antiken Texten nennt Wotton Athenaios' (um 200 n. Chr.) *Deipnosophistai* und Oreibasios von Pergamons (4. Jh. n. Chr.) Auszüge aus den Werken des Galen (*Iatrikai synagoga*).⁸⁷ Zu der diesbezüglichen erstrebten wissensverwalterischen Sorgfalt gehört, dass Wotton in Fußnoten Textvarianten verzeichnet, wodurch er dem Leser ermöglicht, die Textgrundlage nochmals zu überprüfen und etwaige Eingriffe in den überlieferten Text nachzuvollziehen. Dasselbe gilt für kommentierende Aufzeichnungen zu Textemendationen. Sie dienen der nochmaligen Kontrolle.

*Die zoologische Wissensautorisierung: Beleg der Schriftquellen
gegenüber empirischer Wahrnehmung*

Der Titel von Wottons Werk enthält ein auffälliges Element. Für den zoologischen Diskurs, der sich in ihm entfaltet, sind Quellenangaben offensichtlich so wichtig, dass sie im Titel angekündigt werden: *De differentiis animalium libri X, cum amplissimis indicibus, in quibus primum authorum nomina, unde quaeque desumpta sunt, singulis capitibus sunt notata* [...]. *Von den Unterschieden zwischen den Tierarten in zehn Büchern, mit sehr reichen Verzeichnissen, in denen erstens für jedes Kapitel die Namen der Quellenautoren*

⁸⁶ *De differentiis animalium* fol. a iii r. Zu Gaza vgl. Geanakoplos D.J., „Theodore Gaza, a Byzantine Scholar of the Palaeologan ‚Renaissance‘“, *Medievalia et Humanistica* 12 (1984) 61–81.

⁸⁷ *De differentiis animalium* fol. a iii v.

angeführt werden, welchen die einzelnen Angaben entnommen wurden [...]. Es ist ausgeschlossen, dass ein modernes zoologisches Werk mit einer so angelegten Titelei öffnen würde, die den Leser eher abstoßen als zum Kauf oder zur Benutzung überreden würde. Der nicht leicht verständliche Satz bezieht sich auf Folgendes: Nach dem Widmungsbrief findet sich ein Inhaltsverzeichnis. Dieses unterscheidet sich wesentlich von modernen Inhaltsverzeichnissen, für welche die Übersichtlichkeit oberstes Gebot ist. Dieses soll in möglichst kurzer Form den Inhalt des Werkes synoptisch aufschließen. Wottons Inhaltsverzeichnis weist hingegen eine Länge von 26 Foliospalten auf [Abb. 2].⁸⁸ Es bietet nicht nur den Inhalt der jeweiligen Kapitel, sondern auch – wie es die Titelei affizierte – die betreffenden Quellen dar. Als Beispiel möge die Angabe zum Kapitel 80 „Von Löwen“ dienen: „De Leonibus. Ex autoribus Aristotele in historia animalium. De partibus animalium. De generatione animalium. Oppiano De venatione. Ovidio in Metamorphosibus. Strabone. Herodoto. Solino. Galeno De usu partium. De simplicibus medicinis“. Am Ende des Werkes findet sich zusätzlich ein umfängliches Quellenverzeichnis, in welchem 208 Quellenautoren aufgelistet werden [Abb. 3].

Es ergibt sich die Frage, welchen Zweck diese nachdrücklich vortragenen Quellenangaben haben. Bäumer deutete Wottons Quellenangaben, obwohl sie die Präzision bemängelt, auf das „Bemühen des Renaissance-Humanismus um philologische Exaktheit“, das einen „methodischen Fortschritt“ darstelle.⁸⁹ Ich kann mich dieser wissenschaftsteologischen Interpretation nicht anschließen. Man betrachte als Beispiel die Quellenangaben zu Kapitel 80. Können die Angaben den Sinn haben, dem Leser die philologische Überprüfung, d.h. ein Nachschlagen der Zitate in den Originaltexten zu ermöglichen? Aristoteles' *Historia animalium* weist 9 (erhaltene) Bücher, Oppians *De venatione* 4, Ovids *Metamorphosen* 15 Bücher auf. Der Leser, der die betreffenden Stellen nachschlagen wollte, müsste Hunderte von Seiten lesen oder durchsuchen. Es ist klar, dass dies ein geradezu aussichtsloses Unterfangen wäre.

Aus diesem Befund muss man schließen, dass sie eine andere Funktion haben. Sie dienen der *Autorisierung* des dargelegten Wissens. Die

⁸⁸ Zum Vergleich: Macdonalds viel umfangreichere *Enzyklopädie der Säugetiere* (930 Großformatseiten) weist ein Inhaltsverzeichnis von nur 2 Seiten auf.

⁸⁹ Bäumer, „Das erste zoologische Kompendium“ 16.

SVMMATIM HÆC INSUNT LIBRIS
SINGVLIS, ATQVE EX IIS AV-
THORIBVS EXCERPTA.

In primo libro generatim explicatur, quibus modis constituuntur animalium Differentiæ: & præterea animalium partes recensentur.

- A**NIMAL quid sit, & quo differat ab iis quæ non sunt animalia. Ex authoribus. Platone in Timæo. Aristotele in historia animalium.
- De partibus animalium. De generatione animalium. De Anima. De sensu & sensu. De Iuuent. & senect. De somno & uigil. De Respiratione. Et Plinio. Cap. i. Fol. 1
- Quibus modis constitui debeant animalium Differentiæ. Ex Aristotele in histor. animalium. De partib. animalium. De sensu & sensu. ca. ii. fo. r. b
- Animalium genera amplissima. Ex Aristotele in historia animalium. cap. iiii. fol. 2. b
- De partibus animalium. Authores. Aristoteles in historia animalium. De partib. animalium. Galenus in li. De placitis Hippocratis & Platonis. In Methodo medendi. De inæquali intemperie. De facultatibus naturalibus. De usu partium. cap. iiii. fol. 3
- De partibus exterioribus dissimilaribus. Author Aristoteles in historia animalium. De partibus animalium. cap. v. ibid.
- De capite & eius partibus. Ex authoribus Aristotele in historia animalium. De partibus animalium. Cicerone De natura Deorum. Cornel. Celsus. Plinio. Galeno De ossibus. De Alimentorum facultatibus. De compositione medicamentorum per loca. In Commentariis in Aphorismos. Ex libro qui Introductorius inscribitur. Ex Iulio Polluce. cap. vi. fol. 3. b
- De Collo & eius partibus. Ex Aristotele in animalium historia. De partibus animalium. Ex Galeno De Sanitate tuenda. In Anatomicis. De usu partium. De locis affectis. De uerarum sectione. Ex Cornel. Celsus. Plinio. & Iulio Polluce. cap. vii. fol. 5
- De Thorace & eius partibus. Authores. Aristoteles in animalium historia. De partibus animalium. De Generatione animalium. Galenus in lib. Anatomicis. De usu partium. In Methodo medendi. De Motu musculorum.
- De ossibus. In Commentariis de fracturis. Et iis qui inscribuntur κατ' ἐπιστάσις. Hippocrates in Aphorismis. Et Galenus in eundem librum. cap. viii. fol. 5. b
- De Brachiis & eorum partibus. Ex authoribus. Aristotele in historia animalium. De partibus animalium. Galeno de motu musculorum. De ossibus. De usu partium. In Commentario κατ' ἐπιστάσις. Ex lib. qui Introductorius inscribitur. Cornel. Celsus. Plinio. Festo Pompeio. Iulio Polluce. cap. ix. fol. 6. b
- De Cruribus & eorum partibus. Authores. Aristoteles in historia animalium. De partibus animalium. Galenus De usu partium. De ossibus. In Commentariis κατ' ἐπιστάσις. Lib. qui Introductorius inscribitur. Cornel. Celsus. Iulius Pollux. Fest. Pompeius. cap. x. fol. 7
- De Situ partium uario. Authores. Aristoteles in historia animalium. De partibus animalium. De Animalium incessu. De Cælo & mûdo. Plato in Timæo. Corn. Celsus. cap. xi. fo. 7. b
- De Capitis partibus interioribus. De Cerebro & eius partibus. Authores. Aristoteles in animalium historia. De partibus animalium. De Somno & Vigil. Galenus in Anatomicis. De neruorum dissectione. De olfactus instrumento. Lib. Introductorius. Iul. Pollux. ca. xii. fo. 8
- De Oculi partibus interioribus. Authores. Galenus De neruorum dissectione. De usu partium. De Placitis Hippocratis & Platonis. In Methodo medendi. Author libelli qui De Anatomia oculorum inscribitur, Galeno adscripti. Iul. Pollux. cap. xiii. fol. 8. b
- De Collæ & Pectoris partibus interioribus. Ex Authoribus. Aristotele in historia animalium. De partibus animalium. Galeno De usu partium. Iulio Polluce. cap. xiiii. fol. 9. b
- De uisceribus & Septo transuerso. Ex authoribus Aristotele in historia animalium. De partibus animalium. Galeno in Anatomicis. De usu partium. De Temperamentis. De pla-

Fig. 2. Edward Wotton, *De differentiis animalium libri decem* (Paris, Michel de Vascosan: 1552), Inhaltsangabe.

CATALOGVS.

A. Gellij.	11.g.120.d.	Maffarij.	145.b.146.a.147.c.d.150.b.151	Phocionis.	130.d.195.b.
Gilly.	63.a.65.g.70.b.75.c.d.81.b.g.	6.b.13.d.		Phomoneer.	119.e.
207.d.		Maffarij.	40.e.120.c.	Pilfonis.	197.c.
Grati.	60.f.h.71.h.87.c.	Martionis Smyrnei.	51.d.	Pifandri.Camirei.	135.f.
	II	Megafthenis.	50.a.b.e.58.d.65.c.96.e.	Pithie.	154.d.
		186.b.		Platonis.	1.b.12.f.44.f.145.c.
Hegefandri.	153.b.	Menecratis.	177.h.	Plauti.	123.a.151.b.194.b.219.g.
Heliodori.	82.f.129.d.	Mnafei Pratenfis.	163.c.	Plinij.4.e.f.5.a.d.6.a.c.c.h.11.g.12.f.13.	
Hermolai Barbari.	63.a.69.b.70.g.81.	Mnefitheii Athenienfis.	142.a.168.a.	a.16.a.c.d.17.d.16.c.19.c.h.20.a.26	
a.89.c.91.g.93.g.100.c.d.e.103.a.112		209.h.		h.34.e.f.37.d.38.b.40.c.g.41.c.d.42	
a.113.b.117.g.h.120.c.124.b.136.b.		Mufei.	119.a.	c.d.43.f.44.c.45.c.45.a.c.c.48.b.	
151.b.153.b.155.b.156.c.f.162.b.163.		Muttiani.	214.f.	49.d.f.g.h.50.d.c.56.d.f.57.a.b.	
c.d.165.e.166.f.167.f.184.g.187.f.				c.f.g.h.58.g.19.f.61.g.62.c.g.64.	
188.c.191.e.f.197.c.g.111.h.112.a.213		N		a.b.65.e.f.g.67.a.c.68.a.c.69.g.h.	
a.h.216.c.220.a.		Neoclis.	93.e.	70.h.72.a.b.73.b.d.74.c.75.c.f.g.	
Herodoti Haticarnaffei.	50.a.64.a.c.91	Nicandri.	69.f.h.93.c.f.g.h.98.a.99.f.	77.g.78.a.d.79.d.h.80.a.b.d.81.g.	
d.132.b.136.a.168.h.169.b.c.		101.b.c.102.g.h.105.a.130.d.146.e.		h.82.b.83.a.84.b.g.85.c.86.g.87.b.	
Herodoti Heracleote.	63.g.81.h.90.h.	189.a.191.e.192.f.193.c.h.220.a.		c.88.g.89.c.91.a.d.92.c.e.f.93.d.99	
213.d.		Nicandri Thetereni.	151.f.	94.d.96.f.h.97.d.c.f.g.98.b.f.g.59	
Herophil.	8.f.11.c.46.e.	Nicandri interpretis.	94.f.100.e.	b.f.100.c.101.b.f.h.102.h.103.a.b.	
Hefychij.	130.a.134.a.191.f.	P. Nigidij.	69.a.122.c.135.e.190.a.g.	105.a.106.b.h.108.f.109.d.f.110.d.	
Hefiodi.	47.g.49.e.81.a.211.h.	192.b.		d.g.111.c.d.e.h.112.a.b.d.g.113.b.d.e.	
D. Hieronymi.	69.g.	Nonij Marcelli.	136.b.163.e.	114.f.115.c.a.117.d.h.118.g.119.e.	
Hippocratis.	6.h.12.b.f.14.b.15.b.43.f.	Numenij.	152.f.158.f.58.f.166.f.170.b.	h.120.d.e.f.g.h.121.c.122.d.h.123.c.e.	
117.a.182.e.f.192.f.h.193.b.		195.f.		h.124.b.125.d.e.126.a.c.h.127.c.f.	
Homeri.	5.d.6.e.11.g.16.a.14.f.49.g.	O		128.a.d.f.h.129.a.c.d.f.g.130.a.d.131	
119.c.121.a.122.h.		Omficriti.	49.g.	a.132.d.133.c.135.d.e.h.136.a.138.e.	
Horatij Elacci.	108.g.109.f.153.c.163.c.	Oppiani.	57.h.58.g.65.g.66.e.69.h.70	140.h.142.e.145.a.f.146.a.147.c.d.	
I		h.75.b.c.79.d.81.b.97.f.100.d.115.		f.148.a.149.b.c.150.a.b.c.150.f.g.	
Io. Claymondi.	75.d.95.f.112.b.130.d.	c.136.d.138.e.144.g.145.b.f.146.a.		151.b.d.e.g.152.c.h.153.b.d.e.h.154.	
180.c.181.d.		147.c.d.148.f.149.a.b.149.a.b.d.		d.h.155.a.b.e.g.156.b.c.f.g.h.157.a.g	
Icefij.	145.c.146.d.148.b.c.156.b.f.158.	130.b.151.e.f.153.c.d.e.154.a.b.d.154.		158.a.b.c.159.a.160.c.c.161.c.162.a.	
h.159.c.161.b.h.165.d.166.a.167.a.		c.155.b.h.156.e.d.h.157.a.b.e.f.158.f.		b.163.a.c.g.h.164.a.b.166.c.d.e	
d.f.215.c.		159.e.160.g.161.h.162.c.163.d.g.		166.c.f.g.167.a.e.h.168.d.c.f.g.169.	
Iouij.	15.b	164.e.165.c.e.166.f.167.e.f.h.169.		b.c.171.a.172.a.e.g.h.173.e.f.175.f.	
Iphicratis.	75.h.	a.b.g.173.a.e.f.188.f.199.g.200.d.h		176.a.178.a.b.c.d.f.179.d.g.h.180.	
Iftichij.	69.h.	201.a.202.b.205.a.206.f.218.c.h.		d.g.h.181.a.c.g.182.a.h.183.a.b.c.d.e	
Iftoponi.	49.g.50.c.	219.f.		184.b.d.e.f.h.185.a.c.h.186.c.187.c.	
Iuba.	71.h.100.h.133.c.171.e.215.g.	Oribafij.	109.f.117.g.150.c.153.e.156.b.	g.188.a.b.c.g.189.d.190.a.f.g.191.b.	
Iulij Cafaris.	75.a.77.a.	161.h.211.f.h.212.g.215.e.		h.192.a.c.e.f.h.193.a.c.g.h.194.c.f.	
Iulij Pollucis.	4.g.5.a.b.6.c.d.e.h.8.h.9.	Ophilij.	51.d.	h.195.c.g.197.a.b.c.d.199.b.d.200.	
e.g.11.g.16.a.b.e.18.h.44.h.63.a.67.		Ouidij.	7.a.68.h.97.g.109.f.117.g.110.	a.e.f.g.h.201.a.b.202.b.f.203.b.	
c.115.h.126.h.128.a.131.f.161.f.151.c.		e.122.e.123.a.b.125.b.h.126.a.128.g.		204.b.g.h.205.a.e.206.e.h.207.c.d.	
200.e.		130.b.f.133.d.134.f.135.g.h.136.a.		209.b.c.210.a.g.211.f.g.h.212.c.213.	
Iuuenalis.	129.d.207.d.	147.e.f.h.151.a.b.c.f.153.b.g.154.a.b		a.c.e.f.h.214.b.f.215.a.e.h.216.b.c.g.	
Labeonis.	135.	d.g.155.b.e.156.a.b.h.157.f.158.f.		217.b.c.d.h.218.a.c.d.g.219.a.d.f.	
Laberij.	155.c.	160.c.163.g.164.a.165.c.171.f.172.		220.a.	
Laftantij.	9.h.134.h.135.a.	e.173.f.185.h.193.h.200.c.		Plutarchi	97.g.115.e.131.c.
Leoniceni.	100.e.	P		Polemonis.	131.b
Leonidis Byfantij.	170.h.171.a.196.b.	Palladij.	75.c.83.b.85.a.c.d.86.d.87.h.	Polybij.	163.f.
Licinij Mutiani.	153.c.	112.b.116.a.166.g.183.a.194.h.		Praxagore.	36.f.
Lippij.	158.c.	Pamphilij.	165.a.d.	Praxonij.	44.c.
T. Liuij.	82.f.	Parmenonis Rhodij.	157.h.	Pfeufippi.	152.f.g.163.a.167.g.190.f.
Lucani.	97.e.98.e.99.c.100.c.103.a.	Pauli Aeginete.	45.g.69.h.93.h.99.g.	Pythagorae.	72.d.
18.c.192.h.		100.e.127.h.169.c.183.b.191.e.		R	
Lucretij.	9.c.113.b.114.c.124.e.130.b.	Paufaniae.	50.c.57.h.72.f.75.d.81.a.90.	Rafij.	114.d.
Lyncei Samij.	162.b.	h.98.f.100.h.101.h.103.a.126.a.135.		Ruellij.	191.e.
M		g.160.b.163.c.f.169.a.b.173.d.191.		Ruffij.	31.f.40.c.78.f.
L.Macri.	147.f.202.h.	f.211.h.		S	
Magonis.	89.a.	Pelopis.	92.f.	Santrae.	135.e.
Manilij.	134.f.g.	Periandri.	98.f.213.c.	Senecae.	153.c.181.f.
Marcelli Virgilij.	191.f.g.	Phaourini.	162.f.	Sereni.	196.d.
Marialis.	68.c.75.d.84.g.92.g.114.h.	Philoftephanij Cyrenenfis.	163.e.	Sergij.	214.g.
115.h.117.a.c.128.b.128.a.129.b.150		Philoftrati.	57.h.88.e.103.a.	Seruij.	93.g.
a.f.155.b.156.g.153.c.d.205.e.207.d.		Philotimi.	36.f.142.c.145.h.148.h.166.f.	Seftij.	70.b.86.f.91.c.94.d.

Fig. 3. Edward Wotton, *De differentiis animalium libri decem* (Paris, Michel de Vascosan: 1552), Quellenverzeichnis.

formelhafte Diktion „Ex autoribus“ ist dafür ausschlaggebend. Wottons zoologischer Diskurs wird dadurch gekennzeichnet, dass die Zuordnung und Rückführung der Information auf antike „Gewährsmänner“ (die eigentliche Bedeutung von „author“) den ultimativen Beleg ihrer Gültigkeit liefern soll. Die Grundlage der Zoologie bildet für Wotton damit klar ersichtlich nicht der empirische Nachweis, sondern der antike Autoritätsbeleg.

Der zoologische Diskurs Wottons unterscheidet sich diesbezüglich wesentlich von dem moderner zoologischer Übersichtswerke. In diesen betrachtet man Quellenangaben eher als Ballast. Antike Autoren oder nicht-wissenschaftliche Quellen werden grundsätzlich nicht zitiert. Der Diskurs ist so angelegt, dass die Befindungen prinzipiell auf empirisch Nachvollziehbares und Wiederholbares rückführbar sind. Auch wird zumeist nicht unterschieden, ob die jeweiligen Beobachtungen vom Autor selbst oder von anderen gemacht wurden. Dies wird sowohl von der Forschungspraxis (zoologische Teamforschung) als auch von der Forschungstheorie eingegeben. Letzterer liegt der Ausgangspunkt zugrunde, dass niemals die Autorität der Quelle, sondern die empirische Rückführbarkeit den Wahrheitsgehalt der Darstellung ausmache. Dabei wird die Subjektivität der Warte des Betrachters grundsätzlich neutralisiert oder am liebsten ganz ausgeschaltet. Die Diskursanlage impliziert, dass die Subjektivität des Beobachters die Beschaffenheit der Beobachtung nicht nennenswert beeinflusse.

Folgende Art, empirische Beobachtungen wiederzugeben, ist bezeichnend: „Häufig kommt es vor, dass nur ein oder zwei Mitglieder einer größeren Gruppe (nml. der Species *Panthera leo*) einen Jagdversuch unternehmen, während der Rest des Rudels aus sicherer Entfernung zusieht“.⁹⁰ Aus den Angaben geht nicht hervor, wer die Beobachtungen gemacht hat (der Autor oder ein anderer); jedoch wird durch die Betonung des iterativen Charakters der Beobachtung („häufig kommt es vor [...]“) ihre empirische Glaubwürdigkeit attestiert: Die Beobachtung wurde schon oft gemacht und sie kann auch in Zukunft beliebig oft gemacht werden – also ist sie wahr. Dass die Subjektivität zugeschüttet wird, ist umso auffälliger, als die zitierte Beobachtung subjektive Elemente enthält wie „aus sicherer Entfernung zusieht“. Diese Angabe interpretiert das Verhalten der nicht-jagenden Löwen in dem Sinn, dass sie sich vor den Beutetieren oder der Gefahr des Jagens fürchten

⁹⁰ Macdonald (Hrsg.), *Enzyklopädie der Säugetiere* 10.

würden. Dafür liegen allerdings keine schlüssigen Beweise vor. Die bibliographische Nachvollziehbarkeit der Information wird in modernen Übersichtswerken insgesamt stark reduziert, bei der Beschreibung der einzelnen Species oft ganz ausgeklammert.⁹¹ Das hat nicht einfach mit der objektiven Kürze des Lemmas zu tun. Wottons Abschnitt „Von Löwen“ etwa ist nicht einmal halb so lang wie das betreffende Lemma in Macdonalds *Enzyklopädie der Säugetiere*, weist jedoch eine beträchtliche Anzahl von Quellenangaben auf, während sich in jener keine einzige findet.

Moderne zoologische Werke weisen in Bezug auf den Wahrheitsbeleg eine andere Diskursorientierung auf. Statt auf Literaturangaben rekurrieren sie auf Tierphotographien, die sozusagen die Funktion des Wahrheitsbeweises übernehmen. Sie sollen nicht nur die äußere Gestalt des Tieres sichtbar machen, sondern die verhaltensbiologischen (z.B. Sozialverhalten; Jagd) und äußerlich wahrnehmbaren physiologischen Vorgänge (z.B. Fortpflanzung) vorführen. Im Abschnitt über den Löwen in Macdonalds *Enzyklopädie der Säugetiere* (8 Seiten) werden nicht weniger als 10 Photographien dargeboten, die insgesamt *fast die Hälfte des verfügbaren Platzes* beanspruchen. Obwohl Photographien natürlich auch schlicht die Attraktivität eines Buches erhöhen, zeigt ihr massierter Einsatz in modernen zoologischen Übersichtswerken, dass sie die Rolle einer Autorisierungsinstanz übernehmen. Was der Leser mit eigenen Augen sehen kann, muss wahr sein.

Der Glaube an den Wahrheitsbeleg des Bildes ist so stark ausgeprägt, dass Bilder nicht selten als Belege für Vorgänge oder Sachverhalte eingesetzt werden, die auf dem Bild nicht wahrgenommen werden können. Deswegen werden sie mit Begleittexten versehen, die den Betrachter instruieren, was er auf dem Photo „sehen“ soll. Immer wieder geht aus Text-Bild-Kombinationen hervor, wie problematisch der augenscheinlich glasklare Erkenntnisvorgang dieser zoologischen Empirie ist. Z.B. findet sich in Macdonalds *Enzyklopädie der Säugetiere* das Bild eines männlichen Löwen [Abb. 4] mit der Beischrift: „Links: Das Brüllen des Löwen, das weit über die ostafrikanische Savanne trägt, lässt potentielle Eindringlinge unmissverständlich wissen, das dieses Revier

⁹¹ In Goulds und McKays *Enzyklopädie der Säugetiere* beschränken sich die Angaben auf eine kurze Übersichtsbibliographie am Ende des Buches, die nicht mehr als eine halbe Seite beansprucht; in Macdonalds *Enzyklopädie der Säugetiere* gibt es auf ca. 800 Seiten keine Literaturangabe, am Ende des Buches findet sich eine Übersichtsbibliographie von 4 Seiten.



Fig. 4. ‚Das Brüllen des Löwen‘. Tierfotografie aus Macdonald D. (Hrsg.), *Enzyklopädie der Säugetiere* (Königswinter: 2003; urspr. English Oxford: 2001) 16–17.

besetzt ist. Meist hört man das Brüllen nach Sonnenuntergang oder im Anschluss an ein sättigendes Mahl“ (17). Was belegt das Bild eigentlich? Das Brüllen kann man zunächst nur auditiv wahrnehmen, zu sehen ist es nicht. An sich könnte der abgebildete Löwe auch andere Laute von sich geben. Weiter geht aus dem Bild in keiner Weise hervor, dass sich der Löwe in Ostafrika befindet. Das Photo könnte genauso gut im südlichen Afrika, in einem Reservat oder in irgendeiner künstlich geschaffenen Graslandschaft genommen worden sein. Das Bild liefert schließlich auch keinen Beleg für die abschließende Bemerkung: Es wurde weder nach Sonnenuntergang gemacht noch ist auf ihm in irgendeiner Form wahrnehmbar, dass dieser Löwe gerade gefressen hat. Dass man das Bild dennoch bemüht, zeigt die Bildgläubigkeit des empirischen Diskurses an. Wottons Werk hingegen weist keine Illustrationen auf. Wahrheitsgrundlage ist in Wottons Zoologie – im Gegensatz etwa zu Gesners Publikationen – ausschließlich das Wort der antiken Autoren.

*Die Konstituierung der Zoologie als Universalwissenschaft:
Gesners Historia quadrupedum viviparorum (1551):*

*Universalwissenschaft durch Ent-Klassifizierung: Diskursverlagerung von
systematischer Taxonomie zu lexikalischer Wissensorganisation,
am Beispiel der Species Panthera leo*

Der Schweizer Conrad Gesner (1516–1565) brachte Voraussetzungen mit, die denen Edward Wottons auffällig ähnlich sind. Wie Wotton hatte er eine gründliche Ausbildung in den Alt Sprachen, besonders im Griechischen, erhalten. Wie Wotton bekleidete er eine Professur in der griechischen Sprache (an der Akademie in Lausanne, 1537–1540). Wie Wotton hatte er eine besondere Zuwendung für die Schriften der antiken Mediziner, welche er seit 1533 intensiv rezipierte. Wie Wotton studierte er Medizin (Basel und Montpellier, 1536–37; 1540–41). Wie Wotton übte er den Beruf des Arztes aus (seit 1541 Praxis in Zürich; 1552 Unterstadtarzt; 1553 Stadtarzt in Zürich). Wie Wotton hatte er zoologische Studien viele Jahre hindurch betrieben, bevor er die erste Publikation fertigstellte. Wie Wotton hatte er die Werke des Aristoteles sehr eingehend studiert. Sein Handexemplar, das erhalten ist (Zürich, Zentralbibliothek, B 83), zeigt die Spuren dieser intensiven Lektüre – es ist mit marginalen Aufzeichnungen übersät.

Von daher scheint vorprogrammiert zu sein, dass die Anlage des zoologischen Wissenschaftsdiskurses, in dem die beiden Autoren operieren, identisch oder quasi-identisch ist. Bis zu einem gewissen Grad mag dies auch aufgehen und es gibt – wie unten gezeigt werden wird – eine Reihe von Ähnlichkeiten. Dennoch erscheinen mir – besonders in Anbetracht der fast identischen Ausgangslage – die Diskursunterschiede bemerkenswerter. Gesners Zoologie hinterlässt schon bei einem ersten Durchblättern einen anderen Gesamteindruck. In der Tat ist seine Zoologie in einem anderen Diskurs situiert. Statt einer systematischen Klassifizierung – ein Hauptmerkmal von Wottons Konstituierung der zoologischen Wissenschaft – erstellt Gesner eine diametral entgegengesetzte Wissensorganisation. Er ist keineswegs gewillt, die *Mammalia* in Kategorien zu gliedern. Stattdessen wendet er die klassifizierungsfeindlichste und hierarchiefremdeste Anordnung an, die sich denken lässt: die *alphabetische Reihenfolge*. Das mag von einer teleologischen Warte aus betrachtet als beträchtlicher Rückschritt gegenüber Wotton erscheinen. Bäumers bemerkte dann auch: „Die von Conrad Gesner [...] vorgelegte Systematik war eher künstlich [...], sodass seine Klassifizierung insgesamt einen Rückschritt gegenüber Wotton darstellte.“⁹² Jedoch verstellt uns diese Betrachtungsweise den Blick auf die Eigenheiten und Parameter von Gesners Wissenschaftsorientierung.

Für Gesner war die Zoologie nicht eine für wenige Spezialisten bestimmte Fachwissenschaft, sondern ein Bildungsfundament, das sich auf diverse Bereiche auswirkte und für unterschiedliche Gruppen von Intellektuellen relevant war. Auf der Titelseite nennt er Philosophen, Ärzte, Grammatiklehrer, Philologen sowie Dichter in allen Sprachen. Über die Philosophie bietet die Erkenntnis der Natur auch für frühneuzeitliche Theologen eine wichtige Grundlage der Gotteserkenntnis. Das galt nicht zuletzt für das protestantische Zürich, Gesners Wirkungsstätte. Man vergleiche hierzu z.B. die Ausführungen des Reformators Zwingli, der an der Zürcher Prophezei unterrichtete, in seinem Bildungstraktat *Quo pacto ingenui adulescentes informandi sint* (1523).⁹³ Gesner hat die Naturerkenntnis als Fundament der protestantischen Bildung in die Praxis umgesetzt, als er 1541 an der nämlichen Bildungsanstalt Natur-

⁹² „Zoologie der Renaissance – Renaissance der Zoologie“ 290.

⁹³ Vgl. Leu U.B., *Conrad Gesner als Theologe. Ein Beitrag zur Zürcher Geistesgeschichte des 16. Jahrhunderts* (Bern – Frankfurt a.M. – New York – Paris: 1990; Zürcher Beiträge zur Reformationsgeschichte 14) 47–48.

philosophie und Ethik unterrichtete. Zoologie war für ihn ein wesentlicher Teil dieses Wissens von der Natur, das für die Allgemeinbildung der protestantischen Oberschicht bestimmt war. Der protestantische Gläubige hatte „a positive duty to acknowledge the divine artistry of the natural world in which he was placed, and indeed to delight in it“.⁹⁴ Dieser Gedanke findet sich nicht von ungefähr im Vorwort des ersten Buchs von Gesners *Historia animalium*.⁹⁵ Auch von daher lässt sich verstehen, dass Gesner den Nutzen betonte, den die Zoologie bringe.

Man sollte also nicht die Frage stellen, wie fortschrittlich oder rückschrittlich Gesners Zoologie von einer modernen Warte her betrachtet war, sondern wie die Diskurse, in denen er sich bewegte, beschaffen sind und inwiefern sie mit den Zielen, die er verfolgte, zusammenhängen. Man muss also fragen, inwiefern es seinem Ziel, eine Bildungsgrundlage der (protestantischen) Oberschicht zu erstellen, gedient hätte, seine Zoologie auf die Klassifizierung zu fokussieren bzw. diese zur Grundlage der Wissenschaft zu machen. So betrachtet lässt sich nicht leicht erkennen, welchen Nutzen der Leser aus der spezialistischen Taxonomie, z.B. aus der taxonomischen Aufgliederung der „Vierfüßer“ in Einzeher, Zweizeher und Mehrzeher, beziehen hätte sollen. Die Nachteile liegen auf der Hand: Nehmen wir einmal an, der Leser hätte sich für das „Seekalb“ (*vitulus marinus*), d.h. eine Robbenart, interessiert. Inwiefern hätte ihm die Klassifikation geholfen, das Tier zu finden? Hat das Tier überhaupt Füße? Wenn dem so wäre, gehört es den Paarhufern oder den Unpaarhufern oder den Mehrzehern zu? Man kann sich vorstellen, dass Gesner angesichts solcher Schwierigkeiten das alphabetische Ordnungssystem, welches eindeutig ist und an Einfachheit nicht übertroffen werden kann, für zielführender hielt.

Diese im Vergleich zu Wotton diametral entgegengesetzte Diskursorientierung lässt sich anhand des Kapitels über den Löwen⁹⁶ besonders anschaulich zeigen. Zunächst verzichtete Gesner in seiner Beschreibung auf eine nähere Feststellung des systematischen Ortes des Löwen. Z.B. fehlt jeder Hinweis darauf, dass das Tier der Kategorie der Mehrzeher zugehöre.⁹⁷ Weiter ist Gesner nicht geneigt, durch die Anwendung der

⁹⁴ Rudwick M.J.S., *The Meaning of Fossils* (London – New York: 1972) 16.

⁹⁵ Fol. aa 3v.

⁹⁶ Ebd. 642–681.

⁹⁷ Lediglich am Ende der morphologischen Beschreibung macht Gesner eine kurze Angabe zur Anzahl der Zehen (647), jedoch ohne daraus klassifizierende Rückschlüsse zu ziehen.

Induktion und der Komparatistik zu einer weiteren Klassifikation der Species in einzelne Arten bzw. Unterarten zu gelangen. Im Gegenteil: Z.B. war bei Aristoteles, Plinius und anderen antiken Autoren überliefert, dass sich die Species in zwei Unterarten gliedere: in eine kleinere, schwächere, kurz- und kraushaarige bzw. kurz- und krausmähnige und in eine größere, längere, stärkere, aggressivere mit langer, glatter Mähne.⁹⁸ Gesner ‚ent-klassifizierte‘ diese durch die antike Zoologie autorisierte Unterscheidung mit harter Hand. Er versuchte sie als Irrtum zu entlarven, indem er sie als Geschlechtsunterschied deutete. Bei der ersten „Gattung“ handle es sich recht eigentlich um Weibchen, bei der zweiten um Männchen: „Ich freilich meine, dass alle männlichen Löwen lange Mähnen haben“.⁹⁹ Dementsprechend schickt er dem Kapitel das artbestimmende Bild eines männlichen Löwen mit langer Mähne voraus [Abb. 5].

Es ist auffällig, wie selbstbewusst der protestantische Zoologe Gesner seine individuelle Einsicht und Wahrnehmung über die sanktionierte Autorität der Antike stellt. Die Entlarvung des ‚Irrtums‘ erscheint durch ihre Einfachheit und ihren Common-Sense-Charakter plausibel, ist es jedoch nicht ganz, da Löwenweibchen nicht eine kurze, sondern gar keine Mähne haben.¹⁰⁰ Gesner scheint sich dieser Schwierigkeit bewusst gewesen zu sein. Deshalb zieht er Theodor Gazas Aristoteles-Übersetzung (kurz- und kraushaarig), die Wotton als wenig vertrauenswürdig angemerkt hatte, der des Plinius (kurz- und krausmähnig) vor. Entscheidend ist übrigens nicht, inwiefern Gesners Bemerkung einen wissenschaftlichen Fortschritt darstellt, sondern welche Diskursanlage ihr zugrunde liegt.

Diese zielt in der Tat auf eine ‚ent-klassifizierende‘ Deskription ab. Sie bedingt auch, dass Gesner die Unterscheidung der Löwen in „Erlöwen“ („Archoleones“) und aggressionsarme („mansueti“), also gewöhnliche

⁹⁸ Z.B. Plinius, *Naturalis historia* VIII 46 „Leonum duo genera, compactile et breve crispioribus iubis. Hos pavidiore esse quam longos simplicique villo; eos contemptores vulnerum“. Vgl. Aristoteles, *Historia animalium* VIII 5, 594 b.

⁹⁹ Gesner, *Historiae animalium lib. 1* 643 „Atqui ego leones mares omnes iubatos esse puto“.

¹⁰⁰ Worauf die antike Unterscheidung in langmähnige und kurz-mähnige Löwen zurückgeht, ist unklar. H. Leitner hat sie in seiner Studie *Zoologische Terminologie beim älteren Plinius* (Hildesheim: 1972) 152 als Subspecies-Unterscheidung zwischen dem asiatischen Löwen (*Leo persicus*) und dem Berber-Löwen gedeutet. Das ist jedoch keineswegs schlüssig, ja es ist unsicher, ob der Berberlöwe in der Tat eine Subspecies darstellt. Vgl. Macdonald, *Enzyklopädie der Säugetiere* 12. Der Unterscheidung können genauso gut unrichtige, lückenhafte, übertriebene und simplifizierende Beobachtungen oder altersbedingte Differenzen (junge Löwen haben kurze Mähnen) zugrunde liegen.

DE LEONE.



Fig. 5. Abbildung des Löwen. Aus Conrad Gesner, *Historiae animalium I de quadrupedis viviparis* (Zürich, Christoffel Froschauer: 1551) 642; Universitätsbibliothek Leiden.

Löwen, welche er bei dem römischen Historiker Julius Capitolinus antraf,¹⁰¹ als Irrtum ‚entlarvt‘. Der Name Archoleo(n) bezeichne keine Art oder Unterart, sondern beziehe sich auf individualspezifische Merkmale (besonders große, starke Individuen).¹⁰²

Gesners Diskursorientierung zeigt sich noch klarer im Vergleich mit dem taxonomieverliebten Wotton, der die Löwen in 7 Arten oder Unterarten gliederte und dabei auch mähnenlose Löwenarten, z.B. die lybische (Leopard) und die hundegroße (wohl ein Karakal) und die schwarze äthiopische (Leopard) konstituierte. Schon der Titel des Kapitels („De leone“, Einzahl) zeigt, dass Gesner geneigt war, den Löwen als eine einzige, *homogene* Species aufzufassen.¹⁰³ Oppians Ausführungen wertete er, anders als Wotton, nicht als Klassifizierungsgrundlage, sondern lediglich als Materialien zur geographischen Verbreitung der Species Leo aus.¹⁰⁴ Die merkwürdige hundegroße und mähnenlose äthiopische Löwenart, die Wotton aus Oppian konstruierte (s. oben), akzeptiert Gesner nicht. Er vermeldet die betreffende Information überhaupt nicht. Im Abschnitt über das Aussehen des Löwen schreibt er der Art insgesamt eine große Körperlänge zu („Leo corpore longo est“), indem er sich auf den Arzt, Mathematiker und Universalgelehrten Gerolamo Cardano (1501–1576), dessen damals gerade erschienenes Werk *De subtilitate* (1550) eine seiner Hauptquellen ist, beruft.¹⁰⁵ Es war unter anderem diese Hauptquelle, die Gesner dazu brachte, die von der antiken *auctoritas* Oppian überlieferte Unterart des hundegroßen äthiopischen Löwen abzuschreiben. Gesner hat also die Species *Panthera leo* mit Hilfe moderner Quellen homogenisiert.

Für dieses Diskursmerkmal ist die Art bezeichnend, mit der Gesner eine andere aus der Antike überlieferte Angabe verarbeitete. Bei Oppian traf er – wie Wotton – den Bericht an, dass sich die Löwen Libyens durch ein blauschwarzes Fell auszeichnen, und eine äthiopische Löwenart durch ein schwarzes Fell.¹⁰⁶ Wenn man von der zoologischen Diskursorientierung Wottons ausgeht, gibt es zwei Möglichkeiten. Entweder

¹⁰¹ Julius Capitolinus, *Gordianus* III 33.

¹⁰² Gesner, *Historia animalium* I 643: „Quid si archoleontes genus aliquod leonum praegrande intelligas? Ut qui magnitudinis ratione caeteris praestare et quodammodo imperare videantur“.

¹⁰³ Ebd. 642.

¹⁰⁴ Ebd. 643–644.

¹⁰⁵ Ebd. 644. Girolamo Cardano, *De subtilitate libri XXI* [...] (Nürnberg, Joannes Petreius: 1550).

¹⁰⁶ Vgl. oben.

man akzeptiert die Angabe nicht, indem man auf den Autoritätsbeleg des Aristoteles verweist, der allen Löwenarten ein rötlichgelbes Fell zugeschrieben hatte. Wenn man diese Angabe als solche akzeptiert und wie Wotton die Klassifizierung als Hauptaufgabe der Zoologie betrachtet, liegt es nahe, aus ihr Arten bzw. Unterarten des Löwen zu konstruieren. Wie oben gezeigt wurde, hat sich Wotton für die letzte Möglichkeit entschieden.

Gesner fand jedoch einen dritten Weg. Dazu zog er die Angaben heran, die er sich in Bezug auf asiatische Löwen erarbeitet hatte. Daraus ging hervor, dass es schwarze Löwen auch in Syrien, Indien und in der Mongolei gab.¹⁰⁷ Gesner, der sowohl bestrebt war, das Tierreich zu entklassifizieren als auch seine Quellen zu homogenisieren, zog aus der Vielzahl seiner Belege die Schlussfolgerung, dass ein an so vielen unterschiedlichen Orten vorkommendes Merkmal kein Artspezifikum sein könne. Anders gesagt: Die schwarze Farbe sei eine Spielart derselben Species.

Auf diese Weise kam Gesner dem Melanismus auf die Spur, den es bei den Katzenartigen in der Tat gibt, zu dem ihm allerdings keine systematischen empirischen Untersuchungen vorlagen. Sein Homogenisierungsversuch ist hochinteressant, obwohl oder gerade weil er nicht mit den heute bekannten zoologischen Fakten übereinstimmt. Der Melanismus stellt kein artimmanentes Merkmal des Löwen dar, sondern lässt sich für den Leopard (*Panthera pardus*, Afrika und Asien), den Jaguar (*Panthera onca*, Südamerika) und den Serval (*Felis serval*, Afrika) nachweisen.¹⁰⁸ Es ist interessant, mit welchem Selbstvertrauen Gesner seine neue Erkenntnis des Melanismus bei Löwen gegenüber der im 16. Jahrhundert akzeptierten Autorität par excellence, Aristoteles, durchsetzt. Sie führt zu einer regelrechten Berichtigung: „Alle Löwen sind rötlichgelb (gelblich, „fulvus“), sagt Aristoteles. [...] Ich habe schon oben gezeigt, dass es in einigen Regionen schwarze, in anderen blauschwarze Löwen gibt“.¹⁰⁹

¹⁰⁷ Gesner, *Historia animalium* I 644.

¹⁰⁸ Dem Leoparden schrieb Gesner jedoch nicht den Melanismus als Artspezifikum zu. Vgl. Ebd. I 935–948. Gleichwohl vermelden Oppian, *Kyнетika* III 74–75, Solin 17,8 und Isidor von Sevilla, *Etymologiae* XII 2,8 schwarze Exemplare.

¹⁰⁹ Gesner, *Historia animalium* I 644.

*Zum Verbreitungsgebiet der Species Panthera leo: Diskursverlagerung
der zoologischen Wissensautorisierung vom antiken Autoritätsdiktat
zum ‚modernen‘ Wissensaustausch*

Gesners Angaben zum Verbreitungsgebiet des Löwen unterscheiden sich grundlegend von denen Wottons. Der Wissenschaftsdiskurs, in dem er seine Zoologie situierte, ist, obwohl er ungefähr zur gleichen Zeit arbeitete, ein grundsätzlich anderer als der des Oxforder Gelehrten, der einseitig auf antike Autoritätsbelege rekurrierte. Wottons Diskursautorisierung hatte dazu geführt, dass er Europa als das Hauptverbreitungsgebiet des Löwen präsentierte, während die Species dort schon seit der Antike ausgestorben war.¹¹⁰ Gesners gelangt zu einer diametral entgegengesetzten Darstellung: „Es ist sicher, dass es in unserer Zeit in Europa nirgends Löwen in freier Wildbahn gibt“ („Leones nostro tempore nusquam in Europa nasci certum est“).¹¹¹ Als Verbreitungsgebiet des Löwen konstituiert er die südlich und östlich von Europa liegenden Erdteile, also Afrika und Asien, eine Angabe, die in etwa den Tatsachen zu Gesners Zeit entspricht. Im Gegensatz zu Wotton hebt Gesner hervor, dass der Löwe in Nordafrika und weiten Teilen Asiens häufig vorkomme. Besonders auffällig ist, dass Gesner überhaupt *Asien als Hauptverbreitungsgebiet des Löwen* präsentiert. Der längste und ausführlichste Teil des Abschnitts ist dem Löwen in Asien gewidmet. Während der asiatische Löwe heute unmittelbar vom Aussterben bedroht ist und auf eine geringe Anzahl im indischen Gir-Nationalpark zusammengeschmolzen ist, war er zu Gesners Zeit in der Tat noch über weite Teile des Vorderen Orients bis nach Indien hin verbreitet. Wie gelangte Gesner zu seiner auf den ersten Blick realistischeren Darstellung?

Eine auf der Hand liegende Erklärung wäre, dass man sie als Berichtigung der Schrifttradition durch Empirie auffasst. Im Fall der Species *Panthera leo* geht sie jedoch nicht auf. Gesner hat ebenso wenig wie Wotton Nordafrika oder Asien bereist, wenngleich er, wie er selbst im Vorwort seiner *Historia animalium* vol. I angibt, gerne weite Reisen unternommen hätte. Gesner gelangte zu seiner abweichenden Darstellung durch eine andersartige Orientierung der Wissensautorisierung. Er gab den einseitigen Rekurs auf die Antike, wie er sich bei Wotton findet, auf und zog *systematisch rezente Informationsquellen heran*.

¹¹⁰ Vgl. oben.

¹¹¹ *Historia animalium* I 643.

In seinem Quellenverzeichnis finden sich neben 120 antiken (griechischen und römischen) auch 105 rezente oder subrezente Autoren (Nr. 146–251). Werke, die er als Hauptinformationsquellen benutzte, versah er mit einem Asterix. Aus diesen Markierungen geht noch klarer die Verlagerung des Wissenschaftsdiskurses zur ‚Moderne‘ hin hervor: Von den „recentiores“ sind 80 Werke mit einem Asterix versehen, von den Antiken nur 48. Gesners zoologische Wissensgrundlage stammt also zu einem überwiegenden Teil aus der ‚Moderne‘.¹¹²

Besonders wichtig ist, dass Gesner rezente und subrezente Reiseberichte systematisch ausgewertet hat. Aus dem Verzeichnis der „libri recentiorum“ geht hervor, dass er die Beschreibung der Reisen Amerigo Vespuccis (Nr. 151), des Burchardus’ de Monte Sion Beschreibung der Reise ins Heilige Land (*Descriptio terrae Sanctae*, 1283; Nr. 162: „Brocardus monachus de terra sancta“),¹¹³ Columbus’ Bericht *De insulis nuper inventis* (Nr. 169), Ludovico Varthemas (ca. 1472–ca. 1517) Tagebuch über seine Reisen in den Orient 1502–1508 (*Itinerario de Ludovico Varthema Bolognese nello Egipto, nella Surria, nella Arabia deserta et felice; nella Persia, nella India et nella Ethiopia* [...] [Rom: 1510]; Nr. 207 Ludovici Vartomanni Romani patritii *Navigationum libri VII*), Marco Polos (1254–1324) Berichte über seine Reisen ins Innere Asiens (Nr. 209), Paulo Giovios (1486–1552) Bericht über eine Gesandtschaftsreise nach Moskau (*De Moscovitarum legatione*, Nr. 219),¹¹⁴ Pietro Martyres *Decades de orbe novo*¹¹⁵ (Alcalà: 1530; Nr. 223), Vicente Yanez Pinzons (ca. 1460–1524) Reisen ins Amazonasgebiet und ins nördliche Brasilien und Fernao Magalhaes (1480–1521) Reisen zu den Molukken (1505–1512) (Nr. 225; *Pinzoni navigationes et Magellani ad insulas Moluchas*) benutzt hat. Interessant ist, dass er die meisten der hier genannten Reiseberichte mit einem Asterix als Hauptquellen markiert hat.

Es sind in der Tat gerade die Reiseberichte Lodovico Varthemas und Marco Polos, mit welchen Gesner das häufige Vorkommen des Löwens in Asien in der Gegenwart (ca. 1300–1510) nachweist. Varthema reiste 1502 nach Ägypten, wo er sich als Muslimpilger ausgab und bis nach Medina vorstieß; von dort zog er nach Yemen und Äthiopien und setzte

¹¹² Vgl. Leu, *Conrad Gesner als Theologe* 45.

¹¹³ Vgl. die Textausgabe von W.A. Neumann (1880).

¹¹⁴ Zu Giovio vgl. Zimmermann T.C. Price, *Paolo Giovio. The Historian and the Crisis of Sixteenth Century Italy* (Princeton: 1995).

¹¹⁵ Vgl. Peter Martyr von Anghiera, *Acht Dekaden über die Neue Welt*, übersetzt von H. Klingelhöfer, 2 Bde. (Darmstadt: 1972–1973).

nach Indien über, wo er sich jahrelang aufhielt. Erst 1508 kehrte er nach Italien zurück. In seinem Itinerar¹¹⁶ zeichnet er auf, dass es in der Umgebung Adens zahlreiche (menschenfressende) Löwen gebe. Weiter leitet Gesner aus Varthemas Itinerar ab, dass der Löwe in Indien besonders häufig sei („Leones in regno Narsingae plurimi [...]“).¹¹⁷ Aus der Lektüre von Marco Polos („Paulus Venetus“) Reiseberichten destillierte Gesner den Nachweis des Löwen in der Mongolei.

Gesners Abweichen vom Rekurs auf die Antike ist nicht einfach als progressiver Schub zur Empirie hin zu deuten.¹¹⁸ Die Mehrzahl der ‚neuen‘ Angaben Gesners beruhen nicht auf authentischen empirischen Wahrnehmungen, die er selbst angestellt hätte. Jedoch ist die Diskursverlagerung der Faktenerhebung zu ‚modernen‘ Informationsquellen hin von entscheidender Bedeutung. Die zur Abgeschlossenheit tendierende Ausrichtung des Wissenserwerbs auf antike *auctoritates* wird zu ‚modernen‘ Gewährsmännern hin geöffnet, wodurch neues, rezentes Wissen aufbereitet werden kann. Die neue Wissenschaft der Zoologie wird durch eine rezente Diskussion unter Gelehrten gespeist. Sie ist, wie Gesner in seinem Korrespondentenkatalog, in dem er zumeist die Herkunft der insgesamt 52 Gelehrten angibt, betont, international vernetzt. Sein zoologischer Wissenschaftsdiskurs ist auf den dialogischen Wissenschaftsaustausch mit Franzosen (Galli), Engländern (Angli), Schweizern (Rhaeti), Deutschen (Germani), Italienern (Itali) und Polen (Poloni) ausgerichtet [Abb. 6].

*Die Konstituierung der Zoologie als Universalwissenschaft durch
Systematisierung und Erweiterung der Beschreibungsmethode*

Statt auf die klassifizierende Systematik verwendete Gesner seine Schaffenskraft darauf, die Reichweite der zoologischen Deskription zu vergrößern, die Beschreibungsmethode zu verbessern und den Umfang der zoologischen Information zu erweitern. Dafür entwickelte er ein eigenes Deskriptionssystem, das dazu dient, die Beschreibung jedes lexikalisch

¹¹⁶ Siehe dazu Barozzi P., *Ludovico de Varthema e il suo itinerario* (Rom: 1996).

¹¹⁷ *Historiae animalium lib. 1* 644.

¹¹⁸ Dies scheint Anne Bäumer, *Zoologie der Renaissance* 42, zu suggerieren: „Er hatte zwar großen Respekt vor dem überkommenen tradierten Wissen, verband seine Studien der antiken Autoren aber mit den Erfahrungen, die er aus der unmittelbaren Beobachtung der Natur gewonnen hatte“.

CATALOGVS DOCTORVM

RVM VIRORVM, QUI VTOPVS

hoc nostrum & repub. literariam illustrarent,
uel aliunde imagines animalium, aut nomina &
descriptiones miserunt: uel præfentes communi-
carunt. Horū nonnulli superius quoque no-
minati sunt, quod insuper scriptis
eorum publicatis adiu-
tus sum.

- A**chilles P. Gassarus medicus Germanus.
Alexander Pejer Scaphusianus.
Aloisius Mundella Brixienſis medicus.
Andreas Martinus Rostochienſis.
Antonius Eparchus Corcyraeus, Græcæ linguæ
professor Venetijs.
Antonius Mufa Brafauiolus illustrissimi Ferræ
ducis Herculis Estensis archiateros.
Antonius Stuppa Rhætus.
Arnoldus Peraxylus Arlenius Germanus.
Bartolemaeus à Castromuro canonicus Curien-
sis in Rhætia.
Cælius Secundus Curio Italus.
Cælius Sozinus Senensis.
Caspar Hedio ecclesiastes Argentinenſis.
Christophorus Clauerus Tigurinus archiateros.
Cornelius Sittardus medicus Germanus.
Dominicus Montheſaurus medicus Veronēſis.
Florianus Sufz Rolitz à Varſhauia, Polonus.
Franciscus Belinchettus mercator Bergomenſis.
Gæ. Agricola consul Kempnicij.
Ge. Fabricius poeta, Scholæ rector Miſenæ.
Gisbertus Horſtius Amſterodamꝰ medicus Ro-
g. Gregorius Mangolt Conſtantienſis, (ma.
Guilielmus Gratarolus Bergomenſis, medicus.
Guilhelmus Turnerus Anglus medicus.
Henricus Stephanus Roberti filius, Parisienſis.
Hieronymus Fracaſtorius Veronenſis medicus.
Hieronymus Frobenius Baſiliēſis typographus.
Hieronymus Tragus Germanus.
Io. Altus Heſſus.
Io. Culmantius Goppingenſis.
Io. Dérnſchwam Germanus.
Io. Eſtweycus Anglus.
Io. Falconerus medicus Anglus.
Io. Kentmannus Dreſdenſis medicus.
Io. Oporintus Baſilienſis typographus.
Io. Ribbitus ſacrarum literarum interpres Lati-
ſannæ.
Iuſtinus Goblerus I. C. & principi Naſſauienſi à
conſilij.
Lucas Gynus medicus Italus.
Michaël Alyſius Gallus Trecenſis medicus.
Nicolaus Gerbelius Phorcenſis I. C.
Petrus Daſypodius Græcarum literarum ptofeſ-
ſor Argentorati, præceptor meus.
Petrus Gyllius Gallus.
Petrus Merbelius Germanus, Carolo v. à conſi-
lij Mediolani.
Petrus de Meſnil Gallus.
Petrus Paulus Vergerius, olim episcopus Iuſti-
nopolitanus.

Fig. 6. Gesners Korrespondentenliste. Am Conrad Gesner, *Historiae animalium I de quadrupedis viviparis* (Zürich, Christoffel Froschauer: 1551). Universiteitsbibliotheek Leiden.

erfassten Tieres auf genau dieselbe Weise zu gestalten. Gesner hat acht Kategorien (A–H) entworfen, nach denen jedes Lemma gegliedert ist. In Kategorie A werden die Namen des betreffenden Tieres in möglichst vielen Sprachen erfasst. Es geht dabei weder um eine klassifizierende Maßnahme noch um eine Vereinheitlichung der Nomenklatur, wie manchmal angenommen wird,¹¹⁹ sondern um die Anlage eines Thesaurus, einer Schatzkammer oder Fundgrube, die einerseits ein möglichst reiches Sprachmaterial darbieten (aus dem unter anderem sprachkomparatistische Schlussfolgerungen gezogen werden können), andererseits durch Miteinbeziehung der Volkssprachen den Zusammenhang mit der sprachlichen Gegenwart herstellen soll. Ein mehrfacher Index, in dem die Tiernamen in verschiedenen Sprachen aufgegliedert werden, bietet den zeitgenössischen Benutzern einen weiteren nützlichen Zugang. Missverständnisse und Namensverwechslungen, die sich aus der Inkongruenz zwischen der lateinischen Sprache und diversen Volkssprachen ergeben, sollen dadurch ausgeschlossen werden.

Kategorie B ist der Tierbeschreibung im engeren Sinn gewidmet. In dieser Kategorie behandelt Gesner: das Verbreitungsgebiet und die Morphologie, einschließlich der anatomischen Daten. Die Behandlung der Morphologie erfolgt systematisch, wobei Gesner die einzelnen Teile des Tiers, vom Kopf bis zum Schwanz von ‚oben‘ nach ‚unten‘ bzw. von ‚vorne‘ nach ‚hinten‘ behandelt. Gesners Kategorie C ist der Physiologie und der mit den Körperfunktionen zusammenhängenden Verhaltensbiologie (Nahrungsaufnahme, Fortpflanzung etc.) sowie den Krankheiten der Tiere gewidmet. Kategorie D setzt sich mit der Tierpsychologie auseinander. Die Kategorien E–G sind der Nutzung des betreffenden Tiers durch den Menschen gewidmet. In Kategorie E werden Tierfang, Zähmung, Tierhaltung, Veterinärmedizin, Hilfsmittel zur Tiernutzung (Pflug, Sattel etc.), die Verwendung des betreffenden Tiers in Sport und Spiel, zur Kleidung (Felle), Düngung, Wettervorhersage usw. behandelt, in Kategorie F die Nutzung des betreffenden Tiers als Nahrungsmittel, in Kategorie G als Heilmittel. In Kategorie

¹¹⁹ Fischer H. et alii, *Conrad Gessner 1516–1565. Universalgelehrter, Naturforscher, Arzt* (Zürich: 1967) 131 „Eine der vordringlichsten Aufgaben, welche die damalige [...] Naturwissenschaft zu lösen hatte, bestand darin, *Klarheit in die Nomenklatur zu bringen*. [...] *Erst wenn Ordnung in die Nomenklatur gebracht*, die synonymen Bezeichnungen in den alten und modernen Sprachen ermittelt waren, konnten die antiken und neueren Nachrichten über ein Tier zusammengestellt werden“ (Kursivierungen von K.A.E.E.). Gmelig-Nijboer, *Conrad Gesner's „Historia animalium“* 49–50 scheint dieser Darstellung zuzustimmen.

H erläutert Gesner die Verwendung des Tiers in Literatur, Kunst und Religion. In dieser Kategorie erschließt er unter anderen Tierembleme, Tierfabeln und Sprichwörter.

Diese differenzierende Systematisierung der Beschreibung in 8 Kategorien hat den wichtigen Vorteil, dass sie dem Benutzer der Zoologie einen effizienteren und schnelleren Zugang ermöglicht. Der Benutzer, der auf der Suche nach Tiervergleichen ist – z.B. weil er gerade eine Predigt zusammenstellt – kann sich sofort der Kategorie H zuwenden, ohne eine seitenlange Lektüre der vorangehenden Teile des Lemmas auf sich nehmen zu müssen. Der Benutzer, der sich für die Haltung eines bestimmten Tieres interessiert, findet die gewünschte Information sofort unter der Kategorie E. Der Apotheker, der ein Heilmittel anfertigen will, kann sich sofort der Kategorie G zuwenden usw.

Die Beschreibungssystematik Gesners ist so angelegt, dass sie die Differenzierung des frühneuzeitlichen Leserpublikums optimal berücksichtigt. Ein entscheidender Vorteil der Systematisierung ist, dass die Quantität der zoologischen Information stark erweitert werden kann, ohne dass der Benutzer einem undurchdringlichen Dickicht diverser Angaben gegenübersteht. Der Wissensschatz kann also angereichert werden, während die Zugänglichkeit erhalten bleibt. Dadurch wird es weiter möglich, verstärkt ins Detail zu treten. Die zoologische Beschreibung kann dadurch im Hinblick auf Detailangaben in eine andere Dimension vorstoßen. Gesners Kapitel „Vom Löwen“ ist auch in dieser Hinsicht illustrativ: Es ist wohlgemerkt etwa zwanzigmal so lang wie Wottons Kapitel „Von Löwen“.

Ein interessanter Punkt betrifft die Trennung von Morphologie (Kategorie B) und Physiologie (Kategorie C). Wenn man sie wissenschaftsteologisch betrachtet, könnte man sie als Herausdifferenzierung „zoologischer Spezialgebiete“ wie „Physiologie, Vergleichende Anatomie“ verstehen, in der Bäumers einen entscheidenden Fortschritt der frühneuzeitlichen Zoologie erkennt.¹²⁰ Obwohl dies bis zu einem gewissen Grade zutreffen könnte, ist zuerst eine nähere Spezifizierung des Diskurses erforderlich. Es erscheint mir fragwürdig, ob Gesner mit seiner Beschreibungsmethode 1. Spezialdisziplinen schaffen, 2. sich in die Richtung der Vergleichenden Anatomie vorwagen wollte. Interessant ist zunächst, dass er sich bei der Aufgliederung der morphologischen Deskription von Quellen anregen ließ, die den Schritt zur Vergleichenden Anatomie durchaus nahe legen, z.B. vom 11. Buch von Plinius'

¹²⁰ „Zoologie der Renaissance – Renaissance der Zoologie“ 279.

Naturalis historia (121–284). Plinius behandelt in diesem Abschnitt seiner Zoologie die einzelnen Körperteile der Tiere¹²¹ – den Kopf (§ 121ff.) mit Hörnern (§ 123–128), Knochbau (§ 132), Gehirn (§ 133–135), Ohren (§ 136–137), Gesicht (§ 138), Augen (§ 139–157), Wangen (§ 158), Backen (§ 158), Lippen (§ 159), Kinn (§ 159), Zähne (§ 160–170) und Zunge (§ 171–174); Kehle und Nacken mit Mandeln (§ 175) sowie Luft- und Speiseröhre (§ 176–180); Herz (§ 181–187); Lunge (§ 188); Leber und Galle (§ 189–195); Magen und Darm (§ 197–204); Nieren (§ 206); Brustkorb (§ 207ff.); Knochen (§ 212–216); Nerven und Sehnen (§ 217–218); Blutgefäße und Blut (§ 219–225); Haut (§ 226–227); Haare (§ 228–231); Zitzen (§ 232–235); Milch (§ 236–242); Gliedmassen (§ 243–246); Klauen und Nägel (§ 247–248); Gelenke (§ 249–251) usw., indem er eine komparatistische Zusammenschau entwirft.

Im Kapitel „Vom Löwen“ wird zunächst ersichtlich, dass Gesner den Schritt zur Vergleichenden Anatomie *nicht* gemacht hat. Zwar behandelt er die einzelnen Körperteile des Löwen, jedoch nicht in der Art eines komparatistischen Vergleichs, wie er ihn etwa bei Plinius antraf. Vielmehr sammelt er aus dem vergleichenden Abschnitt der Plinius-Zoologie die Angaben zum Löwen lediglich, um Einzeldaten, die nur den Löwen betreffen, zu erheben.

Es gibt jedoch Ausnahmen. Diese sind allerdings nicht so beschaffen, dass man sie ohne weiteres als wissenschaftlichen Fortschritt bewerten könnte. Eine solche Ausnahme bilden die Ausführungen zum Knochbau des Löwen. Bei Aristoteles fand Gesner einen interessanten Schlüssel zur Vergleichenden Anatomie: Aristoteles hatte bemerkt, dass der innere Bauplan des Löwen „in allem“ dem Hunde ähne.¹²² Dies lässt sich geradezu als Auftrag verstehen, die aus der Literatur übermittelten Daten durch empirische Autopsie zu untersuchen. Hunde waren ja, im Gegensatz zu Löwen, jederzeit vorrätig, wenn man Sektionen vornehmen wollte. Wie aus obigem hervorging, wurden bei Sektionen von Medizinern leicht zugängliche Tiere wie Hunde und Katzen verwendet. Nun fand Gesner bei Aristoteles die Angabe, dass der Löwe keine Halswirbel besitze, sondern stattdessen nur einen langen Knochen. Was hätte näher gelegen als einmal einen Hund zu sezieren und nachzusehen, ob dieses Tier Halswirbel besitze?

¹²¹ *Naturalis historia* XI 121: „Nunc per singulas corporum partes [...] membratim tractetur historia“ („Nun soll die Beschreibung nach den einzelnen Körperteilen [...] Glied für Glied erfolgen“).

¹²² Gesner, *Historia animalium* I, 644 „Interiora omnia canibus similia continentur“.

Es ist bezeichnend, dass Gesner diesen Schritt nicht gemacht hat. Stattdessen verstärkt er die Gültigkeit der aristotelischen Angabe, indem er sie mit weiteren Autoritäten (Aelian, Plinius, Manuel Philes von Ephesos [1275–1345], Ibn Ruschd [Averroes, 1126–1198], Albertus Magnus, Ambrosius) und Texten untermauert. So erfährt der Benutzer Gesners zusätzlich, dass der Löwe seinen Hals nicht beugen könne (aus Manuel Philes), dass er ihn nicht nach hinten wenden könne, etwa um umzublicken (aus Ibn Ruschd über Albertus Magnus), ja dass Löwen ohnehin nur einen kurzen Hals hätten, weil sie nicht zu grasen bräuchten wie das Weidevieh (aus Ambrosius).¹²³

Daraus muss man den Schluss ziehen, dass die Vergleichende Anatomie kein Anliegen von Gesners Zoologie war. Es geht ihm zuvorderst um die Vervollständigung der Beschreibung. Die Behandlung der Morphologie als separate Kategorie führt allerdings zu einer detaillierteren und vollständigeren Wiedergabe der morphologischen Merkmale. In der Tat ist Gesners Beschreibung der Morphologie des Löwen vollständiger und präziser als die Wottons. Klar ist weiter, dass die Zusammenführung der Angaben den Vergleich des aus diversen Quellen stammenden Informationsmaterials und damit eine kritische Betrachtung desselben fördert. Widersprüche können auf diese Weise leichter ans Licht gebracht werden. Freilich impliziert der Vergleich nicht, dass dieser auf empirischer Basis stattzufinden habe. Er konzentriert sich zuvorderst auf die Ebene der Textüberlieferung. Wenn die Textüberlieferung nicht widersprüchlich ist, zementiert der Vergleich die überlieferte Information als *communis opinio*. Wenn die Texttradition falsche Information enthält, führt die Separierung der Morphologie zur Zementierung von Irrtümern. Insofern bildet Gesners Differenzierung der Beschreibungsmethode an sich keinen Indikator für wissenschaftlichen Fortschritt.

Für die separate Darstellung der Physiologie gilt mutatis mutandis Ähnliches wie für die Morphologie. Die Konzentration ermöglicht eine detailliertere Beschreibung und die systematische Zusammenführung der Quellen kann ihre kritische Betrachtung fördern. Diese Vorteile treten im Kapitel „Vom Löwen“ u.a. in Bezug auf die Nahrungsaufnahme hervor. Diesbezüglich liegen Quellenangaben vor, die die außerordentliche Jagdfreudigkeit und ‚edle‘ Tapferkeit des Löwen betonen und diese mit der Angabe verbinden, dass Löwen ausschließlich frische und selbst

¹²³ Ebd. 646.

erlegte Beute verspeisen. Aus Ibn Sina (Avicenna, 980–1037) bezog Gesner über Albertus Magnus die Information: „Löwen ernähren sich ausschließlich von der Jagd, und sie jagen mindestens einmal pro Tag“. ¹²⁴ In Joannes Tzetzes' (ca. 1110–ca. 1180) Homerkommentar traf er die Angabe an, dass sich Löwen nur von frisch erlegter Beute ernähren. Was sie nicht unmittelbar fressen können, lassen sie liegen und kehren später nicht mehr zu ihrer Beute zurück. Bei Manuel Philes, Aelian und Plinius fand er jedoch den Bericht, dass die Löwen ihre Beute mit ihrem stinkenden Atem anhauchen, um andere Tiere von ihr abzuhalten. ¹²⁵ Dieses merkwürdige Verhalten macht natürlich nur dann Sinn, wenn der Löwe an den Folgetagen zu der verwesenden Beute zurückkehren will, also auch Aas frisst. Aus der Zusammenführung der Quellen ergibt sich somit ein widersprüchliches Bild, das eine kritische Betrachtung und eine Auflösung des Widerspruchs erfordert.

Es war für Gesner keineswegs leicht, den Widerspruch aufzulösen, da er über keine empirischen Beobachtungen bezüglich der Ernährungsweise des Löwen in freier Wildbahn verfügte. Systematische Beobachtungen der modernen Zoologie haben ergeben, dass es mit dem vermeintlichen ‚Edelmut‘ des Löwen nicht weit her ist. Löwen sind sowohl bereit, die Beute anderer Karnivoren, wie Geparden, Leoparden, Wildhunden und Hyänen, zu rauben als auch Aas zu fressen. Interessant ist zu beobachten, auf welche Weise sich Gesner einen Weg durch das schwer durchdringbare Dickicht bahnte. Er schloss von der ihm zugänglichen Empirie auf die unbekanntenen Daten. Er hatte Löwen in Gefangenschaft beobachtet. Dabei war ihm aufgefallen, dass Löwen in Gefangenschaft nicht nur Aas fressen, sondern sogar Honigkekse und andere Süßigkeiten“ („tamen [captivi inclusique leones] non mortua solum corpora [...] devorare, sed etiam ex melle placentas et huiusmodi“). Daraus leitete er richtig ab, dass die Annahme verfehlt sein müsse, dass Löwen Aas prinzipiell verschmähen würden, z.B. weil sie vom Gestank abgestoßen werden würden. Zugleich war er sich der Beschränkung seiner empirischen Beobachtung bewusst. Es konnte sein, dass gefangene Wildtiere atypisches Verhalten an den Tag legen. Löwen in Gefangenschaft hatten ja keine Wahl, sie durften in der Regel nicht jagen, d.h. sie mussten, wenn sie überleben wollten, totes Fleisch zu sich nehmen. Er wollte daher nicht ausschließen, dass Löwen in freier

¹²⁴ Ebd. 648.

¹²⁵ Ebd.

Wildbahn sich im Prinzip auf frisches Fleisch zulegten. Dies verband er interessanterweise mit einer aus der Textüberlieferung tradierten Auffassung über die psychischen Eigenschaften des Löwen, seinem vermeintlichen „Hochmut“ („superbia“). Es sei diesem zuzuschreiben, dass wilde Löwen frisches und selbsterlegtes Fleisch vorzögen. Aus dem Abschnitt über die Tierpsychologie (D) geht hervor, dass Gesner die aus der literarischen Überlieferung vermittelten Eigenschaften ohne Einschränkungen unterschrieb: Tapferkeit („fortitudo“) und Edelmut („generositas“) seien die wichtigsten Eigenschaften des Löwen,¹²⁶ mit denen er übrigens die idealen Eigenschaften des Mannes am besten verkörpere („Leo ideam maris maxime omnium refert“).¹²⁷ Da Gesner entsprechende empirische Beobachtungen fehlten, konnte er nicht wissen, dass die meiste Beute nicht von den tapferen, kraftstrotzenden, edelmütigen Männchen, sondern gerade von den als weniger tapfer eingestuftem Weibchen erlegt wird, da diese aufgrund ihres geringeren Körpergewichtes bei Jagdsprints gegen die normalen Beutetiere, Zebras, Gnus und Antilopen, bessere Chancen haben als die schweren Männchen.

*Zoologie als utilitaristische Wissenschaft:
Die universale Ausschachtung des Tieres*

Eine wesentliche Erweiterung von Gesners Deskriptionsdiskurs findet auf Gebieten statt, die in modernen zoologischen Übersichtswerken ausgeklammert bleiben: Sie betreffen die Nutzung des Tieres durch den Menschen. In modernen Zoologien leitet man die Berechtigung der zoologischen Deskription nicht aus dem Maß ab, in dem das betreffende Tier dem Menschen nützt. Vielmehr ist man sich der Tatsache bewusst, dass zahlreiche Tierarten von der Existenz des Menschen bedroht werden. Moderne Zoologie ist bis zu einem gewissen Grad die Wissenschaft von gefährdeten Lebewesen. Ein fester Bestandteil von Übersichtswerken ist deshalb eine normierte Angabe des Gefährdungsgrades der beschriebenen Species (IUNC-Status). Zahlreiche Säugetierarten zählen zu den gefährdeten Species, besonders unter den Karnivoren, die als Spitzen der Nahrungskette sowohl mit dem

¹²⁶ Ebd. 652–660.

¹²⁷ Ebd. 656.

Menschen konkurrieren als auch aufgrund der Lebensweise ihrer Beutetiere oft weitläufige Jagdterritorien benötigen, welche von der modernen Zivilisation eingeschränkt oder beseitigt werden. Zum Beispiel wird die Species *Panthera leo* mit dem Prädikat „gefährdet“ versehen, ebenso wie der Nebelparder (*Neofelis nebulosa*), die Chilenische Wildkatze (*Felis guigna*), die Asiatische Goldkatze (*Felis temmincki*), die Fischkatze (*Felis viverrinus*), die Rostkatze (*Felis rubiginosus*), der ostasiatische Rothund (*Cuon alpinus alpinus*), der westasiatische Rothund (*Cuon alpinus hesperius*) und der Waldhund (*Speothos venaticus*); der Tiger (*Panthera tigris*) sogar mit dem Prädikat „stark gefährdet“ ebenso wie der Gepard (*Acinonyx jubatus*), der Schneeleopard (*Panthera uncia*), der Pardelluchs (*Felis pardinus*), die Iriomotekatte (*Felis iriomotensis*), die Bergkatze (*Felis jacobitea*) und die Borneo-Goldkatze.¹²⁸ Die Löwen-Subspecies *Leo persica* ist unmittelbar vom Aussterben bedroht, ebenso wie der Afrikanische Wildhund (*Lycan pictus*), der Abessinische Fuchs (*Canis simensis*) und drei Subspecies des Leoparden. Drei der insgesamt 8 Tigerunterarten sind ausgestorben.

Diese Liste, die keineswegs exhaustiv ist und nur als Beispiel dienen soll, zeigt die Ausrichtung des Diskurses an. In diesem wird von Artenschutzmassnahmen, Artenrettungs- und Rückzuchtungsprogrammen berichtet (z.B. in Bezug auf den Europäischen Wolf, den Berberlöwen, den Abessinischen Fuchs, den Afrikanischen Wildhund, den Rothund usw.). Der Diskurs wird durch ein verstärktes Verantwortungsbewusstsein des Menschen charakterisiert, der den Artenschutz als moralischen Imperativ betrachtet. Ein Beispiel für die diesbezügliche zoologische Ökorhetorik: „Die Erhaltung und Wiedereinführung überlebensfähiger Wolfspopulationen als Bestandteil europäischer Ökosysteme ist eine der größten Herausforderungen für den europäischen Artenschutz im nächsten Jahrtausend“.¹²⁹

Wie anders Gesner! Dass Gesner gleich vier Kategorien (E–H) der Tiernutzung widmete, zeigt an, dass dies ein diskursbestimmendes Merkmal ist. Daraus geht hervor, dass die Tierdeskription nicht als Selbstzweck gedacht ist. Die Ausführungen zu den Namen der Tiere, zu ihrem Verbreitungsgebiet, zu Morphologie, Physiologie und Psychologie führen organisch zur Auseinandersetzung des Nutzens hin. Der Nutzen erscheint damit gewissermaßen von übergeordneter Bedeutung. Das Tier soll dem Menschen zur Mobilität, zum Zeitvertreib,

¹²⁸ Macdonald, *Enzyklopädie der Säugetiere* 11, 36–37, 66.

¹²⁹ Ebd. 45.

zur Kleidung, zur Düngung, zum Krieg, weiter als Schutz, Nahrung und Heilmittel dienen. Es ist kein Zufall, dass die Tiere, welche dem Menschen den meisten Nutzen bringen, am ausführlichsten behandelt werden. Das „nützlichste“ Tier, das Pferd, beansprucht bei Gesner das längste Lemma: 187 Folioseiten (442–619)!

In welchem Masse das Dogma der Tiernutzung Gesners zoologischen Diskurs bestimmte, lässt sich vielleicht noch signifikanter anhand einer Species wie *Panthera leo* zeigen. Denn die katzenartigen Raubtiere zählen zu den am wenigsten nützlichen Tieren. Der Löwe ist kein Reittier, lässt sich kaum zähmen und nur schwer halten, sein Fleisch ist ungenießbar (während er im Gegenteil viel Fleisch benötigt) und sein Kot eignet sich nicht zur Düngung. Außerdem eignet sich der Löwe nicht als Milchtier, schon weil er sich aufgrund seiner Aggression nicht melken lässt. Überhaupt wird sein Nutzen von vornherein schon dadurch praktisch verunmöglicht, dass er zu Gesners Zeit in Europa nicht mehr vorkam.

Wenn man dies berücksichtigt, ist umso erstaunlicher, dass Gesner die betreffenden Kategorien dennoch behandelt. In Kategorie E behandelt er den Löwen auf ca. 2 Folioseiten als Jagdobjekt. Das mutet seltsam an, da der Löwe nicht nur in Gesners Schweiz, sondern auch im übrigen Europa nicht als Jagdtier vorrätig war. Einige seltene Exemplare wurden in Menagerien zu Schauzwecken gehalten. Man hütete sich jedoch, die wertvollen Schauobjekte aufs Spiel zu setzen. Wenn Gesner den Löwen als Jagdobjekt darstellen wollte, musste er auf die Antike zurückgreifen.¹³⁰ Besonders Oppians Jagdgedicht *Kynegetica* stellt diesbezüglich eine ergiebige Quelle dar. Aus Oppian übernimmt Gesner verschiedene Arten der Löwenjagd: Mit Pferden, Hunden, Netzen, Fackeln, Lärm,¹³¹ mit Schildern, Peitschen und Stricken¹³² sowie mit Ködern und Fallgruben.¹³³ Noch merkwürdiger sind Gesners Angaben zum Löwen als Jagdgefährten. Man soll ihn zur Jagd abrichten können wie den Hund. Wie ein Jagdhund sei der Löwe imstande, Beute aufzuspüren. Weiter lasse er sich wie ein Pferd vor den Wagen spannen. Diese unrealistischen Daten hat Gesner aus antiken Quellen und aus den subrezenten Reiseberichten des Marco Polo bezogen.

¹³⁰ Vgl. Steier, Art. „Löwe“, Sp. 978–980.

¹³¹ *Kynegetica* IV 112 ff.

¹³² Ebd. IV 147–212. Auf diese Weise soll man in Äthiopien Löwen gejagt haben.

¹³³ Ebd. IV 77–111.

Die kulinarische Abteilung musste notgedrungen kurz bleiben, da Löwenfleisch, wie das der meisten Karnivoren, ungenießbar ist. Bezeichnend ist jedoch, dass sich Gesner gezwungen fühlte, die Gründe zu erarbeiten, weshalb man Löwenfleisch lieber nicht essen sollte. Das Löwenfleisch besitze eine außerordentlich trockene Komplexion, weshalb sein Verzehr viel „schwarze Galle“ erzeuge, die ihrerseits zu Leibschmerzen, Bauchkrämpfen und Flatulenz führe („dolorem et torsionem et inflationem ventris generat“). Die kuriose Sachlage – es war in Europa kein Löwenfleisch vorrätig, Löwenfleisch ist überhaupt ungenießbar – zeigt das zugrundeliegende Diskursdogma – Tiere sind zum Verzehr durch den Menschen bestimmt – umso klarer auf.

Dasselbe gilt mutatis mutandis vom Löwen als Lieferanten von Heilmitteln: Obwohl Löwen nicht in ausreichendem Maß vorrätig waren, um Löwenarzneien zu produzieren und obwohl dem praktizierenden Arzt Gesner die geringe medizinische Relevanz derselben bewusst gewesen sein muss, widmet er dem Thema eine Folioseite. Löwenfleisch eigne sich als Medizin für Paralytiker. Es soll dazu dienen, das Aufkommen von Trugbildern („phantasmata“) zu verhindern. Ein Streifen Löwenfell soll gegen Fußschmerzen helfen; Löwenblut und Löwenfett soll vor Angriffen wilder Tiere schützen. Schmerzen, die durch Hämorrhoiden verursacht werden, können durch das Sitzen auf einem Löwenfell gelindert werden. Diese wenig hilfreichen Angaben zeigen a fortiori das Dogma, das Gesners zoologischen Diskurs bestimmt. *Das Tier wird bis zum letzten Rest genützt – ausgeschlachtet.* Dabei geht es nicht immer um den tatsächlichen praktischen Wert, sondern ums Prinzip.

Dieses Diskursmerkmal zeigt einmal mehr auf, dass vieles ausgeblendet wird, wenn man die frühneuzeitlichen Zoologien wissenschaftsteleologisch als Vorläufer oder Wegbereiter der modernen Zoologie betrachtet. Das Bild, das sich aus der Diskursanalyse der Großprojekte Wottons und Gesners ergibt, ist durchaus vielgestaltiger, reicher, komplexer und voll von Gegensätzen und Diskontinuitäten. Es liegt keine eindeutige, ‚fortschrittsbezogene‘, geradlinige oder schrittweise Entwicklung vor. Der Vergleich der beiden, ungefähr gleichzeitig ausgeführten Projekte führt zudem vor, wie die Wissenschaft der Zoologie zur selben Zeit auf ganz unterschiedliche Weise konstituiert wurde. Es lohnt sich, die Vielgestaltigkeit, die Gegensätze und Diskontinuitäten zu registrieren. Dadurch wird es möglich, die Wissenschaftsorganisation der frühen Neuzeit in ihrer schillernden Vielfarbigkeit und anregenden Alterität zu verstehen.

Auswahlbibliographie

- ACKERMANN J.M., „Early Renaissance ‚naturalism‘ and scientific illustration“, in Ellenius A. (Hrsg.), *The Natural Sciences and the Arts* (Uppsala: 1985) 1–17.
- ASHWORTH W.B. Jr., „Natural history and the emblematic world view“, in Lindberg D.C. – Westmann R.S. (Hrsg.), *Reappraisals of the Scientific Revolution. Journal of the History of Ideas* 52 (1991) 373–398.
- , „Emblematic natural history of the Renaissance“ in Jardine N. – Secord J.A. – Spary E.C. (Hrsg.), *Cultures of Natural History* (Cambridge: 1996) 17–37.
- BALME D.M., „Aristotle’s use of division and *differentiae*“, in Gotthelf A. – Lennox J.G. (eds.), *Philosophical Issues in Aristotle’s Biology* (Cambridge: 1987) 69–89.
- BALSS H., *Albertus Magnus als Biologe* (Stuttgart: 1947).
- BARANTAY E. – HARDOUIN-FUGIER E., *Zoos. Histoire des jardins zoologiques en l’Occident XVI^e–XX^e siècle* (Paris: 1998).
- BÄUMER A., *Die Biologie von der Antike bis zur Renaissance*, in Dies., *Geschichte der Biologie*, Bd. 1 (Frankfurt a.M. – Bern – New York – Paris: 1991).
- , *Zoologie der Renaissance – Renaissance der Zoologie*, in Dies., *Geschichte der Biologie*, Bd. 2 (Frankfurt a.M. – Bern – New York – Paris: 1991).
- , „Das erste zoologische Kompendium in der Zeit der Renaissance: Edward Wottons Schrift ‚Über die Differenzen der Tiere‘“, *Berichte zur Wissenschaftsgeschichte* 13 (1990) 13–29.
- BÄUMER-SCHLEINKOFER A., „Zoologie der Renaissance – Renaissance der Zoologie“, in Döring K. – Wöhrle G. (Hrsg.), *Antike Naturwissenschaft und ihre Rezeption*, Bd. I und II (Bamberg: 1992) 275–295.
- , „Biblische Zoologie (Hermann Frey, Wolfgang Franz, Heinrich von Hoewel)“, in Kattenstedt H. (Hrsg.), *„Grenzüberschreitung“. Festschrift zum 70. Geburtstag von Manfred Büttner* (Bochum: 1993) 3–17.
- BAY J.CH., „Conrad Gesner (1516–1565), the Father of Bibliography. An Appreciation“, *Papers of the Bibliographical Society of America* 10 (1958) 53–88.
- BEAGON M., *Roman Nature: the Thought of Pliny the Elder* (Oxford: 1992).
- BERENGARIO DA CARPI, *Commentaria cum amplissimis additionibus super anatomia Mundini* [...] (Bologna: 1521).
- , *Isagoge brevis* (Bologna: 1522). Engl. Übers. *A Short Introduction to Anatomy*, trans. Lind L.P. (Chicago: 1959).
- BOAS M., *The Scientific Renaissance 1450–1630* (New York: 1962).
- BYLEBYL J., „The School of Padua: Humanistic Medicine in the 16th Century“, in Webster Ch. (Hrsg.), *Health, Medicine and Mortality in the 16th Century* (Cambridge: 1979) 335–370.
- CASTIGLIONI A., „The Origin and Development of the Anatomical Theatre to the End of the Renaissance“, *Ciba Symposium* 3 (1941) 826–844.
- CÉARD J., „Analogie et zoologie chez naturalistes de la Renaissance“, in Christian L.C. (Hrsg.), *Theatrum mundi. The History of an Idea* (New York: 1987).
- COOK H.J., „Physick and natural history in the 17th century“, in Ariew R. – Barker P. (Hrsg.), *Revolution and Continuity: Essays in the History of Philosophy of the Early Modern Science* (Washington: 1991) 63–80.
- , „Physicians and natural history“ in Jardine N. – Secord J.A. – Spary E.C. (Hrsg.), *Cultures of Natural History* (Cambridge: 1996) 91–105.
- CUNNINGHAM A., *The Anatomical Renaissance* (Aldershot: 1997).
- DAHL F., „Zur Geschichte der Zoologie. Von Aristoteles bis Plinius“, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 50 (1924) 62–104.
- DELAUNY P., *La Zoologie au XVI^e siècle, Histoire de la pensée* 7 (Paris: 1962; reprint Paris: 1997).

- DRIESCH A. VON DEN, *Geschichte der Tiermedizin: 5000 Jahre Tierheilkunde* (München: 1989).
- DURLING R.J., „Conrad Gesner's Liber amicorum, 1555–1565“, *Gesnerus* 22 (1965) 134–159.
- FALOPPIO GABRIELE, *Observationes anatomicae* (1561), in Ders., *Opera genuina omnia*, 3 Bde. (Venedig: 1606).
- FINDLEN, P., *Possessing Nature. Museums, Collecting and Scientific Culture in Early Modern Italy* (Berkeley: 1999).
- FISCHER H., „Conrad Gessner“; „Conrad Gessner als Bibliograph“ und „Conrad Gessner als Arzt“, in Ders. et alii, *Conrad Gessner 1516–1565. Universalgelehrter, Naturforscher, Arzt* (Zürich: 1967) 11–22; 31–37; 39–47.
- , *Conrad Gesner. Leben und Werk* (Zürich: 1966).
- , „Conrad Gesner als Arzt“, *Gesnerus* 22 (1965) 205–215.
- FRANZIUS WOLFGANG, *Historia animalium sacra, in qua plerorumque animalium praecipuae proprietates in gratiam studiosorum Theologiae et ministrorum verbi ad usum eikonologikon breviter accommodantur, in Academia Witenbergensi [...] dictata* (Wittenberg, Zacharias Schurer und Johannes Gormann: 1612).
- FRENCH R.K., *Ancient Natural History: Histories of Nature* (London: 1994).
- , *Dissection and Vivisection in the European Renaissance* (Aldershot: 1999).
- FRENCH R.K. – WEAR A. (Hrsg.), *Medical Revolution in the 17th century* (Cambridge: 1989).
- GESNER CONRAD, *Historiae animalium I de quadrupedis viviparis [...]* (Zürich, Christoffel Froschauer: 1551).
- , *Icones animalium quadrupedum viviparorum et oviparorum quae in Historiae animalium Conradi Gesneri libro I et II describuntur [...]* (Zürich, Christoffel Froschauer: 1553).
- , *Thierbuch, das ist ein kurze beschreybung aller vierfüssigen Thieren, so auff der erden und in wassern wohnend, sampt irer waren conterfactur: alles zu nutz und gutem allen liebhabern der künsten, Artzetzen, Malern, Bildschnitzern, Weydleuten und Köchen gestellt. Erstlich durch Cunrat Gesner in Latin beschriben, yetzunder aber durch Cunrat Forer zu mererem nutz aller mengklichen in das Teutsch gebracht, und in ein kurtze komliche ordnung gezogen* (Zürich, Christoffel Froschauer: 1563).
- GILLES PIERRE, *Ex Aeliani historia per Petrum Gyllium latini facti itemque ex Porphyrio, Heliodoro, Oppiano, tum eodem Gyllio luculentis accessionibus aucti libri XVI de vi et natura animalium. Eiusdem Gyllii liber unus de Gallicis et Latinis nominibus piscium* (Lyon, Sebastian Gryphius: 1535).
- GMELIG-NIJBOER, C.A., *Conrad Gesner's „Historia Animalium“: An Inventory of Renaissance Zoology* (Diss. Utrecht: 1977).
- , „Conrad Gesner (1516–1565) Considered as a Modern Naturalist“, *Janus* 60 (1973) 41–51.
- GOULD E., MCKAY G., *Enzyklopädie der Tierwelt. Säugetiere* (München: 2002; urspr. englisch, Sidney: 1990).
- GUERRINI A., *Experimenting with Humans and Animals. From Galen to Animal Rights* (Baltimore – London: 2003).
- HARMS W., „On natural history and emblematics in the 16th century“, in Ellenius A. (Hrsg.), *The Natural Sciences and the Arts* (Uppsala: 1985) 67–83.
- HELMCKE J.G., „Der Humanist Conrad Gesner auf der Wende von mittelalterlicher Tierkunde zur neuzeitlichen Zoologie“, *Physis* 12 (1970) 329–346.
- HERR MICHAEL, *Gründtlicher Unterricht, wahrhafft und eygentliche beschreibung wunderbarer seltamer art, natur, kraft und eygenschaft aller vierfüssigen thier, wild und zahm, so auff und in der erden oder wassern wonen [...]* (Straßburg, Balthasar Beck: 1546).
- HÜNEMÖRDER Ch., „Aims and Intentions of Botanical and Zoological Classification in the Middle Ages and in the Renaissance“, *History and Philosophy of the Life Science* 5 (1983) 53–67.

- JAHN I. (Hrsg.), *Geschichte der Biologie* (Hamburg: 2004; Sonderausgabe nach dritter Auflage Jena: 1998).
- , *Grundzüge der Biologiegeschichte* (Jena: 1990).
- JARDINE N. – SECORD J.A. – SPARY E.C. (Hrsg.), *Cultures of Natural History* (Cambridge: 1996).
- KAUFMANN T.D., *The Mastery of Nature. Aspects of Art, Science and Humanism in the Renaissance* (Princeton: 1993).
- KELLER O., *Die antike Tierwelt*, 2 Bde., I (Leipzig: 1909), II (Leipzig: 1913), Register (1920). Nachdruck (Hildesheim: 1963).
- , *Thiere des klassischen Alterthums in culturgeschichtlicher Beziehung* (Innsbruck: 1887; Nachdruck Hildesheim: 1983).
- KNIGHT D., *Zoological Illustration. An Essay towards a History of Printed Zoological Pictures* (Folkstone: 1977).
- LEITNER H., *Zoologische Terminologie beim älteren Plinius* (Hildesheim: 1972).
- LENNOX J.G., „Between Data and Demonstration: the Analytics and the *Historia Animalium*“, in: Idem, *Aristotle's Philosophy of Biology: Studies in the Origins of Life Science* (Cambridge: 2001) 39–71.
- LEU U.B., „Theologia naturalis“, in Ders., *Conrad Gesner als Theologe. Ein Beitrag zur Zürcher Geistesgeschichte des 16. Jahrhunderts* (Bern – Frankfurt a.M. – New York – Paris: 1990; Zürcher Beiträge zur Reformationsgeschichte 14) 31–100.
- LEY W., *Conrad Gesner. Leben und Werk* (München: 1926).
- LLOYD G.E.R., *Science, Folklore, and Ideology. Studies in the Life Sciences in Ancient Greece* (Cambridge: 1983).
- , „The Development of Aristotle's Theory of the Classification of Animals“, *Phronesis* 6 (1961) 59–81.
- LLOYD J.E. Barclay, *African Animals in Renaissance Literature and Art* (Oxford: 1971; New York: 1972).
- LONITZER ADAM, *Naturalis historiae opus novum, in quo tractatur de natura et viribus arborum, fructuum, herbarum animantiumque terrestrium, volatilium et aquatilium, item gemmarum, metallorum succorumque concretorum* (Frankfurt a.M., Christoph Egenolph: 1551–1555).
- MACDONALD D. (Hrsg.), *Enzyklopädie der Säugetiere* (Königswinter: 2003; urspr. englisch, Oxford: 2001).
- MAYERHÖFER J., „Conrad Gesner als Bibliograph und Enzyklopädist“, *Gesnerus* 22 (1965) 176–195.
- MAYR E., *Systematics and the Origin of Species* (New York: 1942).
- , *Animal Species and Evolution* (Cambridge Mass.: 1963).
- MESNARD P., *L'horizon zoologique de la Renaissance. Les animaux anciens et les animaux modernes*, in *Sciences de la Renaissance. VII^e congrès international de Tours* (Paris: 1973).
- MEYER H., „Frühe Neuzeit“, in Dinzelsbacher P. (Hrsg.), *Mensch und Tier in der Geschichte Europas* (Stuttgart: 2000) 293–403.
- MILT B., „Zürichs Vergangenheit in Naturwissenschaft und Medizin (Mittelalter und 16. Jahrhundert“, *Gesnerus* 4 (1947) 19–43.
- NISSEN C., *Die naturwissenschaftliche Buchillustration*, 2 Bde. (Bad Münster am Stein: 1950).
- , *Die zoologische Buchillustration, ihre Bibliographie und Geschichte* (Stuttgart: 1971).
- OGLIVIE B., *The Science of Describing Natural History in Renaissance Europe* (Chicago – London: 2006).
- PARK K., „The Criminal and Sainly Body: Autopsy and Dissection in Renaissance Europe“, *Renaissance Quarterly* 47 (1994) 1–33.
- PELLEGRIN P., *La classification des animaux chez Aristote* (Paris: 1982).
- PETT G., „Conrad Gessner, zoologist“ in Fischer H. et alii, *Conrad Gessner 1516–1565. Universalgelehrter, Naturforscher, Arzt* (Zürich: 1967) 49–56.
- , „Conrad Gesner zoologist“, *Gesnerus* 22 (1965) 195–205.
- PETT G. – THEODORIDES J., *Histoire de la zoologie des origines à Linné* (Paris: 1962).

- PLINIUS, GAIUS PLINIUS SECUNDUS DER ÄLTERE, *Naturkunde. Lateinisch – deutsch. Buch VIII. Zoologie: Landtiere*. Herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Gerhard Winkler (Kempten: 1976).
- , *Naturkunde. Lateinisch – deutsch. Buch XI. Zoologie: Insekten. Vergleichende Anatomie*. Herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Joachim Hopp (München – Zürich: 1990).
- RAVEN CH. E., *English Naturalists from Neckham to Ray: A Study of the Making of the Modern World* (Cambridge: 1947).
- SARTON G., *The Appreciation of Ancient and Medieval Science during the Renaissance (1450–1600)* (Philadelphia Penn.: 1953).
- STEIER A., Art. „Löwe“, in Wissowa G. – Kroll W., *Paulys Encyclopädie der classischen Alterthumswissenschaft* XIII,1 (1926) Sp. 968–990.
- , *Aristoteles und Plinius. Studien zur Geschichte der Zoologie* (Würzburg: 1913).
- SUUTALA M., *Tier und Mensch im Denken der Deutschen Renaissance* (Helsinki: 1990).
- THOMAS K., *Man and the Natural World: Changing Attitudes in England 1500–1800* (London: 1983).
- VELDE A.J.J. VAN DE, „Rond Gesner’s *Historiae animalium liber I* van 1551“, *Mededelingen van de Koninklijke Vlaamse Academie voor wetenschappen letteren en schone kunsten van België. Klasse der Wetenschappen* XIII,17 (Brüssel: 1951).
- WEAR A. – FRENCH R.K. – LONIE I.M. (Hrsg.), *The Medical Renaissance of the 16th Century* (Cambridge: 1985).
- WOTTON EDWARD, *De differentiis animalium libri decem* (Paris, Michel de Vascosan: 1552).

ON TOUCANS AND HORNBILLS: READINGS IN EARLY MODERN ORNITHOLOGY FROM BELON TO BUFFON*

Paul J. Smith

In *Les Delices de Leide*,¹ an anonymous travel guide from 1712, French tourists and ‘autres curieux’ are invited to take a walk along the curiosities of Leiden. The walk is made up of concentric circles from the outer canals to the town centre. Guidebook in hand, the tourist arrives at the well-known Anatomical Theatre. At that moment – in the centre of the town and in the middle of the book – the very readable style changes dramatically into a catalogue: seventy pages listing and numbering every single object of the Anatomical Theatre. Some curiosities are singled out and described in much detail: an Egyptian mummy, a Grecian vase and – the lengthiest description of all – the bill of a hornbill. Paradoxically, Leiden’s main curiosities, stored and exhibited in the town centre, turn out to be exotic objects that transport the visitor away from the centre to remote times and far away countries. It thus announces the image that Holland will have in the coming centuries until at least Baudelaire’s ‘pays de Cocagne’: a little, neat country furnishing an entrance to the outer world.

In the description of the hornbill (see appendix), some strange things happen. From the very opening of the text the bird is confused with another species – the toucan –, and authorities are quoted from times long before both birds were known to the learned world: Pliny, Hesychius of Alexandria (5th century AD), and Varinus Phavorinus (16th century). Another sixteenth-century authority, André Thevet, in fact never spoke of hornbills, only of toucans. There is also a strange anecdote about a long-billed bird shot at the battle of Lepanto (1571) in the Corinthian Sea – a place where neither toucans nor hornbills are found.

This curious text will serve us as a point of reference, not only for its own sake, but also because its broad intertext will provide a more

* I thank Peter Mason (Rome) for having corrected my English.

¹ Anonymus, *Les Delices de Leide, Une des célèbres villes de l’Europe* [...] (Leiden: 1712). See Smith PJ, “Wandelen in de *Délices de Leide* (1712)”, *De zeventiende eeuw* 22 (2006) 185–208.

general insight in early modern ornithology and into the sometimes confusing way in which unknown, exotic birds – from both the West and the East Indies – are seen, described, classified and thus introduced into Western scientific discourse.

For the sake of clarity, it is necessary to give some brief relevant ornithological information on the birds under discussion. Toucans are birds with enormous, brightly coloured bills, sometimes almost as long as their bodies. They are found wild only in American tropical forests. Within the suborder of *Piciformes* (woodpeckers and picarian allies), they form a family of thirty-seven species (from the largest crow-sized species of the genus *Ramphastos* to the lesser toucanets and aracarís). Like woodpeckers, toucans have two toes in front and two behind.

Hornbills only superficially resemble toucans in the size of their bills, but these are less fancifully coloured and are usually surmounted by a horny casque. The hornbill family consists of forty-five species, all from the Old World. Except for the two species of African ground hornbills, which forage in open country, they live in the tropical forests of Africa and Asia. According to current ornithological taxonomy, the hornbills (*Bucerotidae*) belong to the suborder of the *Coraciiformes*, to which kingfishers, bee-eaters, rollers and hoopoes also belong, characterised, as can be read in modern manuals, ‘by having their three front toes joined for part of their length, a condition known as “syndactyly”’.² Compared to the toucans, the size of some hornbills is enormous, especially the Great Hornbill (*Buceros bicornis*, 120 cm), the Rhinoceros Hornbill (*Buceros rhinoceros*, 110 cm), and the Wreathed Hornbill (*Aceros undulatus*, 100 cm). A bird in flight is impressive, not only for its format but also because of its noise: each wing stroke ‘makes a loud “whoosh” that sounds in the distance exactly like the chuffing of an old steam locomotive’.³ This characteristic can explain why, in the heat of the battle of Lepanto, the hornbill mentioned in the *Delices* was spotted and shot.

Although to modern eyes the two families are very distinct from each other, when they were first introduced to Europe toucans and hornbills were confused by early modern zoologists, as can be deduced from *Les Delices de Leide*. The birds have this in common with other non-related species that more or less resemble one other by way of ‘convergent

² Austin O.L. Jr., *Birds of the World. A survey of the twenty-seven orders and one hundred and fifty-five families* (London: 1962) 175.

³ Austin, *Birds of the World* 184.

evolution', such as the Antarctic penguins and the Arctic auks (especially the extinct Great Auk), the New World armadillos and the Old World pangolins, and the Old and New World warblers. Their origins are also unknown because the trade routes from the East and the West mostly went via West Africa, where cargos were transshipped, so that it was often difficult to tell from which continent the exotic material originated. This confusion is still clear from the current names of some well-known animals: the English name *guinea pig* ignores the animal's South American origin, and the word *turkey* suggests that the bird comes from Turkey and not from North America, – just as the bird's French name *dindon* or *poule d'Inde* suggests India, and the Dutch name *kalkoen* the town Calcutta as the bird's place of origin.

The following is a chronological discussion of the principal texts on both families, beginning in the sixteenth-century – the age of their discovery – and ending with Buffon, who wrote the most influential ornithology of the Enlightenment. This corpus enables us to outline the history of the scientific knowledge of both bird families. But as a case study it also hopes to show more: because the newly discovered birds were incorporated in the prevailing ornithological discourse and taxonomy, thus making continuous revisions necessary, this teaches us a lot about early modern zoology. As we shall see, the rare, fragmentary and transitory material and the scattered oral, hand-written and printed information about the birds underline the need for every zoologist to maintain a wide and well-functioning social and scientific network and to have access to collections of non-professionals.

The first toucans

The toucan was known in Europe long before the hornbill, although its entry into European ornithology was hesitant. The first description of the bird comes from the Spanish naturalist Gonzalo Fernández de Oviedo y Valdés (1478–1557) in his *Sumario de la natural y general historia de las Indias* (1526), quoted here in a modern English translation:

There is in Tierra Firme a bird that the Christians call *picudo* ['big bill,' toucan] because it has a small body and large beak. The beak weighs more than the whole body. This bird is only slightly larger than a quail, but it appears much larger because of its beautiful thick varicoloured plumage. Its turned-down beak is as much as six inches long. At the head the beak

is about three finger-breadths wide. The bird's tongue is a feather,⁴ and it can whistle loudly. With its beak it makes holes in trees, where it nests and raises its young. It is a very strange bird, and different from any other that I have seen because of its feather tongue, its appearance, and its disproportionately large bill. No bird can so surely and safely protect its young from cats. Because of the location of the nests, cats cannot enter the hole in the tree to take the eggs or young birds. When the birds hear a cat they get into the nest and turn their bills out, and give the cat such pecks that the cat deems it wise not to molest the young birds.⁵

Oviedo's very interesting description of the toucan remained unnoticed until at least the work of the German scholar Johannes Faber (1628),⁶ extensively quoted and commented upon in the *Ornithology* (1678) by Francis Willughby and John Ray (see below). The influential ornithological work by Conrad Gesner (1516–1565), *Historiae animalium liber III, qui est de avium natura* (1555), does not mention the toucan (or the hornbill). We shall see that his first mention of a *Rhampast* only occurs in his *Icones avium* (1560). The bird became more generally known to zoologists through the description and illustration of its bill given by Pierre Belon du Mans (ca. 1517–1565) in his influential *Histoire de la nature des oyseaux* (1555) [Fig. 1].⁷ Although Belon only had the bird's bill at his disposal, while the rest of the bird was unknown to him – the illustrated bill clearly belongs to a Toco Toucan (*Ramphastos toco*), the biggest and most common of the toucan family –, his brief description was to remain, as we shall see, highly authoritative until the eighteenth century. He begins by indicating that the bird is unknown to the Ancients – a detail which is not without importance, because early ornithology defines itself in regard to the Ancients, often affirming or amending the texts of Aristotle, Pliny and others. He continues

⁴ On the bird's tongue, whose strangeness will be developed by Buffon, see Austin, *Birds of the World* 189: 'The tongue, which extends almost to [the bill's] tip, is very thin and narrow, rather stiff and hard, and fringed on both sides with bristles. The function of these bristles is uncertain, and perhaps as ambiguous as the bill itself'.

⁵ Gonzalo Fernández de Oviedo y Valdez, *Natural History of the West Indies*, transl. and ed. Stoudemire S.A. (Chapel Hill: 1959) 68.

⁶ Before Faber, the Italian scientist Gerolamo Cardano proved to have read Oviedo, although wrongly, because he amalgamated Oviedo's description of the tongue ('Illud in eo mirum, quod pennam habent loco linguae') with Oviedo's chapter on the *alcatraz* (the Brown Pelican [*Pelecanus occidentalis*]). Gerolamo Cardano, *De subtilitate* (Basle: 1554) 337.

⁷ Quotations are from Pierre Belon du Mans, *L'Histoire de la nature des oyseaux. Fac-similé de l'édition de 1555*, ed. Glardon P. (Geneva: 1997).

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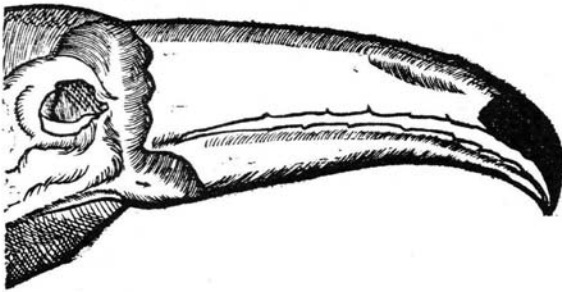
LIVRE III. DE LA NATURE

Du bec d'un oyseau des terres neufues, incognu aux anciens.

CHAP. XXVIII.

C E V X qui nauigent aux terres neufues, faisant leur profit de toutes choses, apportent ce qu'ils trouuent de bon, pour vendre aux marchands. Or est-ce qu'il y a vn oyseau en ce pais lá, ayát le bec long de demy pied, gros come le bras d'un enfant, pointu & noir par le bout, mais blanc en tous autres endroits, & quelque peu coché par les bords. Il est creux par dedens: estant si finement delié, qu'il en est transparent & tenue comme parchemin, & par ce est moult legier. Cest la beauté qui fait qu'on en voit ia plusieurs par les cabinets des hommes curieux de choses nouvelles: Car au demeurant, lon ne s'en sert à au cune chose. Et nous n'ayants veu l'oyseau qui l'á produit, n'en pouuons dire autre chose, sinon que par soupçon le pensons estre de pied plat. Et par ce l'auós mis en cest endroit avec les oyseaux de riuíere. Mais pour faire voir quel est ce bec, en auons cy mis le portraict. Il est seul entre tous ceux qu'auons obseruez, à qui n'ayons veu conduictés pour odorer.

Portraict d'un bec d'oyseau apporté des terres neufues.



FIN DV TROISIEME LIVRE

Fig. 1. Skull of a Toco Toucan from Brazil. From Pierre Belon du Mans, *L'Histoire de la nature des oyseaux* (Paris: 1555).

by remarking that the bird is a popular merchandise, which is another detail expanded upon by Belon's first readers: Thevet and L ery.

Belon's brief but rather accurate description of the bill is followed and developed by Aldrovandi and many others. Thus the bill's slightly crenate edges and its amazing lightness due to its parchment structure ('Il est creux par dedans: estant si finement deli e, qu'il en est transparent & tenue comme parchemin, & par ce est moult legier') are details often repeated after Belon. Furthermore, Belon did not discover any nostrils ('Il est le seul [oiseau] entre tous ceux qu'avons observez,   qui n'avons veu conduicts pour odorer') – the bird's nostrils, at the base of its bill, are indeed difficult to find. From Aldrovandi on until the description in the *Delices de Leide*, this anomalous lack of nostrils is explained by the two other characteristics mentioned by Belon: the bird does not need any nostrils to breathe because the bill's material is transparent; and its edges make it impossible for the bird to close the bill completely. Even the hypothesis that the unknown bill belongs to a webbed-footed river bird – a hypothesis already refuted by Thevet – will leave its traces: until Buffon an aquatic species of toucan or hornbill, a *hydrocorax*, often emerges.

What Belon left implicit is the question of why the bird is placed in the second ('waterfowl') of the six ornithological groups that he distinguished.⁸ The reason for this placement is probably due to the lengthy, saw-edged mandibles – characteristics Belon also noted for webbed-footed fish-eaters such as pelicans, mergansers, and some other species of ducks. And Belon's statement that the bill can be seen in many *cabinets de curiosit es* is particularly important for our argument, since it shows the interdependency of private collections and zoological treatises. As we shall see in more detail, the 'cabinets des hommes curieux de choses nouvelles' often furnished the material for zoology, just as, inversely, zoological treatises were often at the basis of collections.

Thevet, L ery, Gesner and Aldrovandi on toucans

Andr  Thevet is the first to give a description of the toucan, complete with illustration. Thevet (1516–1592) was a Franciscan and author of

⁸ These groups are: raptors, waterfowl, shore birds, terrestrial birds, large arboreal birds, small brushwood birds.

some influential ‘cosmographic’ works, partly based on his own travel experiences. After travelling to the Middle East he wrote a *Cosmographie de Levant* (1554). In 1555–1556 he briefly sojourned in ‘Antarctic France’, *i.e.* Brazil. Upon falling ill at his arrival at Rio de Janeiro, he had to return to France after only ten weeks. In spite of his brief stay, he managed to acquire enough material to write his *Singularitez de la France Antarctique* (1557). In this book he gives a description of the toucan, clearly a response to the recently published description of Belon, though without naming him. Like Belon, Thevet begins by mentioning the bird’s quality as merchandise, not for its bill, but for its plumage. He goes on to give the name of the bird and a brief description of the bird’s feathers:

Sur la coste de la mer, la plus frequente marchandise est le plumage d’un oiseau, qu’ils appellent en leur langue *Toucan*, lequel descrirons sommairement, puis qu’il vient à propos. Cest oyseau est de la grandeur d’un pigeon. Il y en a une autre espece de la forme d’une pie, de mesme plumage que l’autre: c’est à sçavoir noirs tous deux, hors-mis autour de la queue, ou il y a quelques plumes rouges, entrelacées parmy les noires, sous la poitrine plume iaune, environ quatre doigts, tant en longueur que largeur: & n’est possible trouver iaune plus excellent que celui de cest oiseau: au bout de la queue il a petites plumes rouges comme sang. Les Sauvages en prennent la peau à l’endroit qui est iaune, & l’accommodent à faire des garnitures d’espées à leur mode, & quelques robes, chapeaux, et autres choses.⁹

In order to establish himself as a reliable and highly esteemed authority, Thevet continues: ‘J’ai apporté un chapeau fait de ce plumage, fort beau et riche, lequel a été présenté au roi comme chose singulière’. Thevet’s superiority over Belon is suggested in the following observation: ‘Certains pourraient penser qu’il fût aquatique, ce qui n’est pas vraisemblable comme je l’ai vu par expérience’.

That Thevet is more interested in the bird as a commodity than as a zoological species is clear from the fact that he only mentions *en passant* the bird’s bill, without further details, in which, once again, his superiority to Belon is suggested: ‘Au reste, cet oiseau est merveilleusement difforme est monstrueux, ayant le bec plus gros et plus long quasi que le reste du corps. J’en ai apporté un qui me fut donné par-delà avec les peaux de plusieurs de diverses couleurs [...]’. This competitive intertextual relationship with Belon’s description is confirmed by the

⁹ André Thevet, *Les Singularitez de la France antarctique* (Paris: 1558) 90–91.

illustration [Fig. 2]: the bird's bill clearly presents the nostrils that Belon could not find. But the nostrils of Thevet's toucan are depicted at a very unlikely place in the bill (in the middle of the upper mandible), and the bird's toes are wrongly represented (three front toes and one back toe) – a mistake that Belon, known as the 'father of comparative anatomy', would not have committed had he known the bird.

It is probable that Thevet received some criticism from his readers. This is clear from his description of the bird in his *Cosmographie universelle* (1575), printed by André Wechel. Indeed, in this prestigious publication, Thevet, recently appointed King's cosmographer, expands on his former description by giving more detailed information on the bird (for instance, as we saw in the *Delices*, the bird's preference for peppers will be a much quoted – and much debated – detail until the eighteenth century). The illustration [Fig. 3] is a remake of the 1557 one, but the nostrils have disappeared, and its toes are represented in such a way that their correct position is more or less visible.

Thevet's 1575 text and illustration, recognizable by the unnatural, triangle-like posture of the whole of bill, head and body, and the bird's large staring eye, is copied again and again by Ambroise Paré, Ulisse Aldrovandi, Jan Jonston, and others. This is remarkable because, at the end of the sixteenth century, the bird was regularly to be seen in *cabinets de curiosités*. For instance, in his book *Des monstres et prodiges* (1573), also printed by Wechel, Ambroise Paré (ca. 1509–1590) first alludes to Thevet's *Singularitez*, and then describes a bird that he had dissected himself:

Un gentilhomme Provençal en fait present d'un au feu Roy Charles neufiesme, ce qu'il ne peut faire vif, car en l'apportant mourut, neantmoins le presenta au Roy: lequel apres l'avoir veu, commanda à Monseigneur le Mareschal de Rets me le bailler, pour l'anatomiser et embaumer, à fin de le mieux conserver; toutesfois bien tost apres se putrefia. [...] Je le garde comme une chose quasi monstrueuse. La figure duquel t'est icy representee.¹⁰

But, curiously, Paré's illustration represents not the bird that he dissected, but Thevet's bird. As far as I can see, André Wechel and later Gabriel Buon, Paré's printers, continued to use the same woodcut from Thevet's *Cosmographie*.

¹⁰ Ambroise Paré, *Des monstres et prodiges*, ed. Céard J. (Geneva: 1971) 128–129.

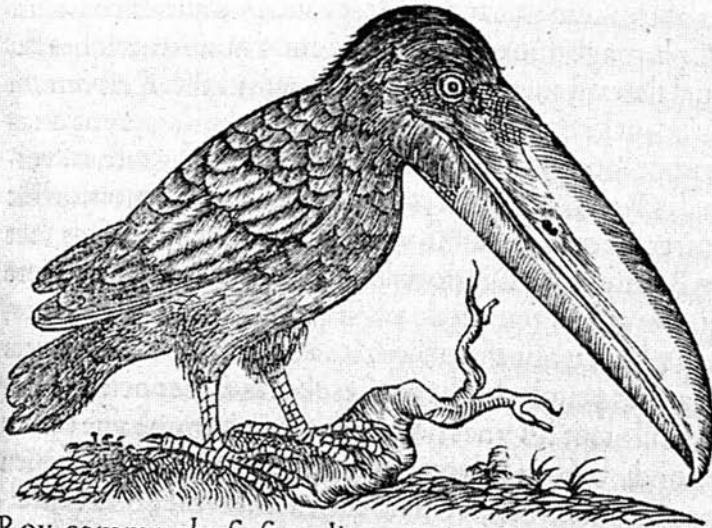
DE LA FRANCE ANTARCTIQUE.

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pellent en leur langue *Toucan*, lequel descrirons sommairement, puis qu'il vient à propos. Cest oyseau est de la grandeur d'un pigeon. Il y en a vne autre espece de la forme d'une pic, de mesme plumage que l'autre: c'est à sçavoir noirs tous deux, hors-mis autour de la queuë, ou il y a quelques plumes rouges, entrelacées parmy les noires, sous la poitrine plume iaune, enuirõ quatre doigts, tant en longueur que largeur: & n'est possible trouuer iaune plus excellët que celuy de cest oiseau: au bout de la queuë il a petites plumes rouges cõme sang. Les Sauvages en prennent la peau, à l'endroit qui est iaune, & l'accommodët à faire garnitures d'espees à leur mode, & quelques robes, chapeaux, & autres choses. l'ay apporté vn chapeau fait de ce plumage, fort beau & riche, lequel a esté presenté au

*Descri-
ption du
Toucan,
oyseau de
l'Ame-
rique.*

*Chapeau
estrange
cõposé de
pluma-
ges.*



Roy, comme chose singuliere. Et de ces oyseaux ne s'en trouue sinon en nostre *Amerique*, prenant depuis la ri-

z iij

Fig. 2. Toucan. From André Thevet, *Les Singularitez de la France antarctique* (Paris: 1558) fol. 91r.

Cosmographie Vniuerselle

singuliere, digne d'estre admiree, veu la gentillesse de l'œuure, où ces Sauvages font le tissu du plumage si mignônement avec leur filet d'ecorce d'arbre, que à grand peine le scauroit on faire plus proprement par deça à tout le fil de foye. Au reste, il ne se trouue de ces oyseaux, sinon vers le Cap de Frie, & où nous estions sur la riuiere de *Ianaire*, prenant neantmoins le cours du país, depuis la riuiere de *Plate*, iusques à celle de *Dorlane*. Il est vray, qu'il s'en trouue quelques vns au Peru, mais beaucoup plus petits que les autres. D'en voir en Mexique, Terre neuue, ou à la Floride, n'en faut point parler, à cause que le pays n'y est de telle temperature, &

Portrait du
Toucan.



que cest oyseau ne scauroit viure parmy la froidure, quil craint merueilleusement. Ce *Toucan* est tres-monstreux & difforme, entant qu'il a le bec plus gros & long presque que tout le reste du corps. & n'est point aquatique, comme plusieurs l'ont pense, car s'en ay veu l'experience au contraire, d'autant qu'il se recule tousiours le plus qu'il peut des riuieres. Cest oyseau ne vit que de certains fruits parmy les boys, où il fait ordinairement sa residence, & mange aussi de certain poiure long & rouge, duquel se trouuent deux especes, l'vn plus long que l'autre, & le plus petit est fait tout ainsi qu'une fraise, vn peu toutesfois plus pointu, & se nomme *Quén Apoua*: le plus grand s'appelle en leur patoys *Quén Boucoup*. De ce poiure se nourrit non seulement le *Toucan*, ains encor vn autre oyseau, que les Sauvages appellent *Sunath*, lequel est de la grandeur d'un Merle, duquel s'en voyent deux especes, l'vn tout noir, & l'autre aussi finement rouge que Escarlatte, tel que encor s'en ay dans mon Cabinet diuerses peaux que ce peuple escorche. Quand ces oyseaux ont mangé de ce poiure, en quel que lieu qu'ils sentent, soit sur vn rocher ou ailleurs, ceste matiere, bien digeree & cuite, ou non, ne faudra de prendre en terre, & se conuertir en herbe, tout ainsi que si lon y auoit semé de ce mesme poiure

Quin leu
c'est poiure
pouine.

Fig. 3. Toucan. From André Thevet, *Cosmographie universelle* (Paris: 1575) vol. II fol. 938v. Leiden, University Library.

Paré's description shows us the difficulties of keeping animals alive during and after their transportation over sea, and therefore the importance of taxidermy. It was difficult to prepare good skins and to protect them against insects. It has been rightly stated that the development of ornithology in the eighteenth century was particularly due to the advanced techniques of taxidermy.¹¹ Paré's description is also interesting because it gives him the opportunity of promoting himself by naming his highly placed connections and patrons: the King and the Maréchal de Retz.

One of the most interesting descriptions of the toucan is given by another French traveller, Jean de Léry (1534–1613), who belonged to the group of Calvinist colonists in Brazil. In 1557 they had a conflict with their Catholic compatriots and were obliged to flee and take refuge with the Tupinamba, who welcomed them heartily. Léry stayed for two months with the Indians. The Catholics, including the Franciscan Thevet in his *Cosmographie*, blamed the failure of the French colonial enterprise in Brazil on the Huguenots. Years later, Léry published his *Histoire d'un voyage fait en la terre du Bresil, autrement dite Amerique* [...] (1585), as an answer to the Catholic calumnies. Because of its accurate descriptions of the Tupinamba, this book is now considered as a forerunner of modern ethnology – it was even the *livre de chevet* of Claude Lévi-Strauss during his stay among the Tupinamba in the 1930s.

Léry's emulation of Thevet is mostly implicit, but the reader should bear in mind that Léry wrote from a direct, personal experience with the Indians of several months, whereas Thevet only spent some weeks in Brazil. This difference is also evident in Léry's description of the toucan: he notices the same features as Thevet did, but with more direct knowledge. Thus Léry provides much more detailed information on the bird and its feathers, on the ornamental and commercial use of the feathers by the Indians, as well as the etymology of the word 'toucan' – meaning 'feather'. His treatment of Belon's description of the bill is much more sympathetic, and he remains silent regarding Thevet's information on the pepper-eating habits of the bird:

Et au surplus, ayans en leur pays un oyseau qu'ils nomment Toucan, lequel (comme je le descriray plus amplement en son lieu) a entierement le plumage aussi noir qu'un corbeau, excepté sous le col, qu'il a environ

¹¹ See Schulze-Hagen K. et al., "Avian taxidermy in Europe from the Middle Ages to the Renaissance", *Journal für Ornithologie* 144(4) (2003) 459–478.

quatre doigts de long et trois de large, tout couvert de petites et subtiles plumes jaunes, bordé de rouge par le bas, escorchans ses poitrals (lesquels ils appellent aussi Toucan du nom de l'oyseau qui les porte) dont ils ont grande quantité, apres qu'ils sont secs, ils en attachent avec de la cire qu'ils nomment Yra-yetic, un de chacun costé de leurs visages au dessus des oreilles: tellement qu'ayans ainsi ces placards jaunes sur les jouës, il semble presque advis que ce soyent deux bossettes de cuivre doré aux deux bouts du mord ou frain de la bride d'un cheval.¹²

This other place ('en son lieu') gives some other detailed information:

Les autres oyseaux du pays de nos Ameriquains sont, en premier lieu, celuy qu'ils appellent Toucan, (dont à autre propos j'ay fait mention ci-dessus) lequel est de la grosseur d'un Ramier, et a tout le plumage, excepté le poictral, aussi noir qu'une Corneille. Mais ce poictral (comme j'ay aussi dit ailleurs) estant l'environ quatre doigts de longueur et trois de largeur, plus jaune que saffran, et bordé de rouge par le bas: escorché qu'il est par les sauvages, outre qu'il leur sert, tant pour s'en couvrir et parer les jouës qu'autres parties du corps, encores parce qu'ils en portent ordinairement quand ils dansent, et pour ceste cause le nomment Toucan-tabouracé, c'est à dire plume pour danser, ils en font plus d'estime. Toutesfois, en ayans grande quantité, ils ne font point de difficulté d'en bailler et changer à la marchandise que les François et Portugais, qui traffiquent par delà leur portent.

Outre plus, cest oyseau Toucan, ayant le bec plus long que tout le corps, et gros en proportion, sans luy parangonner ni opposer celuy de grue, qui n'est rien en comparaison, il le faut tenir non seulement pour le bec des becs, mais aussi pour le plus prodigieux et monstrueux qui se puisse trouver entre tous les oyseaux de l'univers. Tellement que ce n'est point sans raison que Belon en ayant recouvré un, l'a par singularité fait pourtraire à la fin de son troisieme livre des oyseaux: car combien qu'il ne le nomme point, si est-ce sans doute que ce qui est là représenté, se doit entendre du bec de nostre Toucan.

In reaction to Léry, Thevet, in one of his last writings on his Brazilian experience, returns once again to subject of the toucan. In this book, which was never published during his life, Thevet, in retrospective, gives us the following information about some specimens of flying fish and toucans he acquired:

J'en retins quelques uns [i.e. flying fishes] que je sallay, et emportay en France. Depuis j'en envoyay en Allemagne a Gesnerus, le plus docte, medecin en nostre siecle, pour le mettre en son livre des Poissons, comme

¹² I quote Jean de Léry's *Histoire d'un Voyage Faict en la Terre du Brésil* from <http://www.mafua.ufsc.br/BT1730002.html> (last consultation April 10, 2007).

estant chose fort rare. Ce poisson est fort bon, horsmis qu'il a beaucoup d'arrestes fort deliées, et n'est non plus gros qu'un barbeau. Il a quatre aisles, dont deux sont aussy longues que le poisson, les autres deux petites. Je luy envoyay par mesme moyen un bec de l'oiseau *Tocan*, long d'un pied, et gros comme le bras d'un homme, encore que cét oyseau ne soit non plus gros qu'un pigeon, qu'il a mis dans son livre des bestes, qu'il a fait cinq ans devant de mourir. J'en ay deux de reste dans mon Cabinet à Paris.¹³

The difference from his earlier texts is that Thevet appears to become increasingly aware of the importance of his network, not only for the exchange of *singularitez*, but especially for reaffirming his own authority by explicitly referring to the authority of his correspondent.

This famous correspondent, Gesner, did include the toucan in his *Icones avium* of 1560, completed with ample allusions to Thevet's book and with an illustration of the bird.¹⁴ In his commentary Gesner explains how he has created this illustration. It is a sort of collage: the bird's bill is based on the bill that was sent to him by one of his correspondents, the historian and humanist writer Giovanni Ferrerio (Joannes Ferrerius), while the rest of the bird is based on the description given by Thevet. The result is a non-existent bird: whereas this bill evidently belongs to a Toco Toucan (such as the one depicted in Belon), the colouring of the bird is not that of a Toco,¹⁵ and the position of the toes (three in front, one in back) is wrong too.

This collage turns out to be a fruitful mistake. For his *Ornithologiae hoc est de Avibus historiae libri* (1599–1603),¹⁶ Ulisse Aldrovandi (1522–1605) commissioned a beautiful but incorrect watercolour,¹⁷ based on Gesner's

¹³ Ambroise Thevet, *Histoire d'André Thevet, de deux voyages par luy faits aux Indes Australes et Occidentales*, ed. Lestringant F. et Laborie J.-C. (Geneva: 2005) 376. On the toucan, see also 232, 235–236.

¹⁴ Conrad Gesner, *Icones avium omnium, quae in historia avium Conradi Generi describuntur* (Zurich: 1560) 130.

¹⁵ For details, see my note 17.

¹⁶ Ulisse Aldrovandi, *Ornithologiae, hoc est de avibus historiae libri XII* (Bologna: 1599–1603), vol. I 802.

¹⁷ This watercolour is now in the Museum Aldrovandi, and reproduced in Biancastella A. (ed.), *Les animaux et les créatures monstrueuses d'Ulisse Aldrovandi* (Arlès: 2005) 136–137. The editors noticed the peculiarity of the bird: 'L'oiseau que nous voyons ici a certes le bec du *Ramphastos toco*, mais la couleur de son plumage ne correspond absolument pas; le sujet présente en effet une couverture de plumage blanc sur la poitrine, mais la coloration brun-roux est limitée aux sous-caudales. Absentes également la caractéristique caroncule jaune autour de l'oeil' (230), but they were not aware of Aldrovandi's models: Thevet and Gesner. There is a hand-coloured illustration of the toucan in one of the copies held by the University of Bologna which corresponds perfectly to the

composite toucan, which served as a model for the engraving in the book. This engraving, or Gesner's, has a long life, for it reappears in Jan Jonston's *Historia naturalis de avibus libri VI* (1650)¹⁸ [Fig. 4], exhibiting Thevet's toucan in the company of some other birds taken from Clusius and Nieremberg (see below). It is even found in J.H. Lochner's famous *Rariora Musei Besleriani* (1716) among other ornithological curiosities (two species of birds of paradise, a hornbill, a spoonbill, a hummingbird, and an unidentifiable bird).¹⁹

Aldrovandi's hornbill

Aldrovandi is the first to give a description and illustration of a hornbill [Fig. 5].²⁰ This bird is introduced directly after the toucan. Aldrovandi begins by saying that, except for the illustrated bill, he has no certitude about the bird. He continues by motivating the name 'aves rhinocerote' with references to classical authorities: Claudianus (4th century AD), Hesychius of Alexandria (5th century AD), Varinus (according to whom the name 'rhinocerote' was used in Ethiopia to indicate both a mammal and a bird), and Pliny, whose description of the bird 'Tragopan' was imitated by Solinus and Pomponius Mela, and commented upon by Cardano and J.C. Scaliger. These authorities are the same ones adduced in the text of the *Delices de Leide*: Aldrovandi indeed appears to be the main source of this text, but in a very truncated form, as we shall see below.

After these introductory lines, Aldrovandi comments upon his illustration of the hornbill's head, which can be identified as the Rhinoceros Hornbill (*Buceros rhinoceros*) in a subspecies that originates from the isle of Borneo. He informs the reader that this illustration is based upon

watercolour. See http://diglib.cib.unibo.it/diglib.php?inv=26&int_ptnum=&term_ptnum=826&format=jpg&comment=0&zoom=&x=4&y=6 (last consulted 11 April 2007). These pictures are in accordance with the toucan depicted in the Museum of Rudolph II: Haupt H. – Vignau-Wilberg T. – Irblich E. – Staudinger M., *Le Bestiaire de Rodolphe II. Cod. Min. 129 et 130 de la Bibliothèque nationale d'Autriche* (Paris: 1990), figure 169.

¹⁸ Jan Jonston, *Historiae naturalis de avibus libri VI* (Amsterdam: 1650) 46 and tab. 56.

¹⁹ See the illustration in George W., "Alive or Dead: zoological collections in the seventeenth century", in Impey O. – MacGregor A. (eds.), *The Origins of Museums. The cabinet of curiosities in sixteenth- and seventeenth-century Europe* (Oxford: 1985) 179–187, figure 69. It is not clear whether these figures represent paintings or stuffed birds.

²⁰ Aldrovandi, *Ornithologiae*, 1 804–805.

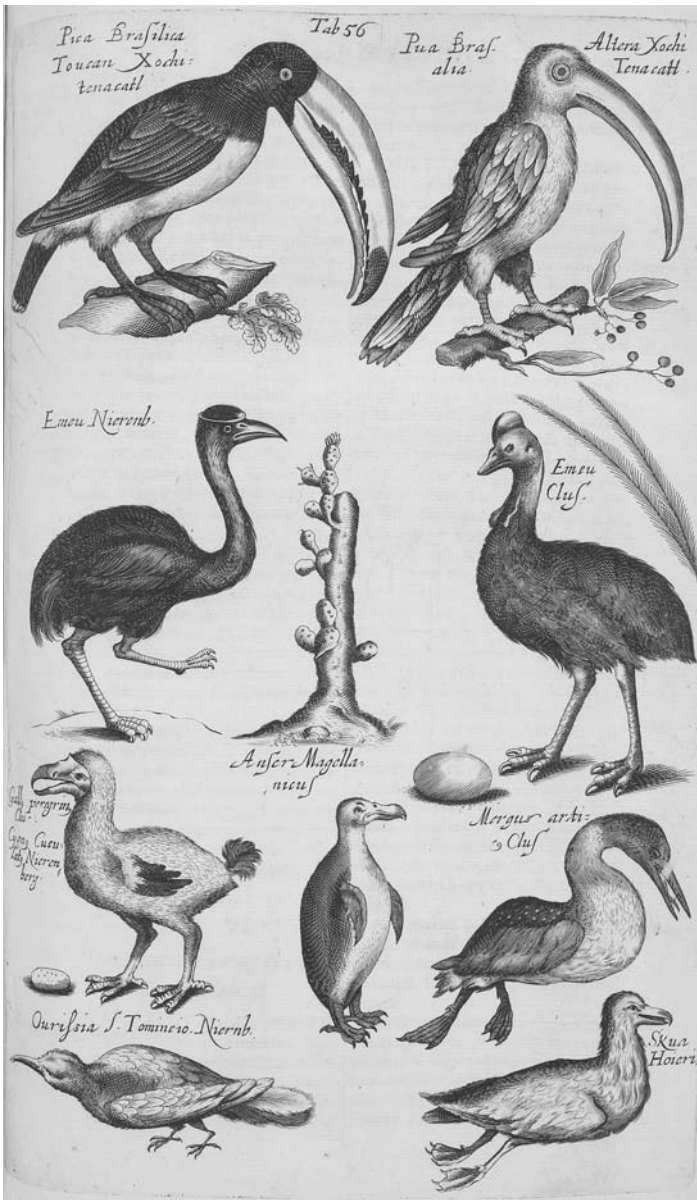


Fig. 4. The left toucan belongs to the Gesner-Aldrovandi type, the right one to the Thevet type. Other birds represented: an emu (?), a dodo, a hummingbird (all from Nieremberg), a cassowary, a penguin, a merganser and a skua (all from Clusius). From Jan Jonston, *Historiae naturalis de avibus libri VI* (Amsterdam: 1650) Table 56. Leiden, University Library.



Fig. 5. Head of a Rhinoceros Hornbill from Borneo. From Ulisse Aldrovandi, *Ornithologiae, hoc est de avibus historiae libri XII* (Bologna: 1599) vol. I 805. Leiden, University Library.

two watercolours which he received independently of each other by two persons who had been present at the Battle of Lepanto, both claiming that this bird was shot during the battle. Because the bird is not resident in the Middle East, the only explanation I can think of is that the hornbill at Lepanto had escaped from the Turkish fleet that was carrying a lot of precious items and *exotica* from the East.

Like those of the toucan, the two watercolours of the hornbill are kept in the Museum Aldrovandi in Bologna and can be consulted on internet.²¹ These watercolours remind us once again that Renaissance ornithology was based on transitory material, due to the lack of good taxidermal methods: whereas one watercolour represents the bird's original colours and feathering, the other shows the same specimen, but at a later state of decay, reduced to a mere skull. The watercolours and Aldrovandi's precise indications of how he obtained them – both correspondents receive some honorary lines – also underline the growing importance of the zoologist's networks to obtain the necessary materials, as we shall see in the section on Carolus Clusius's hornbill.

Like Belon's chapter on the toucan's bill, Aldrovandi's chapter on the hornbill ends with some prudent hypotheses regarding the rest of the bird, concluding: 'Verum alij, qui avem aliquando nacturi sunt, exactius omnia tradere poterunt, & de coniectura nostra vere iudicare' [In fact, once they have found this bird, others will be able to treat all this more precisely, and to verify our conjecture]. Thus, in presenting unknown *naturalia* together with hypotheses, Belon, Aldrovandi and several other zoologists hoped to open up a debate that would further the progress of zoology.

The hornbill and Clusius's network

The second mention of a hornbill is found in Carolus Clusius's *Exoticorum libri decem* (1605), a book in which the famous botanist, at the end of his long life (1526–1609), published the exotic naturalia he received

²¹ See Tavole vol. 006–2, c. 92–93, reproduced in <http://www.filosofia.unibo.it/aldrovandi/pinakesweb/main.asp?language=it> (last consult: April 11, 2007). The first of these watercolours corresponds perfectly with the hand coloured illustration of the Bologna copy of the *Ornithologia*.

See http://diglib.cib.unibo.it/diglib.php?inv=26&int_ptnum=&term_ptnum=829&format=jpg&comment=0&zoom=&x=2&y=8 (last consult: April 11, 2007).

during his position as prefect of the hortus botanicus in Leiden. The illustration of the bill [Fig. 6] indicates that this bird is a species different from the one described by Aldrovandi, namely one of the two African ground hornbills of the genus *Bucorvus*.²² Convinced, however, that the bird was of South American origin, Clusius referred to the work of Oviedo, though not to Oviedo's chapter on the toucan, but to his description of the *alcatraz*, the Brown Pelican. This explains Clusius's title *An Alcatraz Oviedi? sive verius Corvi Marini genus?* (Oviedo's Alcatraz, or rather a kind of Sea-Crow?). The whole chapter expands upon the hypothesis announced in the title.²³

The relevance of Clusius's chapter for our argument lies not only in its hypotheses about the bird, but also in the information it gives on the importance of scientific networks for the development of zoological knowledge. In comparing the descriptions given by Clusius and Aldrovandi with the texts of Belon, Thevet and Paré, an important difference emerges. Whereas in the French authors the details on the provenance of the specimen primarily serve to highlight the scientific credibility of the author (Belon) or his high social position (near the King, in the cases of Thevet and Paré), the detailed information furnished by Gesner, Aldrovandi and Clusius on their informants and donors clearly serves another purpose: it keeps the network going. This is particularly evident from Clusius's description of the hornbill and his correspondence on the subject.

Chapters XII and after, all on unknown birds, begin by mentioning their donor: Jacques Plateau, one of Clusius's correspondents, in the service of Charles de Croy, Archduke of Aerschot, and himself the owner of a *cabinet de curiosités*, a botanical garden and some living animals, including a tame seal (as he mentions in his correspondence with Clusius). Plateau is also mentioned explicitly in the opening sentence of Clusius's chapter on the hornbill: 'In earum avium numero, quarum picturas Iacobus Plateau mittebat [...] [Among these birds, of which Jacques Plateau sent me the illustrations [...]]. The accompanying letter by Plateau has been kept in Leiden University Library²⁴ and is worth

²² Most probably *Bucorvus leadbeateri*, the other species *Bucorvus abyssinicus* having a casque open in front.

²³ The confusion seems to begin with Cardano who amalgamated Oviedo's descriptions of the toucan and the Brown Pelican (Cardano, *De Subtilitate* 336–337; see my note 6).

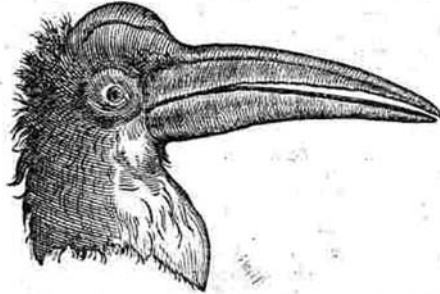
²⁴ University Library Leiden ms. Vul. 101.

An Alcastrax Ouedi? sive verius Corvi Marini genus?

C A P. XII.

IN earum avium numero, quarum picturas Iacobus Plateau mittebat, cuiusdam etiam avis caput erat cum collo pectore tenus, valde ingenti & crasso rostro praeclitum, cui sane pauca similia videre memini: istam picturam, licet integre avis non esset, quia tamen non minus forsitan peregrina, quam quae superiore capite exhibita, dignam existimabam cuius exemplar in tabella expressum Lectoris oculis proponeretur.

Avis peregrina caput.



MAGNAM porro fuisse eam avem oportet, quae simile caput gestaverit, si pictura fideliter est expressam a summo capite ad extremam colli partem, dodrantalem habebat longitudinem, sive novem uncias erat: longa, colli latitudo paullo infra rostrum, septem uncias; rostrum cum capite pedalem longitudinem superabat.

ipsum vero rostrum directum, & minime curvum in dodrantalem mucronem delinebat, qua autem parte capiti iungebatur, palmum erat latum: capitis collisque prona pars cum rostro nigri erant coloris, supina vero & guttur cineracei, cuius etiam coloris macula caput sub oculis ad rostri superioris partis radicem, insignitum erat: pennas in vertice praene, nonnihil reflexas cristae instar habebat: nullam autem ingluviem a rostro propendentem perspiciebam, sed guttur & infimum collum in anteriorem partem valde prominula & protuberantia. Eiusmodi erant nares quas in missa pictura observare poteram.

Fig. 6. Head of a Southern Ground Hornbill from Africa. From Carolus Clusius, *Exoticorum libri decem, quibus animalium, plantarum, aromatum aliorumque peregrinorum fructuum historiae describuntur* (Antwerp: 1605) 106.

quoting at some length because it gives us insight into the functioning of the network to which Clusius belongs. As is usual, the opening of the letter re-establishes the practical contact between the correspondents, informing the addressee of the modes of reception of previous letters and of the writing and sending of the present one. Moreover, these opening lines confirm what we saw already in Aldrovandi's text: the reliance on good painters for the communication of scientific information – the objects themselves being too fragile and expensive to send, and their mere description without illustrations being judged inadequate:

Monssr la cause principale que n'ay donné responce aux vostres du 8^e Juillet et 2 Aoust, pensant tousiours acompaigner mes lettres d'aucunes pourtraits, combien que eusions plusieurs peintres en Tournay, il n'en y a pas un quy sauroit pourtraire une seule plante a la plume. Il n'en y a qu'un lequel sait aucunement paindre sur papier avec couleur, chose;

grossier. Il est advenu que Dieu auroit appelé sa femme de ce monde et n'a gaire voulu besogner de puis, iusque a ce qu'il a recouvert une nouvelle femme. Il m'a falu par force avoir pasience de luy, iusques a ce que la voluté luy est venue de besogner, combien toutesfois que ie l'ay prié par plusieurs fois.

Although Plateau does not send any watercolours of plants, he manages to send some illustrations of animals (probably in black and white), several of which are reproduced in Clusius's *Exoticorum*: a hitherto unknown species of an armadillo, three mergansers, a 'pa[o]n marin' (a 'sea-peacock', which turns out to be an African Crowned Crane (*Balearica regulorum*)) and a hornbill:

Je croy de vous avoir encoire envoyé de deux sortes de grand bec d'oyseau. J'en ay trouvé en mon cabinet un plus grand que le precedens, duquel ie vous envoye aussi le pourtraict sous lequel i'ay mis quelque escriture. Vous en perez dire votre opnion, vous avez meilleur loisir de feuilleter les livres que moy. Je ne scay si Aldrovandus en auroit fait mention en ses livres de Avibus, car ie n'ay encoire riens veu de luy [...] i'estime qu'aurez veu les deux ou trois volumes que ledit Aldrovandus a mis en lumiere. J'ay encoire plusieurs autres sortes d'animaux, que pense n'avoir esté encoire mis en lumiere si en desires encoire avoir, mande le moy, ie vous donneray de la besogne à quoy passer le temps.

It appears that here Plateau overestimated Clusius's knowledge of Aldrovandi's work on birds. Clusius probably had not even read the work. Had he seen it, he certainly would have noticed that his 'sea-peacock' and Aldrovandi's Crowned Crane were in fact the same species.²⁵

What did Plateau expect to receive from Clusius in return? Not only the seeds and dried plants that Clusius had promised to send, or Clusius's recent books ('Je n'ay iamais veu le livre des Observations de Belon traduit en Latin par vous, ne le second livre de Monardes mis nouvellement en lumiere'),²⁶ but more specifically the honour of being named and quoted in Clusius's works. All this is based on a tacit agreement: Clusius mentions and quotes his correspondent (it is probable that Clusius's description of the *alcatraz* copies Plateau's 'quelque escriture' under the bird's picture), thus giving him eternity in print, in exchange for unknown naturalia. Plateau's conclusion contains a subtle hint not

²⁵ It is noteworthy that Clusius was not aware that this bird was already illustrated by Adriaen Collaert in his *Avium vivae icones* (Antwerp: 1580).

²⁶ Both Belon and Monardes were translated by Clusius into Latin.

to break this silent agreement and warns him, between the lines, not to disturb the network on which they both depend:

Monssr le docteur Monelle est un peu fâché contre vous pour cause que n'aves fait encore mention en votre livre de son Colchicum, que Monssr Lobel en son histoire des plantes appelle Colchicum Monelli. Il est fort amateur de sa plante et m'en parle souventesfois. L'ayant une fois perdu, ie luy en ay furny d'une autre plante de laquelle il en fait grand cas, il est bonne personne, n'ayant qu'un fils lequel est aussi docteur. Parquoy si vous fait quelque adionction de plantes en vos livres des Exotiques en perez faire mention, si le trouve bon.

Plateau implicitly demands to be mentioned and quoted in the *Exoticorum* too. It appears that the network had its negative as well as its positive side: whereas Plateau will be mentioned (although not always wholehearted, it seems), Monelle's good character ('il est une bonne personne') and promising son are not sufficient reason to earn a place in the *Exoticorum*.²⁷

Testimonies and cabinets de curiosités

More and more species of toucans became known during the decades after Aldrovandi. The bird ceased to be a *rara avis* in the *cabinets de curiosités*. They are found in the famous collections of Rudolph II (who possessed six toucan bills),²⁸ Federico Cesi (founder of the *Accademia dei Lincei*),²⁹ Ole Worm and Albert Seba. Jan Brueghel the Elder, who had access to the collections and menageries of Rudolph II and of the Archdukes Albert and Isabella, depicted the same species (Red-billed Toucan, *Rhamphastos monilis*), probably even the same specimen, again and again in his animal paintings.³⁰ In their highly authoritative natural histories of Iberian America, authors like Juan Eusebio Nieremberg

²⁷ Monelle, however, was named in one of the Appendices of another book: Carolus Clusius, *Rariorum plantarum historia* (Antwerp: 1601), "Altera appendix" (oral communication, Sylvia van Zanen).

²⁸ Haupt *et al.*, *Le Bestiaire de Rodolphe II* 450.

²⁹ Freedberg D., *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: 2002), index s.v. "Toucan". For another collection, see Mason P., *Infelicities. Representations of the Exotic* (Baltimore: 1998), index s.v. "toucans".

³⁰ Brueghel's toucan has been imitated by Jan van Kessel the Elder in 1666 (oral communication, Peter Mason).

(1635), Willem Piso and Georg Marcgraf (1648) gave such precise descriptions that it is often possible to determine the species.³¹ Thus, the *Aracari* described and illustrated by Marcgraf in his *Historia naturalis Brasiliae* is a Black-necked Aracari (*Pteroglossus aracari*), as is confirmed in a beautiful hand-coloured illustration in the exemplar of the book in Leiden University Library.³²

Hornbills are much less frequent in collections. At the end of their chapter on Brazilian birds, Marcgraf and Piso (*Historia* 218) mentioned a horned bill of unknown origin:

habeo et rostrum avis itidem levissimum et magnae molis, quod superiori parte eminens cornu habet e superiori parte rostri enatum et cavum, coloris incarnati, uti et rostrum: non possum autem affirmare utrum e Brasilia an vero India Orientis sit allatum: et nostri qui in Brasilia vixerunt non meminerunt se ibidem vidisse: Tucana autem ibidem frequentissima est [...].

[I also have a very light and very large bird's bill, which has on the upper part a prominent horn emerging from the upper part of the bill, and which is hollow and red-coloured, especially at the bill. I do not know if this bill comes from Brazil or from the East Indies. Those who have been in Brazil cannot remember having seen it, whereas the toucan is a very common bird there [...].

Although the hornbill's bill became increasingly common, its origin remained mysterious for a long time.

This brings us once again to the bizarre description of the hornbill given in the *Delices de Leide*. We have already noticed that the *Delices* copied whole passages from Aldrovandi, but the anonymous author did so by leaving out a number of other passages. The absurd consequence of these omissions is that the names of Hesychius and Varinus are quoted as direct authorities for the Battle of Lepanto. However, these philological blunders are not wholly due to the author of the *Delices*, because he literally translated from a Latin work, *Collectio monumentorum, rerumque maxime insignium, Belgii Faederati* [...] (1674) by Phileleutherus Timaretes (pseudonym of Theodoor Jansson van Almeloveen (1657–1712)). In this work Timaretes gives, in the form of a catalogue, a description of all

³¹ On Nieremberg, Piso and Marcgraf, see Asúa M. de – French R.K., *A New World of Animals: Early Modern Europeans on the Creatures of Iberian America* (Aldershot: 2005) 115–123; 162–170.

³² Georg Marcgraf – Willem Piso, *Historia naturalis Brasiliae* [...] (Amsterdam: 1648); University Library of Leiden, shelfmark 1407 B 3.

the curiosities of the Leiden Anatomical Theatre. In his translation of Aldrovandi's text, Timaretes not only truncated but also added a minor but interesting detail: the form of the bill is compared to a moon – or as the *Delices* puts it more precisely: a 'croissant', *i.e.* the crescent moon. Retrospectively, Timaretes's words *quasi luna* (which did not appear in Aldrovandi) may explain why Aldrovandi's informants attached such importance to the bird: the bill's form is that of the Turkish moon, and the appearance and killing of the bird can therefore be considered as a *prodigium* foretelling the imminent defeat of the Turkish army. Apparently, Aldrovandi was not very receptive to this latent form of 'emblematic' signification of natural phenomena.

Indirectly, the *Delices* informs us about the quality of scientific research in Leiden at the beginning of the eighteenth century. Internationally, Leiden rapidly dropped behind. The Leiden Anatomical Theatre, once an international scientific highlight, soon degenerated into a tourist attraction,³³ as can be deduced from the travel journals of French and English tourists in the eighteenth century.³⁴

Willughby's and Ray's Ornithology

Although anterior to the *Delices*, the scientific value of the *Ornithology* of the seventeenth-century ornithologists John Ray (1627–1705) and Francis Willughby (1635–1672) is vastly superior. This work was originally written by Willughby; after his death it was continued, much enlarged and published by his tutor, friend and companion Ray, first in Latin (1676), then in English (1678).³⁵ Although they put toucans and hornbills together in the chapter of the 'Birds of the Crow-kind', they clearly distinguish between them: the hornbills are considered as ravens, whereas the toucans are seen as magpies. They carried out extensive bibliographical research on the toucans. Not only do their sources include Thevet, Léry, Aldrovandi, Nieremberg etc., but they

³³ See Otterspeer W., *Groepsportret met Dame II. De vesting van de macht. De Leidse universiteit, 1673–1775* (Amsterdam: 2002) 126–128.

³⁴ See Strien-Chardonneau M. van, "Leiden, metropool der muzen en tuin van Holland. Leiden in Jean Nicolas Parivals *Les Délices de la Hollande*", *De zeventiende eeuw* 22 (2006) (171–184) 181–183.

³⁵ Francis Willughby – John Ray, *The Ornithology [...] in three books. Wherein all the birds hitherto known, being reduced into a Method suitable to their Natures, are accurately described [...]* (London: 1678).

are also the first to quote Oviedo, probably via Oviedo's commentator, the German naturalist Johannes Faber.³⁶ Their quotations are not uncritical, as can be seen in their remarks on Oviedo's statements on the toucan's bill: '*Oviedo* makes it very heavy, and to weight more than the whole body besides, which is certainly a mistake' (*Ornithology* 129). They also question the hardness of the bird's bill, alleged by Oviedo. They do so by quoting Faber:

Faber doth not undeservedly enquire how, seeing the Bill is so light and thin, the Bird can pierce trees with it? Which difficulty he thus satisfies, that though it be thin and light, yet is it of a bony substance, and therefore it is not to be wondred at that, dextrously used by the living Animal, it should therewith by many repeated strokes pierce a tree, having perchance the instinct to chuse a rotten one, as we see drops of rain wear holes in Flints [...] (*Ornithology* 129).

This description also shows another remarkable aspect: their interest in the bird's behaviour. They quote Faber's observation that toucans wag their tail, 'like wrens' (which is a correct observation), and when Faber observes that the tail of the specimen he saw was very short, Ray explains this phenomenon with common sense and dry humour: 'having been, I suppose, plucked off'. This interest in animal behaviour, and their evident concern for the readability of their text, seem to announce Buffon's ornithological preoccupations, as we shall see.

Their final remark proves that by now the bird and its bill are generally known: 'We have seen in several Cabinets the Bill of this Bird, and ourselves have also one of them' (*Ornithology* 130). As for the Hornbill, things are different. Ray and Willughby can only rely on Aldrovandi and on the description of a hornbill given by the Dutch Jacobus Bon-tius, which for a long time will be the only known description of the bird as a whole:

This horned Bird as it casts a strong smell, so it hath a foul look, much exceeding the *European Raven* in bigness. It hath a thick Head and neck, great Eyes; the Bill but moderate in respect to the body: The longer and more acuminate part bending downward argues the Bill to be made and designed for rapine. But the upper part, which is shorter, thicker, and bending upward doth resemble a true Horn, both to fight and touch

³⁶ Johannes Faber, *Animalia Mexicana* [...] (Rome: 1628) 697.

[...] It lives upon Carrion and Garbage, *i.e.* the carcasses and Entrails of Animal (*Ornithology* 127).³⁷

Besides this rather unspecific description (it remains unclear which species Bontius is describing), Willughby and Ray can only rely on the bills they have seen in collections:

Of this sort of Bill we have seen three varieties, all which we have caused to be engraven and exhibited to the Readers view.

The authors provide two plates. The first, Tab. XVII [Fig. 7], represents four birds: the first two are bills ‘engraven’ from autopsy,³⁸ the third is the bird’s head from Aldrovandi; and the fourth is an unidentifiable *corvus indicus* of unknown origin, taken from Jacobus Bontius’s *Historiae Naturalis & Medicae Indiae Orientalis* (1658 or another edition).³⁹ The second plate, Tab. LXXVIII – the very last table of the book – shows the bill of another ‘Indian Raven’, probably a female Plain-pouched Hornbill (*Rhyticeros subruficollis*), and seems to have been added to the book at the very last moment [Fig. 8].⁴⁰

Willughby and Ray’s *Ornithologia* is important not only for its descriptions, its (not always) accurate illustrations, and the attention given to all aspects of the bird, including behaviour, but also for their classification, mainly based on the form of the birds’ bills and feet. All birds find their place in a well-conceived and motivated classification, visualized in conveniently arranged and presented tables [Fig. 9]. From now on, toucans and hornbills are classified as distinct families. This can be deduced from the very practical survey of the most important classifications by Michael Walters:⁴¹ Latham 1781–1785; Schaeffer 1789; Lacépède 1799; Illiger 1811; Wagler 1827. It underlines once again

³⁷ This passage corresponds to Jacobus Bontius, *Historiae naturalis et medicae Indiae Orientalis*, in Willem Piso, *De Indiae utriusque re naturali et medica* (Amsterdam: 1658) 63.

³⁸ The first is a Great Hornbill (*Buceros bicornis*), the second is a Rhinoceros Hornbill (*Buceros rhinoceros*).

³⁹ This *Corvus indicus* is described on p. 126: ‘Bontius his Indian Raven’ (see Bontius, *Historiae naturalis et medicae Indiae Orientalis* 62). The *Corvus indicus* should be distinguished from ‘The horned Indian Raven or Topau, called the Rhinocerot Bird’ (my emphasis), described on the following page (*Ornithology* 127). Curiously, Willughby and Ray’s description of the *Corvus indicus* comes from Bontius’s ‘horned Indian Raven’, whereas their illustration is a copy of Bontius’s ‘Indian Raven’.

⁴⁰ I thank Hein van Grouw (Naturalis, National Museum of Natural History, Leiden) for his help with the identification of the birds.

⁴¹ Walters M., *A Concise History of Ornithology. The lives and works of its founding figures* (London: 2003) 176–235.

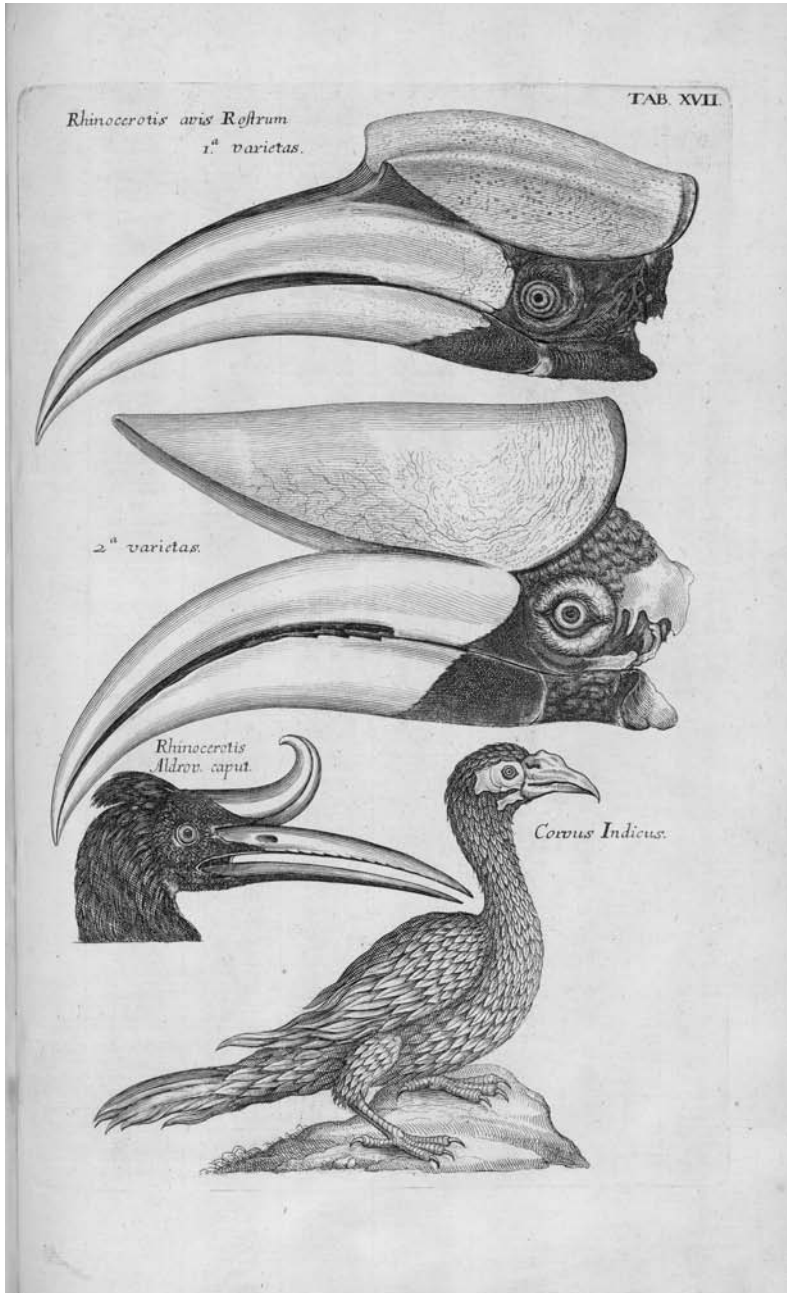


Fig. 7. Four species of hornbills. From Francis Willughby – John Ray, *The Ornithology [...] in three books [...]* (London: 1678) Tab. XVII. The Hague, Royal Library.

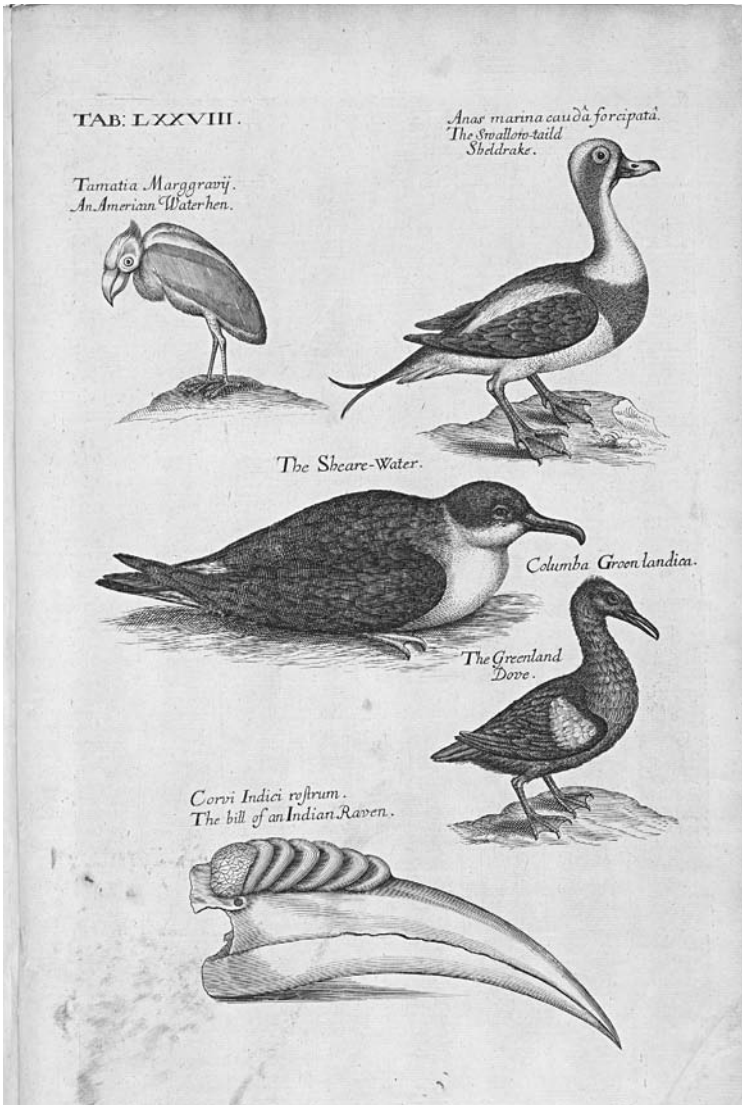


Fig. 8. Bill of a Plain-pouched Hornbill from Thailand and Malaysia. Other birds represented: a male Long-tailed Duck (*Clangula hyemalis*), a shearwater (*Puffinus spec.*), a Black Guillemot (*Cepphus grylle*) and an unidentifiable 'American Waterhen'. From Francis Willughby – John Ray, *The Ornithology* [...] in three books. *Wherein all the birds hitherto known, being reduced into a Method suitable to their Natures, are accurately described* [...]. (London: 1678) Tab. LXXVIII. The Hague, Royal Library.

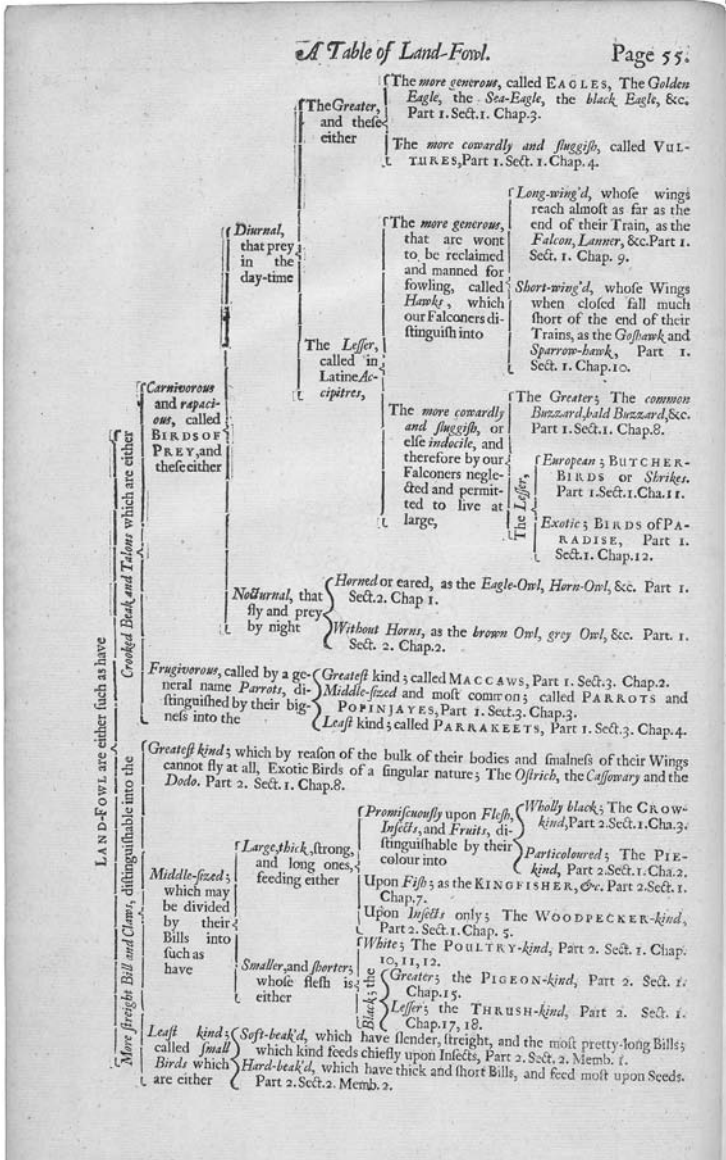


Fig. 9. A Table of Land-Fowl. Hornbills and toucans are put in the lower half of the Table: the hornbills are included in the “Crow-kind”; the toucans belong to the “Pie-kind”. From Francis Willughby – John Ray, *The Ornithology [...] in three books [...]* (London: 1678) 55. The Hague, Royal Library.

Willughby's and Ray's modernity, announcing not Buffon this time, but Linnaeus and Brisson, as we shall see in the next section.

Brisson's systematizations

For the highlights of eighteenth-century ornithology, we must return to France, to the works of Mathurin Jacques Brisson (1723–1806) and his rival and successor Georges-Louis Leclerc, Count of Buffon (1707–1788). Both ornithologists were heavily dependent on the big aristocratic collections of their time. Brisson's *Ornithologie ou Méthode contenant la division des oiseaux en Ordres, Sections, Genres, Espèces & leurs Variétés* (1760)⁴² was based on the collection of René Antoine Ferchauld de Réaumur (1683–1757), a collector who occupies an important place in the history of ornithology. Réaumur explains why ornithology made only little progress:

The study of birds, has remained as yet very imperfect, nor has it yet made them sufficiently known to us, because no considerable collections have hitherto been made of them; and those who had begun to make any soon became weary of going on, having had the mortification to see them every day destroyed by ravenous insects, in spite of all the care that had been taken to preserve them against their teeth.⁴³

Without totally solving the problem, Réaumur found a quick and effective method to conserve birds in the tropics: by drying them in an oven. By this method, promulgated in an anonymous treatise,⁴⁴ his correspondents succeeded in sending him good specimens, from which he built up the largest bird collection in Europe. This enormous and permanent collection enabled its curator Brisson not only to develop a new classification in which all bird species would fit, but also to provide meticulous descriptions of the birds and to have them illustrated with coloured lithographs. After Réaumur's death in 1757, the collection was confiscated by the French King, Brisson was fired, and replaced

⁴² Mathurin Jacques Brisson, *Ornithologia, sive synopsis methodica sistens avium divisionem in ordines, sectiones [...] varietates – Ornithologie ou Méthode contenant la division des oiseaux en Ordres, Sections, Genres, Espèces & leurs Variétés* (Paris: 1760), 6 vols.

⁴³ Quoted from Walters, *A Concise History of Ornithology* 53.

⁴⁴ *Différens moyens d'empêcher de se corrompre les oiseaux morts qu'on veut envoyer dans des pays éloignez et de les y faire arriver bien conditionnez* [1745]. I quote the title of this text, now extremely rare, according to Balis J., *Van diverse pluimage. Tien eeuwen vogelboeken* (Antwerp – The Hague – Brussels: 1968) 57.

by Buffon, who, as we shall see, was in many ways the antipode of Brisson.

Brisson's *Ornithologie* begins with a very interesting historical survey of ornithology, which allows Brisson to position himself in respect to his predecessors. Brisson begins by judging his predecessors on their classificatory merits. Thus, according to Brisson, although his information is somewhat old-fashioned, Belon 'est le premier qui ait donné quelque ordre à cette partie de l'Histoire Naturelle' (*Ornithologie* I viii). Brisson criticizes Gesner's alphabetical order, 'qui a proprement parler ne mérite pas le nom [of 'ordre']' (*Ornithologie* I ix). Aldrovandi is useful but too wordy, whereas Jonston only copied others. Brisson is full of praise on the subject of Ray and Willughby: 'Enfin parut celui que je regarde comme le vrai Méthodiste, *Ray*, qui fut l'Editeur de l'ouvrage de Willughby. Ce Savant a rangé les Oiseaux dans un nouvel ordre, & établi des caracteres propres à les faire connoitre.' Other ornithologists we have not encountered, such as Barrère (1745; 'de la pire espèce')⁴⁵ and Klein (1750; 'confusion horrible'; 'tout s'y trouve pêle-mêle') are summarily and rather sarcastically executed. And on Linnaeus's ornithological work, he observes dryly that his tenth edition is better than the previous ones, but is still not specific enough. Brisson himself comes up with a classification based, like that of Willughby and Ray, on the form of bill and feet. For our birds this implies that they are more clearly separated from each other: the toucans are put in *Ordre XIII, Classe III, Section V*, whereas the hornbills find their place in *Ordre XIV, Classe III, Section V*.

Another innovative aspect of Brisson's method concerns the description of the individual species. This description is invariably done following the same pattern (nomenclature, literature, origin, size, physical description from beak to tail) in a dry, unornamented style. In his introduction he evaluates the pros and contras of this descriptive method: 'J'avoue que cela produit une monotonie, qui deviendrait insupportable dans un ouvrage fait pour être lû de suite' (*Ornithologie* I xv). But the advantage of this descriptive *degré zéro* is that every reader can compare at a single glance the differences between the various

⁴⁵ 'Il semble qu'il range ses Oiseaux dans une armoire, & que, voulant ménager le terrain, il fait remplir par les petits le vuide que laissent nécessairement les gros' (*Ornithologie* I xi).

species. This makes the book a forerunner of modern ornithological handbooks and field guides.

One of the other novelties is that every description is bilingual: French and Latin. Moreover, all described specimens receive brief but precise information about their origins (in this Brisson continues in the direction given by Willughby and Ray). A double asterisk ** means that the description was done from autopsy of the whole bird (in these cases an illustration is given); a single asterisk * indicates that Brisson only saw a part of the bird. In both cases the possessor of the object is mentioned (always in an identical phrasing), which not only assures scientific verifiability, but – as in Clusius’s time – reinforces the importance of the network, implicitly underscoring his own position in it. In his descriptions without any asterisk, the sources are printed descriptions by other authors, who are briefly mentioned.

The following tables are intended to visualize the progress that Brisson made compared to his predecessors in the extended knowledge of the different species and in the repetitive but practical methods of describing them. Brisson distinguishes twelve species of toucan, of which six by autopsy (double asterisk); he distinguishes six species of hornbill, of which three marked with a double asterisk, and two with a single asterisk.⁴⁶

number plus asterisk	French name	origins/principal sources
1	Toucan	Several references
2**	Toucan à gorge jaune de Cayenne	‘du cabinet de Madame de Bandeville’
3	Toucan à gorge blanche du Brésil	Several references
4**	Toucan à gorge blanche de Cayenne	‘On le trouve à Cayenne, d’où il a été envoyé à M. de Reaumur par M. des Essars’
5**	Toucan à gorge jaune du Brésil	‘On le trouve au Brésil et à Cayenne, d’où il a été envoyé à M. de Reaumur par M. des Essars’
6	Toucan à collier de Mexique	Hern. Hist Nov Hisp. ⁴⁶

⁴⁶ Francisco Hernández, *Rerum medicarum Novae Hispaniae thesaurus seu nova plantarum, animalium et mineralium mexicanorum historia* (Rome: 1651).

Table (*cont.*)

number plus asterisk	French name	origins/principal sources
7	Toucan verd de Mexique	Hern. Hist Nov Hisp.
8**	Toucan verd de Cayenne	'On le trouve à Cayenne, d'où il a été envoyé à M. de Reaumur par M. des Essars'
9**	Toucan verd du Brésil	'On le trouve au Brésil, à Surinam & à Cayenne, d'où il a été envoyé à M. de Reaumur par M. Artur
10**	Toucan à collier de Cayenne	'On le trouve à Cayenne, d'où il a été envoyé à M. de Reaumur par M. des Essars'
11	Toucan jaune	Nieremberg
12	Toucan bleu	Nieremberg
<hr/>		
number plus asterisk	French name	origins/principal sources
1**	Calao	'On le trouve aux Moluques, d'où il a été envoyé à M. l'abbé Auboy, qui le conserve dans son cabinet
2*	Calao des Philip[p ?]ines	Opening sentence: 'Je n'ai jamais vû que la tête & le bec de cet oiseau'; Final sentence: 'M. de Reaumur n'en avoit que la tête & le bec dans son cabinet'
3	Calao d'Afrique	Willughby
4*	Calao des Indes	Opening sentence: 'Je n'ai jamais vû que la tête & le bec de cet Oiseau'; Final sentences: On le trouve dans les Indes Orientales. M. de Reaumur n'en avoit que la tête & le bec dans son cabinet'
5**	Calao à bec noir du Sénégal	'On le trouve au Sénégal, d'où il a été envoyé à M. de Reaumur par M. Adanson'
6**	Calao à bec rouge du Sénégal	'On le trouve au Sénégal, d'où il a été envoyé à M. de Reaumur par M. Adanson'

Brisson's strict method implies some remarkable lacunae. Because he solely relies on dried and stuffed animals, he is not able to give any inner morphology of the bird. Nor is he interested in the bird's behaviour, even if his sources give him information on this item. And the tables show that the order of the described birds within a Section is not explicitly motivated, and may be more or less arbitrary. It is to those shortcomings that Buffon will react.

Buffon: de-classification, behaviour, style

The scope of this article does not allow us to expatiate on the immense ornithological work of Buffon, published under the general title *Histoire naturelle des oiseaux* (10 vols., 1771–1786).⁴⁷ We have to limit ourselves to the two bird families under discussion, and to look at how Buffon's treatment of these families informs us about his method, and how sometimes the great French zoologist makes use of it in order to illustrate some of his general ideas on zoology. To start with the latter aspect: one of Buffon's most important issues is his criticism of all kinds of classification pushed too far (as preached by Willughby and Ray, Brisson and Linnaeus). In his view, classification does not express Nature's reality but rather the classifier's mind, who tries to get a grip on Nature and therefore distorts her:

Plus on augmentera le nombre des divisions naturelles des productions naturelles, plus on approchera du vrai, puisqu'il n'existe réellement dans la nature que des individus, et que les genres, les ordres, les classes n'existent que dans notre imagination.⁴⁸

That is why he seems to take some pleasure in subversively undermining Brisson's classification by introducing numerous changes. Thus he juxtaposes the two families which have been separated since Ray and Willughby. He also corrects Brisson's classification of the toucans by making a subdivision between toucans and aracarís on the basis of their size, and adding two other birds, which are presented as intermediate

⁴⁷ Our quotations from Buffon come from the electronic edition of his work, available on Internet (www.buffon.cnrs.fr).

⁴⁸ Buffon, *Discours sur la manière de traiter l'histoire naturelle*, quoted and commented by Foucault M., *Les mots et les choses. Une archéologie des sciences humaines* (Paris: 1966) 159–160.

species: the *barbican* and the *cassican*, the former between the barbets (*Capitonidae*) and the toucans, the latter between the icterids (*Icteridae*) and the toucans. The intermediate position of these two species is shown by the names bestowed upon them: ‘Comme cet oiseau tient du barbu [barbet] & du toucan, nous avons cru pouvoir le nommer *barbican*’ (*Histoire naturelle* 132) and ‘Nous avons donné le nom de *cassican* à cet oiseau [...], parce que ce nom indique les deux genres d’oiseaux auxquels il a le plus de rapports: celui des cassiques [casiques] & celui des toucans’.⁴⁹ The intercalation of these two species makes it problematic to draw definite lines both within bird families and between families and species. Moreover, the order of the species within a family is arbitrary, according to Buffon. Thus, he does not give any explicit motivation for the order of treatment of the toucans and the aracarais, but it is clear that he begins with the largest species (the Toco Toucan) and finishes with the lesser aracarai species. The order of treatment of the ten species of hornbills, on the other hand, is explicitly motivated, and compared with the toucan family the order is inverted, starting with the lesser species:

En considérant ces dix espèces [...] on reconnoitra tous les degrés par où la Nature passe pour arriver à cette monstrueuse conformation de bec. Le tock a un large bec en forme de faux comme les autres, mais ce bec est simple & sans éminence; le calao de Manille a déjà une éminence apparente sur le haut du bec: cette éminence est plus marquée dans le calao de l’île de Panay; elle est très-remarquable dans le calao des Moluques: elle est encore plus considérable dans le calao d’Abyssinie; énorme enfin, dans le calao des Philippines & du Malabar; & tout-à-fait monstrueuse dans le calao rhinocéros (*Histoire naturelle* 140–141).

Buffon problematises not only the notion of family, but also that of species. The first reason for being reluctant to determine the species of a given bird is a practical one: he notes that many ornithologists before him have often considered male and female birds as two different species. The same goes for young and adult birds. He therefore is very satisfied to reduce Brisson’s ‘quatre prétendues espèces’ to one single species, i.e. the *Toucan à gorge jaune*, to which he adds a fifth ‘espèce’,

⁴⁹ Both names still exist in French. Buffon’s illustrations indicate that the *barbican* is the Bearded barbet (*Lybius dubius*) of West Africa; and that the *cassican* can be identified as the Pied butcherbird (*Cracticus nigrogularis*) from Australia. The English name ‘butcherbird’ (also used for shrikes, because they pin their prey on thorns) indicates that Buffon was mistaken in attributing fruit-eating habits to the bird (*Histoire naturelle* 135).

‘qui ne diffère que de ceux-ci par la couleur blanche de la poitrine’ (*Histoire naturelle* 121). And after his description of the *Calao des Philippines*, Buffon discusses another specimen, saying: ‘nous croyons qu’on doit au moins regarder celui-ci comme une variété de l’autre’ (*Histoire naturelle* 159). This observation makes clear that Buffon has more fundamental reasons to be suspicious about Brisson’s classifications. A species can have variants, and Buffon rightly seems to ask himself what the difference is between species and variant (or ‘subspecies’ as it is called in modern taxonomy).

Buffon’s view of the origin of new species and subspecies is diametrically opposed to Linnaeus’s so-called *fixism*, according to which all species remain for ever unchanged. Not that Buffon should be considered as an adherent to Lamarck’s *transformationalism* or as a direct forerunner of Darwinism. Buffon’s concept is that of *degeneration*: under the influence of its milieu a species can degenerate, and if the degenerate species does not die out, this can only be explained by geographical isolation or a lack of natural enemies. According to this theory, the bills of toucans and hornbills are explained. Like the bills of crossbills and skimmers, they are monstrous excrescences, a nuisance to the bird, without any utility. In order to enlarge his discussion Buffon compares the hornbills to the edentates:

Nous avons de semblables exemples dans les animaux quadrupèdes, les unaus, les aïs, les fourmilliers, les pangolins, &c. débués ou misérables par la forme du corps & la disproportion de leurs membres, traînent à peine une existence pénible [...] (*Histoire naturelle* 137).

Buffon goes on indefinitely about the monstrosities of the birds. Thus the toucan’s bill is disqualified as ‘mince & foible’; it serves no purpose whatsoever: it obliges the bird to swallow its food whole; it is useless as a weapon against predators; and it is useless as a counterbalance, because it disturbs the bird in its flight (‘lui donnant un air à demi-culbutant, semble le ramener vers la terre lors même qu’il veut se diriger en haut’). The bill is a mistake of Nature: ‘les vrais caractères des erreurs de la Nature, sont la disproportion jointe à l’inutilité’, it does not belong to ‘le grand plan’ of mother Nature, but to ‘la petite carte de ses caprices’.

The same argumentation is applied to the hornbills, but in an unexpected way: the Old World hornbills are more monstrous than the New World toucans. The opening sentence of the chapter on hornbills gives the following explanation:

Nous venons de voir que les toucans, si singuliers par leur énorme bec, appartiennent tous au continent de l'Amérique méridionale: voici d'autres oiseaux de l'Afrique & des grandes Indes, dont le bec aussi prodigieux pour les dimensions que celui des toucans, est encore plus extraordinaire par la forme, ou pour mieux dire, plus excessivement monstrueux comme pour nous démontrer que la vieille Nature de l'ancien continent, toujours supérieure à la Nature moderne du nouveau monde dans toutes ses productions,⁵⁰ se montre aussi plus grande, même dans ses erreurs, & plus puissante jusque dans ses écarts (*Histoire naturelle* 136).

The monstrous uselessness of the bill is enlarged upon in superlatives: 'il n'y a peut-être pas d'exemple dans la Nature d'une arme d'aussi grand appareil & d'aussi peu d'effect (*Histoire naturelle* 137); and most interestingly, the bill's upper and lower parts do not fit: they only touch each other at the bill's point, 'comme si elles n'eussent pas été faites l'une pour l'autre' (*Histoire naturelle* 138).

Another important difference between Buffon and Brisson (and most ornithologists before them, with the exception of Ray and Willughby) is Buffon's interest in the behaviour of the bird. Whenever he has the chance to do so, Buffon describes the animal behaviour from his own observation of animals, mostly in captivity. Thus, he notes extensively the locomotion and behaviour of a *calao de Malabar*, which was offered to him by the Marquise de Pons:⁵¹

Cet oiseau sautoit des deux pieds à la fois en avant & de côté, comme le geai & la pie, sans marcher; dans son attitude de repos, il avoit la tête portée en arrière & reculée entre les épaules; dans l'émotion de la surprise ou de l'inquiétude, il se haussoit, se gradissoit & sembloit prendre quelque air de fierté; cependant sa mine en général est basse & stupide, ses mouvemens sont brusques & désagréables: & les traits qu'il tient de la pie & du corbeau, lui donnent un air ignoble, que son naturel ne dément pas (*Histoire naturelle* 153).

Qualifications like 'air de fierté', 'basse & stupide', 'désagréables' and 'air ignoble' show a tendency to humanize the animal. We are dealing here

⁵⁰ According to this perspective the animals of the Old World are often superior to those of the New World: the big cats (lion, tiger) are bigger and more dangerous than their counterparts from the Americas (jaguar, puma); the African ostrich is bigger than the South American rhea, and camels are bigger than llamas.

⁵¹ 'qui a eu la bonté de me l'offrir, & à la quelle je me fais un devoir de témoigner ici ma respectueuse sensibilité' (*Histoire naturelle* 149). This expression of gratitude reminds us of the importance of the network, although Buffon, through his function at the Royal collections, is much less dependent on his connections.

not only with a figure of speech – as in Buffon’s comparison between the toucan’s head and ‘ces masques à long nez dont on épouvante les enfans’ (*Histoire naturelle* 109) –, but with a much wider notion, as can be read in the opening sentence of Buffon’s chapter on toucans: ‘Ce qu’on peut appeler physionomie dans tous les êtres vivans, dépend de l’aspect que leur tête présente lorsqu’on les regarde de face’ (*Histoire naturelle* 108). Contrary to birds with ‘une tête légère avec un bec court & fin’ which gives them ‘la physionomie fine, agréable & presque spirituelle’, toucans ‘se présentent avec un air stupide, rarement démenti par leurs habitudes naturelles’ (*Histoire naturelle* 108), and further on: ‘ce gros bec leur donne une physionomie triste & sérieuse que leurs grands yeux fades & sans feu augmentent encore; en sorte que [...] ils n’en paroissent que plus gauches & moins gais’. Something similar is said of the *calao rhinocéros*: ‘ces excès & ces défauts extérieurs semblent influer sur les facultés intérieures de l’animal: ce calao est triste & sauvage; il a l’aspect rude, l’attitude pesante & comme fatiguée’ (*Histoire naturelle* 163). These passages show some affinity with current ideas on physiognomy, originating from Aristotle and modernised and promoted by Lavater, among others.

These passages also show Buffon’s great attention to the stylistic qualities of the descriptions. In his chapters on toucans and hornbills, Buffon never gainsays his famous, though controversial adage ‘le style c’est l’homme même’. He multiplies figures of speech like metaphor, personification, antithesis, and expresses himself in beautifully constructed and well balanced sentences. In assuring the readability of his text, Buffon seems to adopt a position against authors like Brisson, who consciously tries to produce a repetitive, monotonous descriptive mode. This is even visible in the naming of the birds: whereas Brisson’s names are descriptive, generally indicating one of a bird’s physical characteristics (‘Toucan à gorge jaune’) and its origin (‘de Cayenne’), Buffon delights in inventing exotic neologisms based on linguistic hybridization (like the *barbican* and *cassican*), Indian etymology and onomatopoeia, often all at the same time, as can be seen in the following cases:

- *cochicat*: ‘c’est par contraction le nom que cet oiseau porte dans son pays natal au Mexique’ (*Histoire naturelle* 124)
- *hochicat*: ‘c’est de même le nom, par contraction, que cet oiseau porte au Mexique’ (*Histoire naturelle* 125)
- *grigri*: ‘à la Guyane où on l’appelle *gri-gri*, parce que ce mot exprime à peu-près son cri qui est aigu & bref’ (*Histoire naturelle* 126);

- *koulik*: ‘ce petit mot *koulik*, prononcé vite, représente exactement le cri de cet oiseau, & c’est par cette raison que les créoles de Cayenne lui ont donné ce nom’ (*Histoire naturelle* 128–129).⁵²

And it is with regret that he is forced to accept Brisson’s somewhat boring denomination ‘toucan à gorge jaune’: ‘ils [these birds] jettent un cri articulé qui semble prononcer *pinien-coin* ou *pignen-coin*, d’une manière si distincte que les créoles de Cayenne leur ont donné ce nom que nous n’avons pas cru devoir adopter, parce que le toco ou toucan de l’espèce précédente prononce cette même parole, & qu’alors on les eût confondus’ (*Histoire naturelle* 122).

One of the illustrative examples of Buffon’s stylistic variety can be found in the most daring associative sequences of morphological observation, etymology and metaphor, which are to be found in the passages on the toucan’s tongue. Firstly, the strangeness of the bird’s tongue is underscored in a hyperbolic way:

Le bec excessif, inutile du toucan, renferme une langue encore plus inutile, & dont la structure est très-extraordinaire; ce n’est point un organe charnu ou cartilagineux comme la langue de tous les animaux ou des autres oiseaux, c’est une véritable plume bien mal placée, comme l’on voit, & renfermée dans le bec comme dans un étui (*Histoire naturelle* 110).

This comparison with a feather (which Buffon found in Oviedo, probably via Willughby and Ray) unexpectedly brings the author to speak about the bird’s name following (but not mentioning) Léry: ‘Le nom même de toucan signifie *plume* en langue Brésilienne, & les naturels de ce pays ont appelé *toucan tabouracé*, l’oiseau dont ils prenoient les plumes pour se faire les parures [...]’ (*Histoire naturelle* 110). This leads Buffon to speak about the bird’s feathers (*Histoire naturelle* 110–111), then about its bill (*Histoire naturelle* 111–113). After this, Buffon returns to the bird’s tongue, transforming what was a metaphor (‘c’est une véritable plume’, *Histoire naturelle* 110) into a zoological reality (‘ce sont les seuls oiseaux qui aient une plume au lieu de langue, & c’est une plume dans l’acception plus stricte’, *Histoire naturelle* 113). There follows a detailed morphological description of this *plume-langue* (the expression is Buffon’s, *Histoire naturelle* 113). Then he informs us about the strange whistle that the birds are believed to make with their tongue (‘assez

⁵² Both *grigri* and *koulik* have entered French ornithological language.

long temps pour qu'on les ait appelés *oiseaux prédicateurs*') and concludes with the medical use of the tongue: 'Les sauvages attribuent aussi de grandes vertus à cette langue de plume', *Histoire naturelle* 113). It is by this bold, unpredictable, associative way of presenting his material that Buffon hopes to save the reader from boredom.

Conclusions

The numerous paths followed in this article give us some insight into the practice of a variety of describers: zoologists, cosmographers, travellers, collectors. Amateur (i.e. non-professional) zoologists like the cosmographer Thevet and the traveller L ery are more concerned with the bird as a cultural or commercial object. Their descriptions often seem to serve ideological purposes (L ery) or more personal motives of self-promotion (Thevet and Par e). The more professional zoologists like Belon, Gesner, Clusius, Aldrovandi and Marcgraf tried to reconstruct the bird from the scarce material (only a bill) and scarce information available. They were not afraid to venture hypotheses, asking the reader to confirm or falsify them. Some natural historians (Clusius, Marcgraf, Bontius) focused on *exotica*: what counted was the description of the animals, not their classification. For others (Belon, Aldrovandi, Willughby, Ray and Brisson) the insertion of their birds into their systems of classification was a matter of great importance. In the case of Buffon, the birds were used to confirm and illustrate the author's ideas on classification, and more generally on zoology and its discourses. The better the birds became known, the more their description could be formalized – a development culminating in the work of Brisson, who proceeded by external description, moulded in a universally applicable format. Buffon problematised all rigid classification, rejected formalized description in favour of style and readability, and was not interested in the external or internal morphology, but merely in the animals' behaviour. From Belon to Buffon, it is clear that ornithology relied heavily on ephemeral material, conserved, thanks to the developments of taxidermy, in growing collections, with the royal collections in eighteenth-century France as a climax. To keep abreast of the latest information, early modern zoologists needed to maintain a broad network, including not only their fellow zoologists, but also (patrons and) collectors, travellers and other non-professionals. Almost

every early modern zoological description contains elements that not only inform us about this network, but are meant to serve as a means of keeping it going.

As a spin-off, there are two final observations to make: firstly, with the sole exception of Timaretes's description of the hornbill at the Battle of Lepanto, I have found no traces at all of the 'emblemized' vision of natural history that William Ashworth took to be typical of Renaissance zoology.⁵³ As newly discovered birds, our toucans and hornbills definitely belong to a 'disenchanted' world vision (to use Max Weber's terminology).

Neither are there any clear-cut epistemological ruptures, as is described by Michel Foucault in *Les mots et les choses*. One of the main witnesses quoted by Foucault is Buffon and his negative judgment on Aldrovandi: 'qu'on juge après cela quelle proportion d'histoire naturelle on peut trouver dans tout ce fatras d'écriture'.⁵⁴ And another often-quoted judgment on this 'prolixité [...] accablante': 'on les réduiroit à la dixième partie si on en ôtoit toutes les inutilités & toutes les choses étrangères à son sujet'. However, one tends to forget that Buffon's general verdict on Aldrovandi is positive, according to the second part of this sentence, which is often omitted: 'ses livres doivent être regardez comme ce qu'il y a de mieux sur la totalité de l'Histoire Naturelle; le plan de son ouvrage est bon, ses distributions sont sensées, ses divisions bien marquées, ses descriptions assez exactes, monotones, à la vérité, mais fidèles'. For Buffon, the differences from Aldrovandi are reduced to a 'défaut', a 'différence de style' and taste: 'nous préférons un petit ouvrage bien raisonné à un gros volume bien sçavant', and he immediately underlines the dangers of this modern spirit: 'seulement il est à craindre que venant à mépriser l'érudition, nous ne venions aussi à imaginer que l'esprit peut suppléer à tout, & que la Science n'est qu'un vain nom.'

The observations of both Brisson and Buffon continue to draw heavily on classical and Renaissance descriptions, which are of course often discussed, but not rejected as a whole. If there are any clear-cut breaks, it is not with the zoologists of earlier ages, but with their

⁵³ Ashworth W.B. Jr., "Natural History and the Emblematic World View", in Lindberg D.C. – Westman R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1990) 303–332.

⁵⁴ Buffon, *Histoire naturelle* 28, quoted by Foucault, *Les mots et les choses* 55.

immediate predecessors and contemporaries: Thevet against Belon, Léry against Thevet, Buffon against Brisson. On the whole, however, at least until Cuvier, ornithology evolved in a continuum, with many side-paths and dead-ends, not by sudden epistemological shifts, great leaps or ruptures.

Selective Bibliography

- ALDROVANDI ULISSE, *Ornithologiae, hoc est de avibus historiae libri XII* (Bologna: 1599–1603), 3 vols.
- ANONYMUS, *Les Delices de Leide, Une des célèbres villes de l’Europe* [...] (Leiden: 1712).
- ASHWORTH W.B. JR., “Natural History and the Emblematic World View”, in Lindberg D.C. – Westmann R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1990) 303–332.
- ASÚA M. DE – FRENCH R.K., *A New World of Animals: Early Modern Europeans on the Creatures of Iberian America* (Aldershot: 2005).
- AUSTIN O.L. JR., *Birds of the World. A survey of the twenty-seven orders and one hundred and fifty-five families* (London: 1962).
- BALIS J., *Van diverse pluimage. Tien eeuwen vogelboeken* (Antwerp – The Hague – Brussels: 1968).
- BELON DU MANS PIERRE, *L’Histoire de la nature des oyseaux. Fac-similé de l’édition de 1555*, ed. Glardon P. (Geneva: 1997).
- BIANCACASTELLA A. (ed.), *Les animaux et les créatures monstrueuses d’Ulisse Aldrovandi* (Arles: 2005).
- BONTIUS JACOBUS, *Historiae Naturalis et Medicae Indiae Orientalis*, in Piso Willem, *De Indiae utriusque re naturali et medica* (Amsterdam: 1658).
- BRISSON MATHURIN JACQUES, *Ornithologia, sive synopsis methodica sistens avium divisionem in ordines, sectiones [...] varietates – Ornithologie ou Méthode contenant la division des oiseaux en Ordres, Sections, Genres, Espèces & leurs Variétés* (Paris: 1760) 6 vols.
- BUFFON GEORGES-LOUIS, COUNT OF LECLERC, *Histoire naturelle des oiseaux* (Paris: 1771–1786), 10 vols. (www.buffon.cnrs.fr; last consultation April 10, 2007).
- CARDANO GEROLAMO, *De subtilitate* (Basle: 1554).
- CLUSIUS CAROLUS, *Exoticorum libri decem, quibus animalium, plantarum, aromatum aliorumque peregrinorum fructuum historiae describuntur* (Antwerp: 1605).
- , *Rariorum Plantarum Historia* (Antwerp: 1601).
- FABER JOHANNES, *Animalia Mexicana* [...] (Rome: 1628).
- FOUCAULT M., *Les mots et les choses. Une archéologie des sciences humaines* (Paris: 1966).
- FREEDBERG D., *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: 2002).
- GEORGE W., “Alive or Dead: Zoological Collections in the Seventeenth Century”, in Impey O. – Macgregor A. (eds.), *The Origins of Museums. The cabinet of curiosities in sixteenth- and seventeenth-century Europe* (Oxford: 1985) 179–187.
- GESNER CONRAD, *Historia animalium* (Zurich: 1551–1558), 5 vols.
- , *Icones avium omnium, quae in historia avium Conradi Generi describuntur* (Zurich: 1560).
- HAUPT H. – VIGNAU-WILBERG Th. – IRBLICH E. – STAUDINGER M., *Le Bestiaire de Rodolphe II. Cod. Min. 129 et 130 de la Bibliothèque nationale d’Autriche* (Paris: 1990).
- HERNÁNDEZ FRANCISCO, *Rerum medicarum Novae Hispaniae thesaurus seu nova plantarum, animalium et mineralium mexicanorum historia* (Rome: 1651).
- JONSTON JAN, *Historiae naturalis de avibus libri VI* (Amsterdam: 1650).
- LÉRY JEAN DE, *Histoire d’un Voyage Fait en la Terre du Brésil* (Geneva: 1585). (<http://www.mafua.ufsc.br/BT1730002.html>; last consultation April 10, 2007).
- MARCGRAF GEORG – PISO WILLEM, *Historia naturalis Brasiliae* [...] (Amsterdam: 1648).
- MASON P., *Infelicities. Representations of the Exotic* (Baltimore: 1998).
- NIEREMBERG JUAN EUSEBIO, *Historia naturae, maxime peregrinae, libris XVI. distincta* [...] (Antwerp: 1635).
- OTTESPEER W., *Groepsportret met Dame II. De vestiging van de macht. De Leidse universiteit, 1673–1775* (Amsterdam: 2002).

- OVIDIO GONZALO FERNÁNDEZ DE VALDÉS, *Natural History of the West Indies*, transl. and ed. Stoudemire S.A. (Chapel Hill: 1959).
- PARÉ AMBROISE, *Des monstres et prodiges*, ed. Céard J. (Geneva: 1971).
- SCHULZE-HAGEN K. et al., “Avian taxidermy in Europe from the Middle Ages to the Renaissance”, *Journal für Ornithologie* 144(4) (2003) 459–478.
- SMITH P.J., “Wandelen in de *Délices de Leide* (1712)”, *De zeventiende eeuw* 22 (2006) 185–208.
- STRIEN-CHARDONNEAU M. VAN, “Leiden, metropool der muzen en tuin van Holland. Leiden in Jean Nicolas Parivals *Les Délices de la Hollande*”, *De zeventiende eeuw* 22 (2006) 171–184.
- THEVET ANDRÉ, *Cosmographie universelle* (Paris: 1575).
- , *Histoire d’André Thevet, de deux voyages par luy faits aux Indes Australes et Occidentales*, eds. Lestringant F. et Laborie J.-C. (Geneva: 2005).
- , *Les Singularitez de la France antarctique* (Paris: 1558).
- WILLUGHBY FRANCIS – RAY JOHN, *The Ornithology [...] in three books. Wherein all the birds hitherto known, being reduced into a Method suitable to their Natures, are accurately described [...]* (London: 1678).

Appendix

Fragment from Anon., *Les Delices de Leide, Une des célèbres villes de l'Europe* [...] (Leiden: 1712)

Le Bec de l'Oiseau Rhinocerot ou Toupan; autrement nommé Pie de Bresil. Présent de Mons. Adr. de Pauw

Le Bec de cette *Pie de Bresil* est d'une substance très-déliée, comme celle d'une membrane, mais osseuse, claire & reluisante, creuse, & qui donne facilement passage à l'air. C'est pourquoi, contre l'ordinaire de tous les autres Oiseaux, elle n'a pas de Narines; parce qu'étant d'une substance très mince, très-déliée, & diaphane, l'air y peut facilement entrer. Que si la Nature y eût laissé quelque endroit ouvert pour le passage de l'air, cela eût rendu ce bec sujet à être rompu, par quelque accident survenu exterieurement. Or afin que l'air coulat aisément dans ce Bec, & s'y glissat continuellement par le palais, la même Nature en a fait les bords en forme de scie, & comme dentelés, pour l'empêcher. Et afin que ce Bec qui est d'une si grande longueur, & d'une si grosse épaisseur, soit bien apuyée & soutenu, la tête en est à proportion de toute la masse du corps, grande & grosse. [...]

Les Americains naturels appellent cet Oiseau Toucham, les Latins *Pie Barbare*. D'autres le nomment *Ramphast*, & Oiseau *Mange-Poivre*. Les Allemans *Pfeffer Vogel*, car il s'en remplit avec une avidité si grande qu'il le rend tout aussi tôt crud, & sans être digéré. C'est pourquoi les Americains l'estiment davantage, parce, disent-ils, que la chaleur rude & âpre du poivre est corrigée par ce moyen. C'est ce qu'*André Thevet* rapporte dans sa *Cosmographie*. Le *bec de l'Oiseau Rhinocerot* ainsi nommé par Aldrovandus au Liv. XII. du *Traité des Oiseaux*, au Chapitre 20. *Parce que comme l'Animal qui s'appelle du même nom il porte une corne à son front*. C'est un Oiseau qu'on voit très-rarement. Hesichius & Verinus disent qu'en *Ethiopie se trouvent* & un *Animal* & un *Oiseau qui s'appellent Rhinoceros*. Ils rapportent que les *Chrétiens* le virent en l'air, lors que dans l'Année 1571 ils remporterent cette memorable *Victoire* sur les *Turcs* dans le Golfe de Lepante ou de Corinthe, sous les auspices & la conduite de Jean d'Autriche, où ayant percé d'un dart en volant, il tomba mort au milieu des combattans. Sa Tête, disent les Histoires, étoit d'une prodigieuse grandeur, ayant à peu près deux pieds de circonference, les ailes noires & enrichies de touffes de plumes, qui pendoient en bas. Son Bec environ long de quatre pieds, un peu courbé, non toutefois à la maniere des Oiseaux de proye, mais en façon d'un arc, ou d'un croissant. Le dessous du Bec étoit de couleur

jaune titant sur le blanc; Le dessus vers la tête étoit d'un beau vermillon, & le reste étoit un peu jaunâtre, comme nous nous avons dit que le dessous étoit un peu blanchâtre. Ce Bec en dedans, tant dans la partie inférieure, que dans la supérieure, étoit dentelé comme une scie. Une Corne également grande & pesante, & qui avoit à sa racine environ une paume de largeur, lui sortoit du front, & étoit adhérente à la partie supérieure de son Bec, fort peu différente de celle de l'animal Rhinocerot, si ce n'est qu'elle étoit tant soit peu recourbée à son extrémité. La couleur de cette Corne étoit en haut & en bas de vermillon, & sur le milieu de couleur jaune. Cette description convient en tout au prodigieux Bec dont nous parlons.

BIOLOGY AND THEOLOGY IN FRANZIUS'S
HISTORIA ANIMALIUM SACRA (1612)

Vibeke Roggen

In 1612, the protestant theologian Wolfgang Franzius published a book entitled *Historia animalium sacra*. Franzius (Franz or Frantze, 1564–1628) was Probst [Rural Dean] of Wittenberg and professor of theology at the university [Fig. 1].¹ Wittenberg – the city where Luther had initiated the Reformation in 1517 – was still a stronghold for the Reformation, but the Catholic Counter-Reformation was a threatening reality. The *Historia animalium sacra* was widely read: A long series of editions appeared from 1612 until 1671, and an English translation was published in London in 1670. To later readers, Franzius's work was presented together with extensive commentaries written by Johannes Cyprianus (1642–1723), professor of physics and later of theology in Leipzig. Cyprianus's edition first appeared in 1687 and was reprinted as late as 1712.²

The *Historia animalium sacra* was much used and it was referred to with honour and respect. For example, Franzius is mentioned among the ichthyologists in the *Encyclopédie Française*.³ And Georg Caspar Kirchmayer (1635–1700) refers to Franzius's work many times in *Hexas disputationum Zoologicarum* (Wittenberg: 1661). Among the animals treated by Kirchmayer is the Phoenix: "To our mind the Phoenix is a pure fig-

¹ An earlier version of this paper was presented at a Symposium in Honour of Ann Moss, arranged by The Cambridge Society for Neo-Latin Studies, 20–22 September 2004 at Clare College, Cambridge. An important primary source to Franzius's life is the funeral speech given by the headmaster of the university, Jacob Martini (1570–1649), in Henning Witte, *Memoriae theologorum nostri saeculi clarissimorum renovatae decas prima (-sexta)* (Königsberg – Frankfurt a.M.: 1674–1675) 311–316.

² Editions of the *Historia animalium sacra* appeared in Wittenberg 1612, 1613, 1616, 1621, 1624, 1633, 1642, 1659; Amsterdam 1643, 1654, 1665; Frankfurt a. M. 1671. Cyprianus's edition was first published in 1687 in Dresden, and reprinted there the following year. Cyprianus celebrated the centenary for the first edition of *Historia animalium sacra* through an edition with a new preface; Frankfurt and Leipzig 1712. The editions from 1613, 1616, 1654 and 1665 have been examined as preparation for the present paper, in addition to Cyprianus's 1712 edition. The Latin quotes hereunder are taken from the 1613 edition.

³ In the article "Ichthyologiste", *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, vol. VIII (Neuchâtel: 1765) 485.



Fig. 1. Wolfgang Franzius, portrait on copper plate. From Franzius, *Historia animalium Sacra* (Frankfurt – Leipzig, Gottofredus Leschius: 1712). Translation of the inscription: 'Wolfgangus Frantzius, doctor of the sacrosanct theology, professor in the academy of Wittenberg, and Rural Dean of the castle church'. University Library of Oslo, Department of Biology.

ment and nonentity. Long ago this was the belief of such great men as Herodotus, Pliny, Gesner, Aldrovandus, Franzius, and Sperlingius'.⁴ The company in which Franzius is included demonstrates the high esteem he enjoyed at the time. Another example is found in a treatise by Isaac Schoockius (d. 1681) on a fable regarding the shape of newborn bears. Even if Franzius is not among the authors quoted in the very brief treatise, he is recommended for further reading: 'In addition to the quoted authors, more information can be obtained on the subject of the bear in Aldrovandus, Gesner, Franzius [...]'.⁵

However, Franzius's work *Historia animalium sacra* has not been met with much interest during the last two centuries. Though it has not been completely forgotten, no critical edition of the *Historia animalium sacra* has appeared, no translation after the one from 1670, and no commentary after the one by Cyprianus. It has been included among the targets in Andrew Dickson White's study from the late 19th century on 'the warfare of science with theology'. On the general situation, White says that the religious use of natural science went on after the Reformation, following Luther's example.⁶ He devotes some lines to the *Historia animalium sacra* and Franzius, but his treatment is very superficial and confined to only one example – namely the 'natural dragons' (see below). But of course, a work of 1000 pages should not be judged on the basis of one chapter. One century after White, in an article entitled "The Virtues of Animals in Seventeenth-Century Thought", Peter Harrison relates Franzius's way of reasoning to a medieval way of thinking. Harrison's discussion of Franzius seems to be based primarily on examples from one article (on the lion), but the statements he makes are general, namely that the *Historia animalium sacra* 'is a typical early seventeenth-century work of natural history', and that 'there is what seems to us a rather credulous acceptance of the traditional sources'.⁷ In the German standard work on the history of biology, *Geschichte der Biologie*, which has appeared in various editions since the first one in 1982, Franzius was not mentioned at all

⁴ Kirchmayer is quoted from a collection of 17th-century treatises, translated from Latin by E. Goldsmid and published under the title *Un-Natural History* (Edinburgh: 1886) 49.

⁵ Isaac Schoockius in Goldsmid, *Un-Natural History* 106.

⁶ White A.D., *A History of the Warfare of Science with Theology in Christendom*, vol. I (Gloucester, Massachusetts: 1978 [1896]) 37–38.

⁷ *Journal of the History of Ideas* 59 (1998) 463–489 (469–470). Harrison refers to the English translation from London 1670.

to begin with, when the approach was mainly Marxist.⁸ In the latest editions, however, the treatment of biology in the early modern period has been expanded, and there is a new chapter on ‘Tierbücher unter dem Einfluß der christlichen Religion’, including the *Historia animalium sacra*.⁹ This very brief chapter (3/4 page) is based upon the work of Anne Bäumer on Franzius and other representatives for the Biblical zoology (see below).¹⁰

A full study of Franzius’s treatise on animals would exceed the limits of an article; the aim of the present paper is to give a general presentation of the work, and to answer the following questions: What was Franzius’s project, as a theologian, for writing a book on animals? What were his sources of knowledge and what were his methods? How did he argue and how did he make up his mind on disputed questions? Priority is given to an examination of the introductory parts, Franzius’s classification system, a selection of animal chapters, and his treatment of certain problematic questions, particularly fable animals and spontaneous generation.

The Historia animalium sacra – structure and presentation

The *Historia animalium sacra* is a book of about a thousand pages in octavo. It was dedicated to the Duke of Saxony, Johannes Georg I (1585–1656, prince-electoral from 1611), who was also the man who accepted the book for printing, according to information on the title page. Through the title, Franzius connected his work to two famous predecessors, Conrad Gesner (1515–1565), whose *Historia animalium* in five large volumes was published in the period 1551–1587, and Aristotle. And by adding *sacra*, Franzius emphasized his ideological basis in the Christian religion as well.

The *Historia animalium sacra* has no illustrations, except for an image on the title page. The layout of the title page differs, particularly when different printing houses are involved. In the edition from Wittenberg 1613, printed by Johann Gormann, there is an image of a bird in flight [Fig. 2]. There is a text written above its head: ‘Jahve’ in Hebrew letters.

⁸ Jahn I. – Löther R. – Seuglaub K. (eds.), *Geschichte der Biologie* (Jena: 1982).

⁹ Hoppe B., „Botanik und Zoologie in der Zeit der Renaissance und des Humanismus“, in Jahn I. (ed.), *Geschichte der Biologie* (Hamburg: 2004) (161–195) 189.

¹⁰ Bäumer Ä., *Geschichte der Biologie*, vol. II (Frankfurt a. M.: 1991) 156–168. An article that appeared two years later is a reprint (very slightly revised): „Biblische Zoologie (Hermann Frey, Wolfgang Franz, Heinrich von Hoewel)“, in Kattenstedt H. (ed.), „Grenz-Überschreitung“: *Festschrift zum 70. Geburtstag von Manfred Büttner* (Bochum: 1993) 3–17.



Fig. 2. Title page of the *Historia animalium sacra* (Wittenberg: 1613).
 University Library of Oslo, Department of Biology.



Fig. 3. Title page of the *Historia animalium sacra* (Amsterdam, Joannes Ravenstein: 1665). In this image, God's name is the center around which there is a landscape with various animals.
 University Library of Oslo, Department of Biology.

One possible interpretation is that the bird is a dove, a symbol of the Holy Spirit. Another possibility is that the bird is a representative of the animals that praise the Lord.¹¹ The title page of the 1616 edition, which was printed in the same printing house as the preceding edition, has the same layout. The word 'Jahve' is an element also in the title page of the edition from Amsterdam 1665 [Fig. 3]. The title page of the edition from Amsterdam 1654 gives the illusion of three-dimensionality, with Adam and Eve standing on a stele [Fig. 4]. A common element in the title page images is the connection between nature and God.

There are more than 80 pages of paratexts in the *Historia animalium sacra* [see the table below]. On the verso of the title page there is an extract from Psalm 104 with the primary content 'glory to the Lord' and 'God rejoices over his labour'. In Franzius's fairly long *Praefatio* (42 pages) this subject is emphasized very strongly through a phrase that is

A table of contents, constructed from the 1613 edition

Title page (see Fig. 2)
 Extract from Psalm 104, fol. a v
 Dedicatory preface, fols. a2 r–c6 v (42 pp.)
 To the pious reader, fols. c7 r–c8 v (4 pp.)
 A physical tract on the nature of many brute animals, pp. 1–888
 Chapters 1–3, on classification of animals and other general questions,
 pp. 1–31
 [Part 1, On fourfooted animals], pp. 31–324
 Part 2, On birds, pp. 324–584
 Part 3, On fish, pp. 584–706
 Chapter 1, On fish in general, pp. 584–609
 [...]
 Part 4, On serpents and on insects, pp. 706–888
 Chapter 1, On serpents in general, pp. 706–722
 [...]
 Chapter 7, On insects in general, pp. 755–770
 [...]
 Chapter 16, Conclusion, p. 888
 Table of contents, listing all the chapters, 4 pp. (unpaginated)
 Index rerum, 28 pp. (unpaginated)

¹¹ The layout on the title pages of books printed by Gormann varies; for example, the title page of Franzius's *Augustanae confessionis articuli fidei XXI* (1611) has text only. Thus, it seems that the image is related to the content of the work.

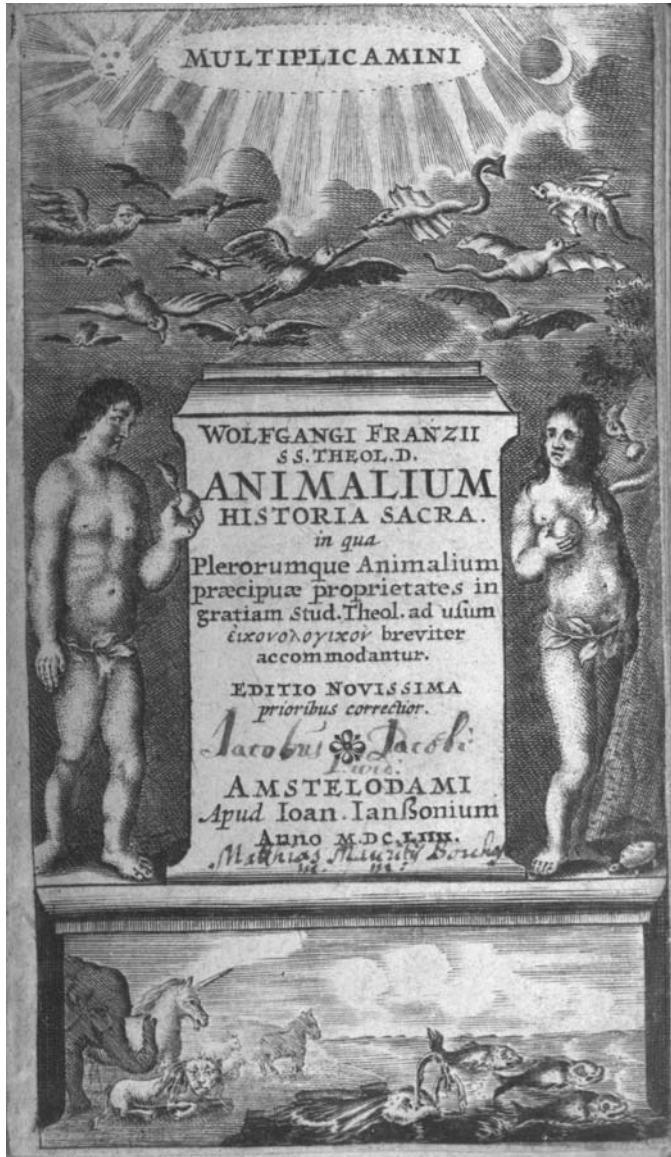


Fig. 4. Title page of *Animalium historia sacra* (Amsterdam, Johannes Janssonius: 1654). Above Adam and Eve is the sky with birds and the Latin word ‘multiplicamini’ (‘multiply’) uttered from above (*Genesis*, Chapter 1, 22; 28). The lower section of the page shows a landscape with animals, among them a unicorn. University Library of Oslo, Department of Biology.

repeated again and again: ‘Vox confitentium DEUM CREATOREM’ (‘the voice of those who confess that God is the creator’). The preface demonstrates Franzius’s ability as a writer; for example, in the following he describes how each species has its own particular nature,

to the extent that no cuckoo ever seeks to compete with the cocks’ crowing, or lions with the pigs’ grunting, or dogs with the horses’ whinnying, or hens with the bees’ honey-making art, so that never does the cat reveal a thief at night, never do the little birds sing together with the yapping dogs; so that never does the desire for meat sneak into sows, the desire for corn into swallows, the desire for bones into horses, the desire for clover and thyme into dogs; so that you can never accustom the hare or the rhinoceros to the manger, to the yoke and to ploughing the fields like oxen or horses; so that dogs and cats never leave their masters and homes and clothe themselves in the savagery and tendency to range about in the wilderness of wild pigs, wolves or lions [...].¹²

Franzius’s explanation of the many differences – which obviously impress him – was that this is God’s plan, through the creation of the world. He dryly commented that many learned works arise from these many differences (*Historia animalium sacra*, fol. a4 r).

The plan for the work and the relationship between the animal world and theology is further explained in the preface ‘to the pious reader’ – the last part of the prefatory material. The *Historia animalium sacra* was meant for theologians, meant for priests, meant for teaching; when you want to teach a certain doctrine to a simple audience, so that they will be able to evocate to their minds the sight of this animal or that, you can find many such parables or similes in this book [‘copiam talium seu parabolarum seu similitudinum’] (*Historia animalium sacra* fol. c8 r).

¹² *Historia animalium sacra* fol. a3–a4: ‘adeo ut nunquam ullus cuculus gallorum cantilenas, nec leones grunitum porcorum, nec equorum hinnitum canes, nec apum mellificandi artem gallinae aemulari tentent, ut nunquam felis prodat furem nocturnum, nunquam avicula noctu cum canibus latrantibus canant, ut nunquam ovibus carniū, hirundinibus frumentorum, equis ossium, canibus trifoliorum et thymorum obrepant desideria, ut nunquam leporem aut rhinocerotem ad praesepia, ad jugum et ad agros arandos more boum aut equorum assuefacere queas, sicut nunquam canes et feles dominis et domibus derelictis aprorum aut luporum aut leonum feritatem et in desertis circumvagandi naturam induent [...]’. The translations from Latin are mine.

Treatment of categories and species

In the main part of the work, the first three chapters have introductory character. In Chapter 1, ‘On the argument of this tract’, Franzius argues that even if natural history is part of the ‘doctrina physica’ (*Historia animalium sacra* 1), it should not be looked upon as primarily the field of the physicians, ‘but of each and every scholar, and above all theologians’ (*Historia animalium sacra* 2).¹³ The subject is useful, firstly, *ad disserendum*, which is to be able to discuss matters regarding animals and nature with other scholars, and present material related to animals in speeches and preaching without making mistakes; secondly, it is useful in order to explain sacred and profane texts;¹⁴ and, thirdly, it is helpful in praising God. As it seems, the first aim is directly related to nature and animal life, whereas aim two is related to interpretation of texts; partly texts on animals *per se*, partly texts where animals and animal behaviour are used in an abstract sense. Chapter 2, “On the definition of the irrational animal”, contains some general statements – for example, that small animals are the most intelligent. In the same chapter, Franzius has treated the question of how life arises (see below). Chapter 3, on classification, begins with a summary of the scholarly situation. No less than ten (alternative) sets of criteria for classification are listed, one of which divides animals into those that give birth to living animals and those that lay eggs – *animalia vivipara* and *ovipara*. Franzius’s opinion is shown in a logical table [Fig. 5].¹⁵

¹³ Bäumer, on the other hand, says in *Geschichte der Biologie*, vol. II 162, that the animal world ‘sei eigentlich die Aufgabe der “Physica”’, which seems inaccurate. At this point it has to be said that whereas Bäumer refers to the edition from 1612, I have used the edition that appeared, also in Wittenberg, in 1613. My discussion with Bäumer (who does not quote Franzius in Latin) is based upon the assumption that the second edition was a reprint, which seems likely, since Bäumer’s references coincide with the page numbers in the 1613 edition of the *Historia animalium sacra*.

¹⁴ *Historia animalium sacra* 3: ‘2. ad explicandum scriptores sacros et profanos’; Bäumer’s translation is inaccurate: ‘2. zur Erklärung der Heiligen Schrift’; see *Geschichte der Biologie* vol. II 162.

¹⁵ Bäumer presents a German version of the table; see *Geschichte der Biologie*, vol. II 160.

ca autumnum. Sed has omnes & fimiles quas-
dam alias divisiones complecti videtur hæc ta-
bella :

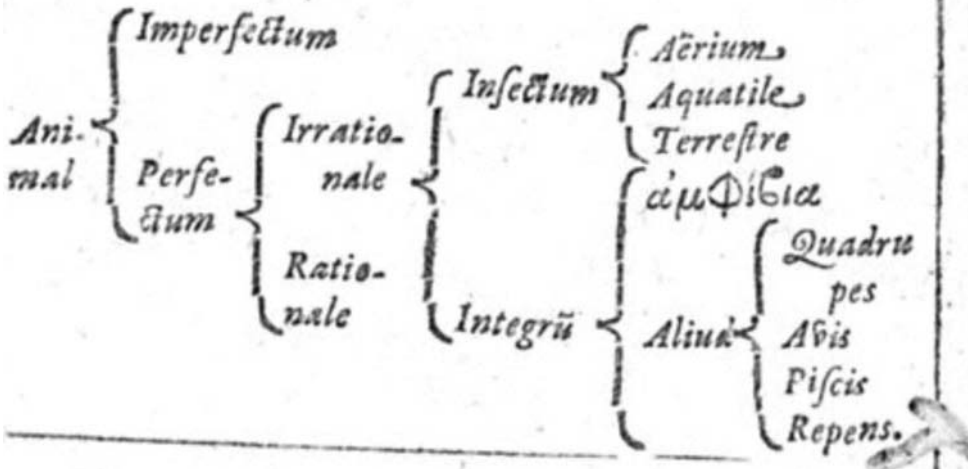


Fig. 5. Logical table showing Franzius's classification of the animals (*Historia animalium sacra* 30). The superordinate concept *animal* is divided into 'imperfect' animals (e.g. zoophytes) and 'perfect' animals, the last category in the 'rational animal' (man) and in 'irrational animals' (all other animals). These are divided in insects ('cut in') and *animalia integra* – non-insects. University Library of Oslo, Department of Biology.

Each part of the *Historia animalium sacra* has introductory chapters. Part 3, “On fish”, begins with a discussion of twelve general matters, for example the similarities between fish and other groups of animals. There are analogies between the bodily parts of birds and fish: feathers and wings correspond to scales and fins. Moreover, fish move through contractions of the body, like serpents. The big animals in the ocean do not lay eggs, but have genitalian parts like animals on land; likewise, they have lungs. Franzius concluded: ‘they are classified by some among the terrestrial animals, but since they always stay in the water, it is better to call them fish’.¹⁶ Which scholars does Franzius refer to? Most famous among the 16th-century ichthyologists are Pierre Belon, who gave a good description of the lungs and brain of the marine animals (1551), and his contemporary Guillaume Rondelet (1554). But according to Hoppe, they both classified the whale among fish.¹⁷ Ilse Jahn claims that Aldrovandi was the first scholar who separated fish and whales, in a posthumous volume, published 1612–1613.¹⁸ But this must be wrong, since this volume was hardly published before the *Historia animalium sacra*; cp. Franzius’s words, ‘they are classified by some among the terrestrial animals’. How this may be, it seems that all these scholars had a fairly good comprehension of the nature of marine mammals, and the classification could be looked upon as a matter of the *definition* of the concept *fish*. Franzius’s knowledge was partly based upon personal observation: ‘In big marine animals there is no spine, but solid and very big bones, as people observe with astonishment in this city, in the castle church’.¹⁹ Franzius was *praepositus* in the castle church²⁰ and surely it was him who had organised the exposition, driven by his interest in zoology and his wish to teach the people of Wittenberg.

¹⁶ *Historia animalium sacra* 586: ‘ab aliquibus annumerantur terrestribus animalibus, sed tamen quia semper manent in aquis, commodius appellantur pisces’.

¹⁷ Hoppe in Jahn (ed.), *Geschichte der Biologie* 192–193.

¹⁸ Jahn I., „Naturphilosophie und Empirie in der Frühaufklärung (17. Jh.)“, in eadem (ed.), *Geschichte der Biologie* (197–230) 226.

¹⁹ *Historia animalium sacra* 585: ‘In magnis tamen piscibus marinis non sunt spinae, sed solidissima ossa eaque maxima, quemadmodum cum admiratione talia conspiciuntur in hac urbe, in templo arcis’.

²⁰ Jacob Martini in Henning Witte, *Memoriae theologorum nostri saeculi* 311.

The main part of the *Historia animalium sacra* is the treatment of the species, one by one or in small groups. Franzius has described the differences between his treatise and the works of his predecessors:

I have deliberately not taken special consideration of what is usually, and in a very learned manner, taught about the nature of animals, the size of their bodies, their outer and inner parts, their natural actions to maintain life or propagate their kind, the voice of each individual animal, its senses, nourishment, hiding places, movements, health, diseases, growth, conception, birth, age, usefulness [...] but just the things that particularly concern its way of managing its life, and to offer something useful to men of my profession, students of theology and servants of the Word [...].²¹

For example, the chapter on the peacock begins with a description of the bird's appearance, the beauty of its feathers and its slender body, 'since God gave it the palm of victory among the birds'.²² But the species is also known to have five vices, namely that it is 'cunning, ambitious, envious, malevolent, licentious'.²³ Its ambitions are connected with the fact that the bird is too aware of its beauty, and it is described as envious because it swallows its own excrement – which is useful in medicine, according to Franzius. It is malevolent because it does not love its own children: the male bird destroys the eggs if it finds them. Franzius saw many ways in which the peacock's behaviour and attitudes could be compared with those of certain human beings; he lists about a dozen analogies. For instance, in the same way the peacock spontaneously begins to revolve its tail from time to time, some people may suddenly burst out in praise of themselves.

²¹ *Historia animalium sacra* fol. c: 'In illo autem non ego ex professo respexi ista praesertim anima, quae de animalium naturis, corporum quantitibus, partibus externis et internis, naturalibus actionibus pro vitae ipsorum conservatione, vel speciei propagatione, animantis cujusque voce, sensu, alimento, latibulo, motu, sanitate, morbis, educatione, conceptu, partu, aetate, de usibus [...] sed tantum illa, quae morum regendorum rationem cumprimis spectabant, et meae professionis hominibus, Theologiae studiosis et Ministris verbi commoditatem aliquam praebere'.

²² 'utpote cui Deus palmam dedit inter aves'. Cp. the chapter "On the peacock", in *Historia animalium sacra* 359–365.

²³ 'callida, ambitiosa, invida, malevola, libidinosa'.

Chapter 11 treats two species, unicorn and rhinoceros, and discusses the question whether or not unicorns exist. Franzius's point of departure is the notion that 'some very learned men have denied that the unicorn exists in nature'.²⁴ But the Bible uses learned images related to the unicorn, and Franzius's conclusion is that the unicorn *does* exist.²⁵ Bäumer claims that Franzius 'sie [die Existenz des Einhorn] aber schon deshalb als bewiesen ansieht, weil dieses Tier in der Bibel erwähnt werde'.²⁶ But in addition to the Bible, Franzius based his view upon a report from an alleged eyewitness: 'Add to this that the very serious author Julius Caesar Scaliger, in his *Exercises against Cardanus*, quotes testimony from a certain friend of his who has seen a unicorn'.²⁷ In the case of the phoenix, Franzius concluded that the bird is fictitious, even though many early Christian authors accepted it.²⁸ Franzius's arguments were related to the bird's life: whereas other birds live in couples, the phoenix lives alone – which contradicts the story of the Flood; whereas other birds make nests in order to reproduce their young, the phoenix does so to prepare its death; whereas other birds love the sun, the phoenix is burnt and killed by it. When dragons are concerned, such creatures exist in nature, according to Franzius, but they are merely very old and very big serpents; they do not differ from other serpents, except in size (*Historia animalium sacra* 747). However, after this rational explanation, he contradicted it by saying that there are 'two kinds of real dragons' – 'verorum Draconum duae sunt species' – a statement which, as we have seen, was criticized by White.

²⁴ 'doctissimi aliqui viri negarunt esse in rerum natura unicornem'. See the chapter "De Monocerote et Rhinocerote", in *Historia animalium sacra* 109–118.

²⁵ B. Faidutti's dissertation from University Paris XII 1996 treats the unicorn: *Images et connaissance de la licorne (Fin du Moyen-Age–XIX^{ème} siècle)*. In a survey of authors and their points of view regarding the existence of the unicorn, Franzius has been placed among those who say 'Non ou plutôt non', but this is not correct.

²⁶ Bäumer, *Geschichte der Biologie*, vol. II 163.

²⁷ *Historia animalium sacra* 109: 'Huc accedit, quod gravissimus author Julius Caesar Scaliger in suis exercitationibus contra Cardanum citat testimonium amici sui cujusdam, qui vidit unicornem'.

²⁸ In *Historia animalium sacra* 353 he writes: 'satis de hac fabulosa ave' ['enough about this fictitious bird'].

A difficult question: spontaneous generation

The assumption that life can arise through spontaneous generation had a long tradition in ancient Greek thought, even before Aristotle added his authority to it. He saw a combination of heat and humidity as the environment in which certain insects, for example flies and lice, came into being.²⁹ Pennington sums up the situation regarding spontaneous generation:

One of the most firmly held of the scientific teachings of Aristotle, expanded by many medieval writers, was spontaneous generation. To question this, Sir Thomas Browne had said, 'is to question reason, sense, and experience'. Johann van Helmont, the discoverer of carbon dioxide, produced a recipe for making mice out of cheese and dirty linen. Everyone knew that putrefied meat generated maggots; but some accounts of the spontaneous appearance of bees and frogs reached almost the same level of mythology as the phoenix. Harvey was uncertain about it. It was not until 1668 that Francesco Redi, after experiments and observations that included the not very difficult one of protecting the meat from flies, claimed that all life arises from reproduction.³⁰

Thus, in Franzius's time, all leading scholars accepted spontaneous generation – even Thomas Browne, the author of *Pseudodoxia Epidemica* (1646), often called "Vulgar Errors", an attempt to evaluate vulgar 'truths' in natural history. The common opinion was that there were three ways of reproduction: some species reproduce through sexual intercourse, some take their origin from excrement, and some may be reproduced in either way, for instance mice (*Historia animalium sacra* 19–20). Franzius proceeds:

But although this is how matters are presented, we shall leave it to more learned men to judge whether everything is bred through the reciprocal custom of the sexes, but nevertheless in such a way that most smaller animals give birth to eggs or something that resembles an egg and lay it in a place where it can be hatched with the help of an external heat.³¹

²⁹ Harig G. – Kollesch J., „Naturforschung und Naturphilosophie in der Antike“, in Jahn (ed.), *Geschichte der Biologie* (48–87) 66.

³⁰ Pennington D.H., *Europe in the Seventeenth Century* (London – New York: 1993 [1970]) 171–172.

³¹ *Historia animalium sacra* 21: 'Etsi vero haec ita disputantur, tamen doctioribus iudicandum relinquimus, an non omnia producantur ex mutua sexuum consuetudine, ita tamen ut pleraque minora pariant ova vel ovis aliquid simile, illudque hinc inde deponant, ut a calore aliquo externo excludatur'.

Franzius continued his line of thought: One reason why people came to believe that insects originated from, for instance, putrefied material, was the fact that one could not see them: they enter and settle in wood, for instance, through minute pores and, after a short period, breed. Insects settle in water, salted meat, raw meat, in beds, in some trees, in flowers and fruit, and so on. There are no animals without lice, no fish without certain worms. Franzius also argued against the claim that mice arise in ships, and presented an alternative observation to the ancient myth of birds that arise from trees:

And who can assure us that no mouse has come into the ship together with the goods? So let those who have greater experience consider this more closely. But as for the birds that are said to grow from trees in Scotland,³² Dutchmen on a sea trip to China saw that they hatched eggs and sat on eggs; so they too are procreated like other birds (*Historia animalium sacra* 22).

True enough, there are examples of spontaneous generation in the Bible. But obviously, such narratives represent *miracles*, very different from regular animal behaviour (*Historia animalium sacra* 767). This must be the case, since God, as Franzius understood him, would not have wanted that one mouse was born from another mouse, whereas others were born from excrement. On this matter, Franzius argued against the view of *all* authorities. However, his point of view has not received much scholarly attention.³³

Material and methods

It was important to Franzius that his treatment of animal life was correct and corresponding to reality. At his disposal were many early sources: Aristotle and other ancient Greek and Roman authors, *Physiologus*, early Christian authors and medieval bestiaries, and not least, the Bible. But very often, Franzius's starting point for discussing animal life was early modern authorities, whom he referred to as a group with the word *docti*. For example, Julius Caesar Scaliger is characterized as *gravissimus author* (*Historia animalium sacra* 109). In the case of spontaneous generation,

³² On this myth, see White, *A History of the Warfare of Science* 37.

³³ Bäumer, and Hoppe who follows her, mention Franzius's rejection of spontaneous generation, but relate it to fish only. Bäumer, *Geschichte der Biologie*, vol. II 163; Hoppe in Jahn (ed.), *Geschichte der Biologie* 189.

there was a scholarly agreement. Franzius did not present an open criticism, but wanted the *docti* to think about the arguments that he presented against their view. Through eyewitnesses, he rejected an alleged example of spontaneous generation – birds growing in trees – and when insects in rotten material were concerned, he presented a rational explanation of the phenomenon. In the case of the unicorn, Franzius's discussion was based upon the fact that certain *docti* denied its existence. His primary arguments were the mentioning of unicorns in the Bible, in addition to an eyewitness presented by Scaliger. But even tales from the Bible could be questioned, or explained, as Biblical miracles.

Even more trustworthy than scholarly works were *observations*. When Franzius and the citizens of Wittenberg had seen the skeleton of a big marine animal, they knew what such a skeleton looked like. Also, observations witnessed by other authorities are referred to in the *Historia animalium sacra* and relied upon. An observation by Scaliger is related to the myth that bears are born without shape and licked to shape by their mothers (cp. on Schoockius above): On a bear hunt in the Alps, when a pregnant bear had been killed, the hunters observed that the fetus had the perfect form of a bear (*Historia animalium sacra* 81). In the same chapter, an observation by Pliny the Elder is quoted from circus in Rome. Pliny has also made observations on lions (*Historia animalium sacra* 67). Bäumer, on the other hand, finds that the *Historia animalium sacra* contains interesting zoological information, but claims that this information 'allerdings nicht auf eigenen Beobachtungen beruhen, sondern aus zeitgenössischen Werken entnommen sind'.³⁴

Franzius did not use the same kind of critical sense when animals are used in an abstract way. For example, in the chapter on the pelican one finds material from the ancient *Physiologus* that is not trustworthy.³⁵ After narrating a couple of these fables, Franzius added: 'But even if one thinks that these narratives are not real, but are in fact fictitious, there is nothing that prevents students from using similes from them'.³⁶ This is a practical and pedagogical attitude; Franzius wanted people to *understand*, and fables could be used in order to achieve this end. As is understood, the criteria for the selection and use of material for pedagogical purposes were quite different from the criteria and use of the

³⁴ Bäumer, *Geschichte der Biologie*, vol. II 164.

³⁵ *Historia animalium sacra* 354–358, "De Pelicano".

³⁶ *Historia animalium sacra* 358: 'Etsi autem haec ita sese habere non putantur, imo prorsus fabulosa sunt tamen nihil obstat, quo minus studiosi ex illis similitudine utantur'.

purely biological material. A helpful example is Franzius's treatment of the elk, which he employs for both direct and abstract meaning. This was an animal that he had observed himself: 'Its voice, as I have heard it myself from the animal, is rather sad and miserable; so much that if you did not see it, you would think that it was a child'.³⁷ The fact that the author is familiar with elks is perhaps the reason why he qualifies Julius Caesar's memorable description of the elk in *De bello Gallico* (Book 6, Chapter 27). Caesar explains that the Germans hunt elks by cutting trees half-way through; since the elk has no knee joints, it sleeps in a standing position, leaning against a favourite tree. And, of course, it is unable to rise again when it falls to the ground and is, therefore, easy to catch. But based upon his observations, Franzius inserts a qualification: 'It has legs, either without joints, or without very mobile joints'.³⁸ But when the time came to use the elk and its legs in relation to human conduct, Caesar's version was more convenient: 'In the same way the elk has legs without joints, and, consequently, it cannot rise easily when it falls, so Christians are remote from fraud: they do not have splendid positions in this life, they are not armed with external power, and when they meet danger, they are unable to free themselves'.³⁹

Among the material in the *Historia animalium sacra* are some proverbs; for example, a German proverb that says that the hare is faithful: 'Er stehet einem bey/wie der Haas beym Trummelschleger: Er bleibet bey seinen Worten/wie der Haas bey seinen Jungen' (*Historia animalium sacra* 203). There was an interest in proverbs and other parts of the popular culture in German areas during Franzius's time, and the process of collecting proverbs and having them published had already begun. Nevertheless, proverbs should be regarded as a primarily oral material.

Animals were also used in the description of famous individuals. In this category, anecdotes and other material related to the fathers of the Reformation should be mentioned. In the chapter on the phoenix, one learns that Melanchthon was called 'Germany's phoenix' and described through a verse, 'Nulla ferent talem secla futura virum' ('No future

³⁷ *Historia animalium sacra* 107: 'Vocem eius ut ipse ex animali audivi, admodum flebilem et miserabilem, adeo, ut si non conspiceretur, existimaretur esse infans'.

³⁸ *Historia animalium sacra* 107: 'Crura habet aut sine nodis aut sine nimis mobilibus articulis'.

³⁹ *Historia animalium sacra* 108: 'Quemadmodum enim Alce crura habet sine nodis et sine articulis, et ita cum prociderunt, non possunt facile exurgere: ita Christiani sunt alieni a dolis, et in hac vita non habent splendidas sedes, non sunt armati externa potentia et cum incidunt in periculum seipsos nequeunt liberare'.

epoch will bring forward such a man', *Historia animalium sacra* 348). In the chapter "On the nightingale" (*Historia animalium sacra* 554–565), the myth of the bird's origin is narrated from Ovid's *Metamorphoses*. It is called philomela, from the Greek 'philos' for friend, and 'melos' for song, since 'it cares for nothing but song', and this is related to Melanchthon:

Since Philip Melanchthon has a name whose initial letters and syllables correspond with the name of this bird, and since he was connected to Luther in a splendid way in the Reformation of the barbarian Papacy, and since he taught and wrote a lot in the fields of theology and philosophy in a very good way, and had innumerable diligent students in this Academy [...], many scholars compare him to the nightingale in their writings and call him Philomela in deed and name.

The link between the bird and the interpretation of the name seems rather tenuous; the connection is made on two levels: that the Reformist 'cares for song' and the literal similarity. The *meaning* of the word Philomela is not related to 'Philipp' or 'Melanchthon' – the latter being a Greek translation of his family name, Schwarzerd. Melanchthon's nickname should be seen in relationship to the interest for word games in the early modern period: acrostics, anagrams, lipograms and so on. Such wordplays were not regarded as merely games. Augarde writes on the anagram: 'This belief in the power of shuffling letters of the alphabet continued from the Middle Ages into the Renaissance. It was thought that character or fate could be discovered by rearranging the letters of a person's name – making an anagram'.⁴⁰

Early modern reception: an example

As a treatise which combines animal life and cultural interpretations, it is not unexpected that the *Historia animalium sacra* was used as a natural history as well as a work in the field of theology and human behaviour. Kirchmayer and Schoockius may serve as examples of the first use; see above. But the primary audience that Franzius had in mind was students of theology and priests, in their work of preaching and teaching. One example of such use is found in a 17th century Norwegian vicar, Nils Thomassøn (1605/06–62), in the commentaries accompanying his

⁴⁰ Augarde T., *The Oxford Guide to Word Games* (Oxford, New York: 1986) 71.

Latin poem in *Cestus sapphicus* [A love-girdle in Sapphics], Christiania (Oslo), 1661.⁴¹ Thomassøn's fascinating and original work originated from a wedding poem, and the subject of his rebus poem is *marriage*. Franzius is quoted in the commentary on the first stanza, from his chapter on the cuckoo. This bird's habit of laying eggs in other birds' nests is compared to men who hate marriage and want to avoid the labour of raising children. One may see Thomassøn's high estimation of Franzius's work from his, albeit brief, comment: 'Thus Franzius, by whose authority I congratulate myself that weight has been added to what I said before'.⁴² In another context, Thomassøn made use of Franzius's chapter on the vulture; this bird was compared traditionally to people waiting for an inheritance.⁴³

What interested Thomassøn in the chapters on the cuckoo and the vulture was Franzius's use of these species in an abstract way; they fitted into his treatment of aspects of marriage and human life. But he also used Franzius as an authority on a philological question – the interpretation of a certain Hebrew word from the Bible, 'Schachak', which had been translated as either cuckoo or seagull; *Vulgata* had *larus*. 'There are many words in the Latin translation of the Bible, says Franzius, which do not correspond to the Hebrew sources'.⁴⁴ What Thomassøn wanted was to use the bird as a rebus picture; the letter *c* together with the picture of a *larus* formed the word *clarus* [Fig. 6].

Nils Thomassøn was a vicar on the Norwegian countryside for the last 25 years of his life, and it was in this period that he wrote, or invented, *Cestus sapphicus*. The *Historia animalium sacra* is among the works that Thomassøn quoted so many times that it seems likely that he owned a copy. As a young man, during the years 1625–1630, Thomassøn was a student at the universities of Copenhagen, Rostock, Leiden and – last but not least – Wittenberg. He never met Franzius, who died in 1624, but it was perhaps in Wittenberg that he bought his book on animals.

⁴¹ See Roggen V., *Entertainment and learning: Intellectual play – word and picture. A study of Nils Thomassøn's Latin rebus book Cestus sapphicus. With edition, translation and a corpus of sources* (Oslo: 2002; orig. Ph.D. thesis, Oslo: 2001).

⁴² 'Haec Franzius, cujus autoritate a me supra positus pondus accedere mihi gratulor' (Nils Thomassøn, *Cestus*, in Roggen, *Entertainment* 362–363).

⁴³ Nils Thomassøn, *Cestus*, in Roggen, *Entertainment* 442–443.

⁴⁴ 'Multa sunt, inquit Franzius, vocabula latinae versionis Bibliorum, quae non congruunt cum ipsis fontibus Hebraicis' (Nils Thomassøn, *Cestus*, in Roggen, *Entertainment* 482–483).

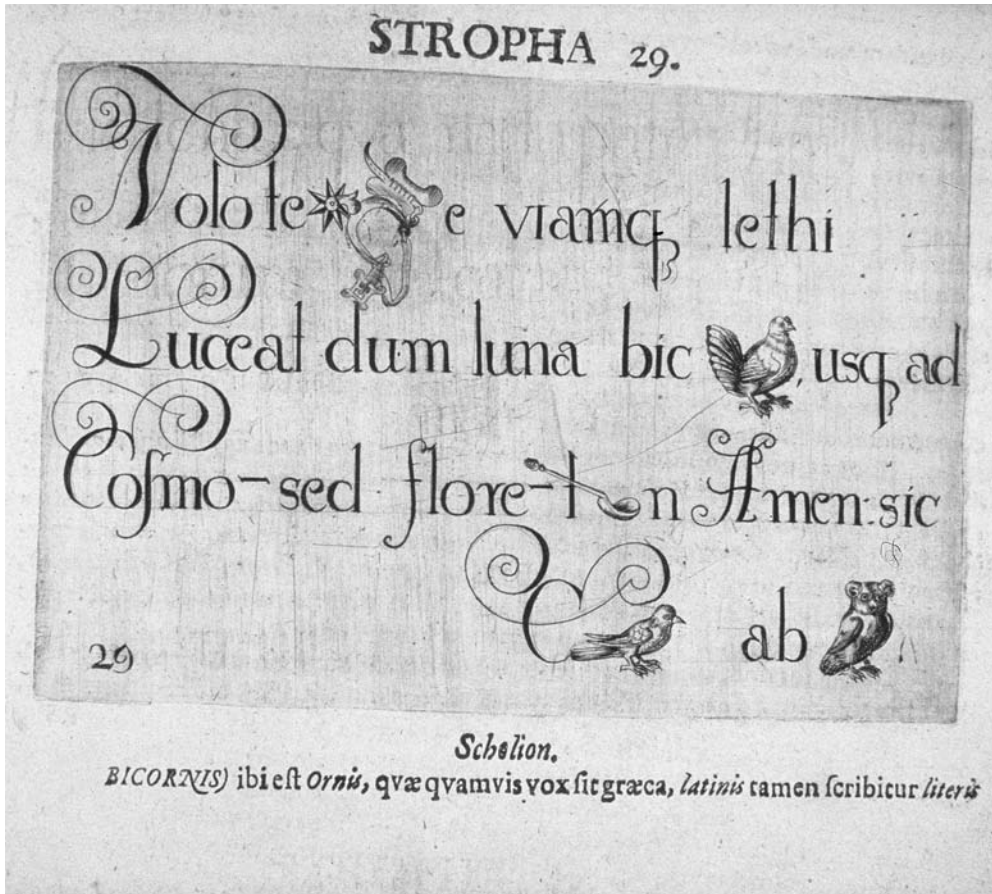


Fig. 6. Stanza 29 in Nils Thomassøn's rebus poem on marriage from 1661, where three birds are used as motifs for rebus pictures. Copper plate engraving by the Norwegian artist Didrik Muus (1633–1706). The rebus figures in the stanza are *calcar* (a spur), *ornis* (hen), *toryne* (spoon), *larus* (cuckoo – see the text), and an *ibis* (long-eared owl). The result of the rebus is a Sapphic stanza: 'Nolo te {calcar}e viamque lethi/ Luceat dum luna bic{ornis}, usque ad/ Cosmo – sed flore – {toryne}n Amen: sic/ C{larus} ab{ibis}' ('I do not want you to tread the road of death under your foot as long as the two-horned moon shines. No, stay healthy until the world is changed into chaos – Amen: then you will pass away gloriously').

National Library of Oslo.

Conclusion

The *Historia animalium sacra* is not the only early modern treatise that combines zoology with theology. But the book demonstrates that Franzius was genuinely interested in the life of animals; as Bäumer observes, he described all groups of animals, whether they were apt for allegorical use or use in sermons or not.⁴⁵ And the book found readers – compare the many editions. In his funeral speech on Franzius, the headmaster of the University of Wittenberg, Jacob Martini, emphasized that the *Historia animalium sacra* had the attention of theologians and philosophers alike.⁴⁶ It seems likely that ‘philosophi’ here comprises even natural philosophers – today’s biologists.

It would be unhistorical to blame Franzius for his conclusion regarding the existence of unicorns. It is difficult, of course, to prove that a species does *not* exist – particularly in light of the statement of a trustworthy eyewitness. As a result of the European discoveries of new continents during the early modern period, people’s image of the natural world had been expanded, and Franzius had no criteria that could help him to decide whether or not the unicorn was fictitious. As he saw it, the life of this species did not contradict experience, reason and logic, as does the life of the phoenix. The label ‘credulous’, used by Peter Harrison, is quite inappropriate.

Franzius wanted his readers to understand how animals are employed in literature to cultivate abstract meaning. He described his use of animal life in terms of parable, analogy and simile, with reference to their use in the New Testament. ‘As a leader in this kind of teaching, you have the Holy Spirit and above all, Christ the Lord’.⁴⁷ A passage on the weasel (*mustela*) may serve as an example:

The weasel with its unbelievable courage is able to investigate the cave of a snake. Consequently, it is said that it smears itself all over with rue [a bitter herb], and that it afterwards, without trembling, attacks and kills even a big serpent and basilisk. This might be an image of Christians,

⁴⁵ Bäumer, *Geschichte der Biologie*, vol. II 164.

⁴⁶ ‘Certe *Historiam sacram animalium*, Theologi pariter et Philosophi in oculis habent’ (Jacob Martini in Henning Witte, *Memoriae theologorum nostri saeculi* 312).

⁴⁷ *Historia animalium sacra* fol. c8 r: ‘Habes ducem in hoc ipso genere docendi Spiritum Sanctum et imprimis Christum Dominum [...]’. Concerning the terminology, cp. Lausberg H., *Handbuch der literarischen Rhetorik* (Stuttgart: 1990) 232–233; 869.

whom the Devil always hates, but by whom he is defeated by the help of rue, that is, the preaching of the Word on Christ's merits and blood (*Historia animalium sacra* 274).

The habits of the animal in question is interpreted in relation to Christian doctrine, or rather Christian life. In this case, the weasel was the Christian and the snake was the Devil, while God's word was represented by the bitter herb. In an allegorical and emblematic interpretation, everything in the universe *possesses* hidden meanings;⁴⁸ Franzius had a more pedagogical and practical approach: 'this might be an image of Christians'. In general, his use of animal life may be described by the concept *analogy*.

As stated above, *Historia animalium sacra* has not yet been the object of a thorough study, and some of the available information on the work is erroneous. This is the case with some of Bäumer's conclusions, with the effect that the theological aspect of the *Historia animalium sacra* gets too much weight and the biological too little. But for more than one reason, Franzius's work deserves to be examined properly. His treatment of biological problems is interesting in itself. Moreover, the *Historia animalium sacra* was a work with great influence on the Protestant Northern Europe throughout the seventeenth century and in the beginning of the eighteenth, and as professor of theology at the highest esteemed Protestant university, Franzius had students of many nationalities. And whereas the *Historia animalium sacra* was written in Latin, the content was, surely, handed over to parishes in various vernacular languages.

Franzius was a scholar who had read a lot, and with a fairly open mind. In order to understand why he, a theologian, would want to write a book on animals, one must begin with his own description of his aims, which are related to the public for which the book was written, namely the clergy and the students of theology. Franzius was driven by a wish to find out how the animals *really* live and to teach this to his fellow clergymen and students. In the treatment of his sources, Franzius used reason and logics; he did not accept the conclusions of authorities without testing them. He was not afraid to oppose *all* authorities, as in the case of spontaneous generation. *God* was part of Franzius's method; he asked: Would God have wanted this? Is it compatible with essential

⁴⁸ See Ashworth W.B. Jr., "Natural history and the emblematic world view", in Lindberg D.C. – Westman R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge etc.: 1990) 303–332.

parts of the Bible? God, as Franzius saw him, was logical and reasonable, like the world he had constructed. Franzius's argument appears as an interwoven pattern of scientific and theological discussion, and in evaluating him, one should not forget that even for Newton God and nature were aspects of the same matter.⁴⁹

⁴⁹ Bono J.J., "From Paracelsus to Newton: The Word of God, the Book of Nature, and the Eclipse of the 'Emblematic World View'", in Force R.E. – Popkin R.H. (eds.), *Newton and Religion: Context, Nature, and Influence* (Dordrecht – Boston – London: 1999) 74–76.

Selective Bibliography

- ASHWORTH W.B. JR., "Natural history and the emblematic world view", in Lindberg D.C. – Westman R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1990) 303–332.
- AUGARDE T., *The Oxford Guide to Word Games* (Oxford – New York: 1986).
- BÄUMER Ä., *Geschichte der Biologie* (Frankfurt a.M. – Bern – New York – Paris: 1991).
- , „Biblische Zoologie (Hermann Frey, Wolfgang Franz, Heinrich von Hoewel)“, in Kattenstedt H. (ed.), *„Grenzüberschreitung“. Festschrift zum 70. Geburtstag von Manfred Büttner* (Bochum: 1993) 3–17.
- BONO J.J., "From Paracelsus to Newton: The Word of God, the Book of Nature, and the Eclipse of the 'Emblematic World View'", in Force J.E. – Popkin R.H. (eds.), *Newton and Religion: Context, Nature, and Influence* (Dordrecht – Boston – London: 1999) 45–76.
- CARDANO GEROLAMO, *De subtilitate*, in Idem, *Opera omnia*, 10 vols. (Leiden: 1663), vol. III 357–672.
- "Ichthyologiste", in *Encyclopedie, ou dictionnaire raisonné des sciences, des arts et des métiers. Par une société de gens de lettres. Mis en ordre et publié par Mr. ****, (Neuchâtel: 1765) vol. VIII 485–486.
- CYPRIANUS JOHANNES, *Wolfgangi Franzii Animalium, cum commentariis et supplementis observationum ex recentiori historia naturali, similitudinum, emblematum, hieroglyphicorum, ad usum oratoriae tum civilis tum ecclesiasticae*, 2 vols. (Frankfurt – Leipzig: 1712).
- FAIDUTTI B., *Images et connaissance de la licorne (Fin du Moyen-Age–XIX^{me} siècle)*; diss. Paris XII, Paris: 1996.
- FRANZIUS WOLFGANGUS, *Augustanae confessionis articuli fidei XXI et articuli abusuum VII* (Wittenberg: 1611).
- , *Historia animalium sacra* (Wittenberg: 1613 [1612]; 1616; Amsterdam: 1654 and 1665).
- HARIG G. – KOLLESCH J., "Naturforschung und Naturphilosophie in der Antike", in Jahn I. (ed.), *Geschichte der Biologie* (Hamburg: 2004) 48–87.
- HARRISON P., "The Virtues of Animals in Seventeenth-Century Thought", *Journal of the History of Ideas* 59 (1998) 463–484.
- HENRY J., *The Scientific Revolution and the Origins of Modern Science* (Basingstoke: 1997).
- HOPPE B., "Botanik und Zoologie in der Zeit der Renaissance und des Humanismus", in Jahn I. (ed.), *Geschichte der Biologie* (Hamburg: 2004) 161–195.
- JAHN I. – LÖTHER R. – SEUGLAUB K. (eds.), *Geschichte der Biologie: Theorien, Methoden, Institutionen, Kurzbiographien* (Jena: 1982).
- JAHN I. (ed.), *Geschichte der Biologie: Theorien, Methoden, Institutionen, Kurzbiographien* (Hamburg: 2004).
- , "Naturphilosophie und Empirie in der Frühaufklärung (17. Jh.)", in Eadem (ed.), *Geschichte der Biologie* (Hamburg: 2004) 196–230.
- KIRCHMAYER GEORG CASPAR, "On the Basilisk"; "On the Unicorn"; "On the Phoenix"; "On the Behemoth"; "On the Dragon"; "On the Spider", in Goldsmid E. (ed.), *Un-Natural History, or Myths of Ancient Science; Being a Collection of Curious Tracts on the Basilisk, Unicorn, Phoenix, Behemoth or Leviathan, Dragon, Giant Spider, Tarantula, Chameleons, Satyrs, Homines Caudati, &c.* (electronic reprint, s.l.: 2000 [Edinburgh: 1886]) 5–87.
- MARTINI JACOB, "Programma, in funere perquam Reverendi atque Clarissimi Viri, Domini Wolfgangi Frantzii", in Henning Witte (ed.), *Memoriae theologorum nostri saeculi clarissimorum renovatae decas prima (-sexta)*, (Königsberg – Frankfurt a.M.: 1674–1675).
- PENNINGTON D.H., *Europe in the Seventeenth Century* (London – New York: 1993 [1970]).
- ROGGEN V., *Entertainment and learning: Intellectual play – word and picture. A study of Nils Thomasson's Latin rebus book Cestus sapphicus. With edition, translation and a corpus of sources* (Oslo: 2002; orig. Ph.D. thesis, Oslo: 2001).

- SCALIGER JULIUS CAESAR, *Exotericarum exercitationum liber XV de subtilitate ad Cardanum* (Frankfurt a.M.: 1607 [Paris: 1557]).
- SCHOOCKIUS ISAAC, “On Bears licking their Offspring into perfect Shape”, in Goldsmid E. (ed.), *Un-Natural History, or Myths of Ancient Science; Being a Collection of Curious Tracts on the Basilisk, Unicorn, Phoenix, Behemoth or Leviathan, Dragon, Giant Spider, Tarantula, Chameleons, Satyrs, Homines Caudati, &c.*, (Electronic reprint, s.l.: 2000 [Edinburgh: 1886]) 103–106.
- SLIFKIN N., “The Sweat-Louse, the Dirt-Mouse, and the Dong-Chong: A Study of Spontaneous Generation in Jewish Law” <<http://www.aishdas.org/toratemet/dongchong.html>>.
- THOMASSØN NILS, *Cestus sapphicus* (Oslo: 1661).
- WIENER P.P. (ed.), *Dictionary of the History of Ideas: Studies of Selected Pivotal Ideas*, 5 vols. (New York: 1973–1974).
- WHITE A.D., *A History of the Warfare of Science with Theology in Christendom*, 2 vols. (Gloucester, Massachusetts: 1978 [1896]).
- ZEDLER J.H., *Grosses vollständiges Universal-Lexicon*, 64 vols. (reprint, Graz: 1961–1964 [orig. Halle: 1732–1750]).

BETWEEN EMBLEMATICS AND THE 'ARGUMENT
FROM DESIGN'. THE REPRESENTATION OF INSECTS IN
THE DUTCH REPUBLIC

Eric Jorink

Introduction

'Everywhere and in the humblest of creatures the traces of divine wisdom and supreme skill are made known', Jan Swammerdam wrote to the Royal Society, after he had dissected a stag beetle in 1673. Amongst other things, Swammerdam had observed with astonishment the creature's genitalia, those of the male 'consisting of no more than a single, long, hollow, innumerable fine thread'.¹ Swammerdam (1637–1680) was the first in Europe to investigate the delicate anatomy of insects in a systematic way. He undertook this extremely difficult enterprise with the aid of a recently invented tool, the microscope. Insects had been a neglected subject of observation and contemplation since Antiquity. With a few exceptions, insects were considered vermin, not worthy of any scientific or artistic attention, but for various reasons Jan Swammerdam considered it his vocation to put these 'less esteemed of God's creatures' on the intellectual agenda.

Swammerdam, who was both a talented observer and draftsman, was very much aware of the pioneering nature of his research. By ignoring insects, or not studying them carefully, men refused to honor God in the most wonderful of his creatures, Swammerdam maintained. In his view, inaccuracy in scientific research was equal to blasphemy, and he never missed an opportunity to pour scorn on his predecessors, ranging from Aristotle to Johannes Goedaert. In fact, there were only a few earlier students of insects who could count on his respect. Referring to one of the earlier observers of the stag beetle, Swammerdam wrote: 'Nothing is more striking in the stag beetle, than the creature's snout or tongue

¹ Henri Oldenburg, *The Correspondence of Henry Oldenburg*, ed. A.R. Hall and M.B. Hall, 10 vols. (London: 1965–1973) IX 413.

[...] This tongue is nicely represented in the pictures of Hoefnagel, which are the best and most widely known until now'.²

Here, Swammerdam referred to a work published in 1592, *Archetypa studiaque patris Georgii Hoefnagelii*, a collection of 48 engravings by Joris Hoefnagel, showing *ad vivum* pictures of plants, insects and small animals. These impressive depictions of the 'little world' were intended not merely as representations *per se*, but also as a means to contemplate God's plan of creation.³ Hoefnagel (1542–1600) was by no means a humble artisan, but a classically educated scholar, who self-consciously called himself 'inventor hieroglyphicus et allegoricus'.⁴ In a manner reminiscent of contemporary emblem books, each of the pictures in the *Archetypa* carried a motto. 'Narrabo omnia mirabilia tua, Domine', 'I will tell of all your wonderful deeds, Lord' (Psalm 9.2) was, for example, the capture of a beautifully composed still-life with a may fly, longicorn beetle, spider and grass-leaved iris.

Marginal creatures

The religious significance Hoefnagel attributed to the world of insects was not exceptional to sixteenth-century standards. However, the way in which he represented these creatures certainly was. Both the wide range of species he observed, as the love for detail which characterizes his engravings are remarkable. Until far into the early modern era, conceptions of the world of insects were based on classical and biblical sources, and highly ambivalent.⁵ Aristotle spoke of *entoma*, 'those creatures which have insections on their bodies, whether on their underside only, or both on their underside and their backs'.⁶ Although the Greek

² Jan Swammerdam, *Bybel der natuure of historie der insecten. Biblia naturae, sive historia insectorum*, 2 vols. (Leiden: 1737–1738) 282.

³ Vignau-Wilberg Th., *Archetypa studiaque patris Georgii Hoefnagelii 1592. Natur, Dichtung und Wissenschaft in der Kunst um 1600* (Munich: 1994).

⁴ Wilberg Vignau-Schuurman Th., *Die emblematischen Elemente im Werke Joris Hoefnagels*, 2 vols. (Leiden: 1969); Kaufmann T.D., *The Mastery of Nature. Aspects of Art, Science and Humanism in the Renaissance* (Princeton: 1993).

⁵ Bodenheimer E.S., *Materialien zur Geschichte der Entomologie bis Linné*, 2 vols. (Berlin: 1928).

⁶ Aristotle, *Historia animalium* (here quoted after the translation by A.L. Peck, Cambridge Mass.: 1965) 487 a 32–33; 523 b 13.

appears to have studied some species quite attentively, he did not make a sharp distinction between the respective stages of development (egg, larva, chrysalis). Important in this respect is the fact that Aristotle assumed that most insects originate from spontaneous generation, that is to say, that they grew out of putrefying plants or flesh. This idea was to become extremely influential. In the centuries to come, insects were ranked lowest in the 'great chain of being'.⁷ Notwithstanding his conviction that most insects lack the complicated anatomy of the higher creatures, Aristotle wrote that every animal, irrespective of its size, was worth studying. This was an idea Pliny the Elder further elaborated upon. The whole of book XI of his monumental *Historia naturalis* was devoted to *insecta*, 'Creatures of immeasurably minute structure – in fact some authorities have stated that they do not breathe and also that they are actually devoid of blood'.⁸ Pliny too assumed that most species originated from spontaneous generation, but was lyrical about their visible external anatomy. 'But we marvel at the elephant's shoulders carrying castles, and bull's necks and the fierce tossings of their heads, at the rapacity of tigers and the manes of lions, whereas really Nature is to be found in her entirety nowhere more than in her smallest creations'.⁹ 'Natura nusquam magis quam in minimis tota sit' was to become a *topos* in the study of insects. Their minute structure seemed to imply the existence of a higher being. Moreover, some species taught moral lessons to mankind: the industry of ants, the destructive gluttony of grasshoppers and, most of all, the class-based society of the bees which, it was assumed, stood under the rule of a king.

With the advance of Christianity, this moral and symbolic significance of insects was to become dominant. The book of *Exodus* told how Jahwe punished the Egyptians with gnats and locusts. Other biblical passages described how God not only used insects as instruments of divine retribution, but as means to contemplation as well. 'Go to the ant, thou sluggard' the wise king Solomon said,

⁷ Lovejoy A., *The Great Chain of Being. A Study of the History of an Idea* (Cambridge Mass.: 1936) 236–240.

⁸ Pliny, *Naturalis historia* (here quoted after the edition by H. Rackham, Cambridge Mass.: 1940) XI, 1.

⁹ *Ibid.*

Consider her ways, and be wise:
 Which having no guide, overseer, or ruler,
 Provideth her meat in the summer, [and] gathered her food in the
 harvest.
 How long wilt thou sleep, O sluggard?
 When wilt thou arise out of thy sleep?¹⁰

The symbolic, allegoric and typological potential of lines like these was enormous, and was further elaborated upon by, for example, the *Physiologus*, the collection of religious descriptions of animals dating from the third century AD.

Sixteenth-century ideas on insects (and on nature in general) were firmly based on the legacy of classical and biblical antiquity. Although both the Bible and the classics seemed to imply that God manifested himself in the lowest of his creatures, only very few species were observed, depicted and contemplated upon: the bee, the ant, the grasshopper and, of course, the butterfly, whose mysterious metamorphosis was seen as a symbol of the Resurrection. On paintings, engravings, in emblem books and in the massive natural histories of the sixteenth century, insects were wrapped up in an amazing world of textual references and hidden meanings. Both in, for example, Joachim Camerarius II's *Symbola et emblemata* and Ulysse Aldrovandi's monumental *Historia Naturalis*, insects were represented as a means to learn moral and religious virtues. The way in which the insects were depicted was not considered of major importance, nor were the descriptions of their external anatomy, behavior and life cycle. Instead, sections on each creature consist, in typical humanist style, of long enumerations of the etymology of each creature's name, the biblical and classical sources in which it is mentioned, fables, tales and proverbs on the creature, its symbolic value and moral significance, representations of it on paintings, medals and so on.¹¹

¹⁰ *Proverbs* 6:6–9 (King James Version).

¹¹ Harms W., "Bedeutung als Teil der Sache in zoologischen Standardwerken der Frühen Neuzeit (Konrad Gesner, Ulysse Aldrovandi)" in: Boockman H. (ed.), *Lebenslehre und Weltentwürfe im Übergang vom Mittelalter zur Neuzeit* (Göttingen: 1989) 531–553; Ashworth W., "Natural History and the Emblematic Worldview", in Lindberg D.C. – Westman R. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1993) 303–323.

Early modern Dutch conceptions of insects

The manner in which Dutch authors and artists represented insects at the beginning of the seventeenth century was much in the spirit of the learned Joris Hoefnagel. This was surely no coincidence. Hoefnagel was the uncle of the highly influential diplomat and poet Constantijn Huygens (1596–1687), who during his long life stimulated both artists and scientists. When Hoefnagel died in 1600, a part of his artistic heritage was bequeathed to the Huygens family, where it was seen by another artist, Jacques de Gheyn II. Bergström has convincingly argued that Hoefnagel stood at the basis of the typical Dutch genre of still-life paintings with flowers, shells and insects.¹² The *Archetypa* series were widely known in the young Republic, and offered excellent models for *imitatio* and *aemulatio*.

However, Dutch artists were only interested in the small corpus of symbolically laden species of insects. Not only on still-life paintings, but also in other works of art, only a few sorts were represented. For example, in a wordy poem, the minister and naturalist Petrus Hondius (1578–1621) described the flora and fauna of his country estate 'Moufeschans' (1621). It is interesting to note that, although the place must have been crawling with vermin, the only insect Hondius thought worth lauding was the intelligent and ingenious bee.¹³ In a similar poem, Jacob Cats (1577–1660), by far the most popular Dutch poet of the seventeenth century, observed to his annoyance the insects which 'as a kind of evil worms, besiege the trees in summertime'.¹⁴ Only one species deserved his praise: the bee, of course. 'What do I learn here, What do I learn from this diligent creature: We are sluggards, in comparison to this industrious animal!'¹⁵ In his emblem book *Silenus Alcibiadis* (1618), Cats also presented some other insects. In Emblem XL, 'Non intrandum, aut penetrandum', a spider is depicted, in whose web all kinds of insects are caught. In the accompanying text, Cats

¹² Bergström I., *Dutch Still-Life Painting in the Seventeenth Century* (London: 1956); Idem, "On Georg Hoefnagel's Manner of Working with Notes on the Influence of the Archetypa series of 1592" in Cavalli-Björkman G. (ed.), *Netherlandish Mannerism* (Stockholm: 1985) 177–188.

¹³ Petrus Hondius, *Dapes inemptae, of de Moufe-schans, dat is de soeticheydt des buytenlevens, vergeselschap met de boucken* (Leiden: 1621).

¹⁴ Jacob Cats, *Alle de Wercken* 2 vols. (Amsterdam and The Hague: 1726) II, 367.

¹⁵ *Ibid.*

refers to the Bible, the classical writers and the fathers of the Church, explaining the virtues of moderation, soberness, prudence and chastity. In the same manner, a butterfly emerging from its cocoon is depicted in Emblem LII, 'Amor elegantiae pater'. Here, Cats meditates on purity, love and the hope of resurrection.¹⁶

To be sure, it was not only painters and poets who were caught in the web of humanist preferences for certain species. In 1597, Dirck Outgersz Cluyt (1546–1598), an apothecary who was appointed keeper of the newly founded *hortus botanicus* of Leiden university, published a solid monograph on the bee.¹⁷ It was actually one of the first books ever written in Europe devoted to one single insect. In the classical form of a colloquy, Cluyt lectured his interlocutor on the origin, nature and use of the bee. Cluyt repeatedly stated that he not only wrote down 'what I read in the Classics or heard from other people, but, most of all, what I learned from my own experience'. Indeed, Cluyt made some original remarks on the bee. Amongst other things, he refuted the idea that bees had their origin in spontaneous generation. This conviction, however, was based more on *a priori* reasoning than critical observation. Cluyt could simply not believe that such a noble creature had its origin in putrefying meat, like dung flies or other kinds of vermin had. Many other chapters of his book testify to the power of tradition as well.

In conformity with humanist traditions, Cluyt started his colloquy with a lesson in etymology. The bee, *apis*, derived its name from the fact that it was born without feet, *a-pes*. The social order within the beehive was a moral example for mankind, and the rule of the wise king-bee was so remarkable 'that it appears to be supernatural'. Of course, Cluyt mentioned the biblical passages which spoke of bees, and he took great pains to identify the 'wild honey' which St John the Baptist ate in the wilderness (Matthew 3:4; Mark 1:6). He concluded his book with a reference to Psalm 104: 'O LORD my God, thou art very great; though art clothed with honour and majesty [...] The LORD shall rejoice in his works'.

¹⁶ Jacob Cats, *Silenus Alcibiadis dat is, Sinne- en minnebeelden*, ed. H. Luijten, 2 vols. (The Hague: 1996) II, 342–249; 757–772.

¹⁷ Dirck Outgersz. Cluyt, *Van de byen, hare wonderlicke oorspronc, natuer, eygeschap, crachtige, ongehoorde ende seldsame werken: Waerin gemerct werden hare wonderlicke Politien en ordentelicke Regeringe, die sy met haren Coning ende onder melcandern onderhouden. Vervat in drie Boecken: Seer genuechlich om te lesen* (Leiden: 1597).

Another interesting monograph on a symbolic insect was published by Cluyt's son, Augerius Clutius (1577–1636), in 1634.¹⁸ Trained as a physician, it was Clutius' intention to write a small booklet on the alleged therapeutic effects of the ephemeron of may fly. The complicated life cycle of this insect had fascinated authors since Antiquity. As we know now, may flies are aquatic in their preparatory stages. The eggs are dropped into the water by the female in large masses and sink to the bottom of the river or lake. There after a considerable time – up to three years – the young larvae hatch. When the insect finally has reached its full growth, it emerges from the water. This usually occurs during a few days in June. Reaching the surface, the thorax splits and the winged form appears, and the creature flies, usually in huge swarms. The insects live from a few hours to a couple of days, they mate and die, after which the life cycle starts anew. Both Cicero and Pliny had already meditated on the short life of the may fly, and the creature would become one of the favorites of humanist scholars and artists such as Hoefnagel.¹⁹ Clutius elaborated further on this theme. Like his father, he claimed to have based his book on his own observations. However, this treatise was firmly rooted in the humanist tradition as well. Clutius started with the creature's name, identifying Aristotle's *ephemeron* with the animal described by Pliny, and in Holland known as 'haft' or 'oever-aas'. Then, he continued with the relevant proverbs. After an untimely death, the Romans used to say: 'ephemeri vita'. When a place is densely crowded, the Dutch say: 'Het isser soo dicht als haft' – it is like a swarm of may-flies. Clutius does not seem to have studied the creature *in vivo*. Instead, he stressed the moral lesson taught since Antiquity: life is miserable and short, and all creatures are condemned to the same fate (*fatum*): Death.

The persistence of this highly symbolic view on insects could perhaps best be illustrated by the way a revolutionary new instrument was employed in the first decades after its invention.²⁰ Around 1620,

¹⁸ Augerius Clutius, *Opuscula duo singularia. I. De nucce medica. II. De hemerobio sive ephemero insecto et maiali verme* (Amsterdam: 1634). See also Francissen F.P.M. – Mol A.W.M., *Augerius Clutius and his 'De hemerobio'. An Early Work on Ephemeroptera* (Marburg: 1984).

¹⁹ Cicero, *Tusculanae disputationes* I 39: 'Confer nostram longissimam aetatem cum aeternitate: in eadem propemodum brevitatem, qua illae bestiolae reperiemur'; Pliny, *Naturalis historia* XI 42. Cf. Hoefnagel, *Archetypa* Pars II, 10.

²⁰ Jorink E., "'These wonderful glasses'. Dutch humanists and the microscope", in Grob B. and Hooijmaijers H. (eds.), *Who needs scientific instruments? Conference on Scientific Instruments and their Users, 20–22 October 2005* (Leiden: 2006) 115–124.

the Dutch inventor Cornelis Drebbel (1572–1633) had constructed the first compound microscope, consisting of two lenses in a tube. He demonstrated his device to the young Constantijn Huygens, who was lyrical about this instrument: ‘It is really as if one stands before a new theatre of nature, as if one is on a different earth’.²¹ It is in this ‘New World’ of the smallest possible things that we encounter the dedication of the divine Architect, Huygens cheered:

Nothing can compel us to honor more fully the infinite wisdom and power of God the creator unless, satiated with the wonders of nature that up till the present day have been obvious to everyone (for usually our astonishment cools as we become familiar with Nature through frequent contact) we are led into this second treasure-house of nature, and in the tiniest and most disdained of creatures meet with the same careful labor of the Great Architect, and everywhere we will come upon the same ineffable Majesty.²²

Huygens quickly realized the instrument’s potential and tried to persuade his friend Jacques de Gheyn II (1565–1629) to produce a set of microscopic drawings to give a new impetus to the somewhat faded interest in the wonders of God’s Creation. But, alas, De Gheyn passed away before these plans could be realized. One wonders which kinds of insects the artist would have depicted if he had lived longer. Presumably it would have been the traditional bees, ants and butterflies. In any case, these were the creatures his contemporaries first came to mind when they employed the expensive and hard to handle microscope.

Recently, historians of science have spoken in somewhat derogatory terms of the way in which humanists like Huygens used this new instrument, considering it more like *Spielerei* than a truly scientific enterprise.²³ However, seen from contemporary concepts of *scientia* it was obvious to study nature with the Bible and the classics in one hand, and a microscope in the other. Nature was, after all, not an unknown territory waiting to be explored, penetrated and mapped, but God’s second revelation.²⁴ As the articles of faith of the Dutch Reformed

²¹ Constantijn Huygens, *Mijn jeugd*, ed. C.L. Heesakkers (Amsterdam: 1987) 132.

²² *Ibidem*.

²³ Fournier M., *The Fabric of Life. Microscopy in the Seventeenth Century* (Baltimore: 1996) 30; Ruestow E., *The Microscope in the Dutch Republic. The Shaping of Discovery* (Cambridge: 1996) 5; 39.

²⁴ Jorink E., *Het Boeck der Natuere. Nederlandse geleerden en de wonderen van Gods Schepping, 1575–1715* (Leiden: 2006); an English translation, *Reading the Book of Nature in the Dutch Golden Age* will appear in the series *Brill’s Studies in Intellectual History*.

Church explicitly stated: we know God in two ways. Firstly, through Creation, 'which is before our eyes as a most elegant book, wherein all creatures, great and small, are as characters'. And secondly, God can be known through Scripture. Seen from this perspective, it was quite natural to observe only the insects mentioned in (or associated with) the Bible. The aim of observation was to contemplate God, not to penetrate into Nature's secrets. And in studying the smallest letters of the book of nature, the microscope proved an excellent tool. In the first decades after the invention of the microscope, the instrument was extensively used by humanist scholars, as a private means to meditate on the wonders of the Creator. No 'scientific' treatises were published on insects, nor (as far as we know) were drawings made.

Instead, Huygens recommended the study of the limbs of ants, in order to marvel at Gods creation.²⁵ His friend Jacob Westerbaen (1599–1670) observed lice, butterflies and bees, and exclaimed that God reveals Himself more clearly in a gnat than an elephant – explicitly referring to Pliny.²⁶ Another classically trained *virtuoso*, the Dordrecht minister Andreas Colvius (1594–1672), was fascinated by the microscope as well. It was Colvius who brought the young Christiaan Huygens in contact with a local lense-grinder called Calthoff, and was rewarded for his good offices with a microscope manufactured by Huygens himself – an instrument of excellent quality, no doubt. 'Is it not true what Pliny says', Colvius rhetorically wrote to Christiaan Huygens, 'Natura nusquam magis quam in minimis tota sit?'.²⁷ Like many of his contemporaries, Colvius seems to have been fascinated mostly by symbol-laden insects. He studied and collected the may-fly, which was endemic in the rivers around Dordrecht. In 1669, Jan Swammerdam would describe a species he had received 'from the honorable D. Colvius'.²⁸

²⁵ Constantijn Huygens, *De gedichten van Constantijn Huygens*, ed. J.A. Worp, 9 vols. (Arnhem: s.d.) III 80–81.

²⁶ Jacob Westerbaen, *Arctoa Tempe. Ockenburgh. Woonstede van den Heere van Brandweyck, in de Clingen buyten Loosduinen* (The Hague: 1654) 140–145.

²⁷ Christiaan Huygens, *Oewres complètes de Christiaan Huygens* 22 vols. (The Hague: 1888–1950) I 322.

²⁸ Jan Swammerdam, *Bybel der natuure* 219.

Changing attitudes: Goedaert

In the course of the seventeenth century, observers of insects in the Dutch Republic broadened their scope. From the 1640's on, other insects than the well known corpus were studied and even depicted, including wasps, dung flies and all kinds of beetles. It is important to note that this process was not the outcome of the increasing use of the microscope or any other form of 'scientific progress'. On the contrary, it seems that this was the result of an increasing stress on what since early Christianity had been the major motivation for the study of the bee, ant and grasshopper, namely the conviction that the Maker revealed himself in *all* of His works. Moreover, seventeenth-century conceptions were strongly influenced by the classical lines by Pliny: 'Natura nusquam magis quam in minimis tota sit'.

The first to embark on a systematic study of the generation of insects, not only in the Netherlands but in Europe as a whole, was Johannes Goedaert (1617–1668). This now largely forgotten figure earned his living as a painter of still-lives in the spirit and style of Hoefnagel, depicting bouquets of flowers adorned with butterflies and caterpillars. Contrary to Hoefnagel, Goedaert was an artisan in the first place. Although he lacked a classical education, he was deeply religious and well-versed in the Bible. According to his own testimony, he started to study insects around 1635, driven by the conviction

that there is no creature so small, or by the attentive observation thereof one can find immediate cause and ample reasons to glorify God, and wonder at His marvelous wisdom and providence. The truth of this I have discovered by the observation of worms, caterpillars, maggots and other crawling animals [...] Which is confirmed by the divine psalmist who has said that the benevolence of God is manifest in all of His works, and that He has created them with wisdom.²⁹

The pious Goedaert brought the lines of *Genesis* 1–7 and *Psalms* 104 to its logical conclusion: if God was the creator of everything, why would He not care for the insects? And thus Goedaert started to collect,

²⁹ Johannes Goedaert, *Metamorphosis naturalis, ofte historische beschrijvinge van den oirspronk, aerdt, eygenschapen ende vreemde veranderingen der wormen, rupsen, maeden, vliegen, wijens, byen, motten en diergelijke dierkens meer; niet uit eenige boeken, maar alleenlyck door eygen ervartheit wytgevonden, beschreven ende na de konst afgeteykent* 3 vols. (Middelburg: s.d. [1660–1669]) I, "Dedicatie".

observe and draw all the insects he could find around his native town Middelburg. He scrutinized his own garden, walked through woods, marshes and dunes, and even visited graveyards at night, armed with a torch, in order to catch insects wherever he could. Then, he put them in glass jars, fed them with whatever they seemed to like, and closely observed their behavior and transformation from larvae or pupae to insect. According to their nature, he gave them nicknames like 'Runny nose' or 'Ugly sluggard'. This somewhat anthropocentric approach clearly becomes manifest in the pictures Goedaert drew of the respective stages of each insect. Some of the maggots have unmistakable human features. It is somewhat surprising that Goedaert seems to have employed the microscope only occasionally.

Nevertheless, while Goedaert broadened the scope of insect observation on an empirical level, he was not able to approach these creatures from a new theoretical framework. Like all of his contemporaries, Goedaert was convinced that insects emerge from spontaneous generation or metamorphosis. To him, the emergence of each one of them was a kind of divine miracle. For example, he described with astonishment how he once observed how two identical caterpillars died. From the one corpse a swarm of dirty 'flies' emerged, while the other gave birth to a beautiful butterfly! It must have been a wondrous sight indeed, although we tend to suspect the activities of a hymenopterous parasite instead of the direct intervention of God. To Goedaert, the world of insects was the world of deeply religious meanings. Following Christian tradition, he considered the metamorphosis from caterpillar into butterfly a symbol, even a proof, of the Resurrection:

As it is miraculous to our eyes, but at the same time clearly evident, that from dead caterpillars emerge living animals; so it is equally true and miraculous, that our dead and rotten corpses will rise from the grave.³⁰

The fact that insects were attracted to burning candles at night was considered a divine warning against *curiositas*. Goedaert quoted at length 1 *Timothy* 6: 15–16:

Which in his times shall shew, [who is] the blessed and only Potentate, the King of kings, and Lord of lords; Who only hath immortality, dwelling in the light which no man can approach unto; whom no man hath seen, nor can see: to whom [be] honour and power everlasting.

³⁰ Jan Goedaert, *Metamorphosis* II 140.

And thus Goedaert concluded that it was good to rejoice at the marvels of Gods creation, but wrong to try to penetrate them – which might explain why he refrained from the use of the microscope.

It took some decades before Goedaerts works were published. Between 1660 and 1669, three parts of his *Metamorphosis naturalis* appeared, both in Dutch and Latin. Although by no means revolutionary in itself, the works caused some excitement amongst European scientists and *virtuosi*, since they were the first in which native insects were described and depicted in a systematic way. The series went through many reprints, and was translated into French and English. A new Latin edition was published by Martin Lister, Fellow of the Royal Society, who grudgingly remarked that Goedaert's illustrations of insects were quite satisfying, but that the artist 'seemes rather to have diverted with them, than to have given himselfe the trouble of well understanding them'.³¹

Indeed, even before the last part of the book appeared posthumously in 1669, the intent of the work was attacked from several angles. First of all, there was the publication of Robert Hooke's magnificent *Micrographia* in 1664. Although the book did not contain many descriptions of insects, it was considered a landmark in the history of the visual representation of these creatures. After perfecting the compound microscope, Hooke was able to give stunning engravings of a gnat, a louse and even the facet-eyes of a bee. 'The book that popularized the microscope', as Wilson recently labelled it.³² In Italy, Francesco Redi used this optical instrument in order to study the procreation of insects, in 1668 publishing his *Esperienze intorno alla generatione degl'insetti* (1668) in which he questioned the idea of spontaneous generation. A year later, his fellow-countryman Marcello Malpighi was able to dissect a silkworm. Using the microscope, Malpighi observed, described and depicted the internal parts of this creature. Applauded (and sponsored) by the Royal Society, the results were published in the autumn of 1669.³³ Notwithstanding Malpighi's reputation as being one of the pioneers

³¹ Jan Goedaert, *Of insects. Done into English, and Methodized, with the Addition of Notes* (York: 1682).

³² Wilson C., *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: 1995) 75; 86. See also Harwood J.T., "Rhetoric and graphic in *Micrographia*" in Hunter M. – Schaffer S. (eds.), *Robert Hooke: New Studies* (Woodbridge: 1989) 119–147.

³³ Cobb M., "Malpighi, Swammerdam and the Colourful Silkworm: Replication and Visual Representation in Early Modern Science", *Annals of Science* 59 (2002) 111–147.

of microscopy, his amazing study on the intestines of the silkworm would remain his only published work on insects. While *De Bombyce* was in print, an ambitious Dutchman wrote the last lines of what would become the classical study on the generation of insects.

Swammerdam and new arguments for the existence of the 'Great Designer'

As had his predecessor Johannes Goedaert, Jan Swammerdam had an open eye for every kind of insect. But unlike Goedaert, he worked from a new theoretical framework. Moreover, he would bring the microscopic study of insect anatomy on a level which was not surpassed until the nineteenth century. Swammerdam would become the key figure in the whole process of transformation of the moral significance of insects and, more generally, of the increasing popularity of "the argument from design" in early modern intellectual culture. For Swammerdam, insects had completely lost their allegoric and symbolic value. Insects were, by their minute nature and delicate anatomy, the most convincing evidence of the existence of a godly masterplan, of an intelligent designer. 'Wonder', Daston and Park observed recently,

Was now displaced almost entirely to commonplace objects praised as marvels of divine handiwork. Late-seventeenth- and early-eighteenth-century entomology was particularly rich in such natural theological expressions of wonder at the ordinary. The Dutch naturalist Jan Swammerdam, for example, thought the humble ant deserved as much admiration as God's largest and gaudiest creations.³⁴

In the wake of Swammerdam's work, the study of insects became extremely popular. It is certainly no coincidence that in the last quarter of the seventeenth century Dutch collectors, scientists and artists were struck by a real insect-craze. Echoing both Pliny and Swammerdam, the Dutch author Bernard Nieuwentijt (1654–1718) rhetorically wrote in his exceptionally popular work on natural theology, *Het regt gebruik der wereldbeschouwingen* (1715) that 'the Maker shows himself no less adorable in the creation of a gnat, a fly, a flea or a cheese-mite than in the biggest elephant'.³⁵

³⁴ Daston L. – Park K., *Wonders and the Order of Nature, 1150–1750* (New York: 1998) 323.

³⁵ Bernard Nieuwentijt, *Het regt gebruik der wereldbeschouwingen, ter overtuiging van ongodisten en ongelovigen* (Amsterdam: 1715) 560; 563.

Much the victim of later, somewhat romantic historians, Swammerdam is usually portrayed as a rather isolated, somewhat erratic mystic, who after a short scientific career felt prey to an attack of religious frenzy from which he never recovered.³⁶ This, however, is contrary to the evidence now available.³⁷ Suffice it to say that, with only a short interruption in 1675, Swammerdam continued his research until his death in 1680, and that he was much more communicative than often assumed – as for example his letters to the Royal Society testify.

After his matriculation at the famous faculty of medicine of Leiden university in 1661, Swammerdam excelled in anatomical dissections of (mostly) dogs and frogs. Although a talented observer, he was by no means a mere empiricist. Swammerdam was strongly guided by philosophical and religious ideas, and much of his work must be viewed as an effort to prove certain axioms. One idea Swammerdam vehemently opposed was the concept of spontaneous generation. This would imply, Swammerdam wrote, that creation was contingent, and that certain parts of the universe were excluded from God's will. It would be ridiculous, not to say blasphemous, to think that man and the higher creatures were created by God, while insects were the result of the rotting of flesh or the decay of plants. Believing in spontaneous generation was equal to believing in blind chance or fate, and was thus a rejection of the power and glory of the almighty Architect. Gods creation, Swammerdam repeated time after time, was uniform and stable.

Swammerdam's ideas on the order of nature were much influenced by the natural philosophy of René Descartes, which was then in its heyday among Dutch intellectuals.³⁸ In his *Discours de la méthode* (1637) and subsequent works, Descartes had reduced all processes in nature to three underlying laws. Everything in the universe obeyed to these laws of nature, and nature itself was orderly, obeying to fixed laws and

³⁶ Two recent examples are Ruestow, *Microscope* 105–145; Wilson, *Invisible world* 186–190.

³⁷ Jorink E., “‘Outside God, there is Nothing’. Swammerdam, Spinoza, and the Janus-Face of the Early Dutch Enlightenment”, in Bunge W. van (ed.), *The Early Enlightenment in the Dutch Republic, 1650–1750. Selected papers of a conference held at the Herzog August Bibliothek, Wolfenbüttel 22–23 March 2001* (Leiden: 2003) 81–103.

³⁸ Much literature is available on this topic. Good introductions are: Bunge W. van, *From Stevin to Spinoza. An Essay on Philosophy in the Seventeenth-Century Dutch Republic* (Leiden: 2001); Verbeek Th., *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637–1650* (Carbondale: 1992).

open to rational explanation. Of equal importance with his physics was Descartes's epistemology. Only rational concepts would lead to true understanding. Descartes rejected all bookish knowledge, regardless of its status or standing, implicitly creating a sharp contrast between natural philosophy and the biblical account of creation. For Swammerdam this epistemology implied that not only the massive natural histories of the sixteenth century could be left unread, but Aristotle and Pliny as well. Ironically, it was Swammerdam who gave Pliny's *dictum* 'Natura nusquam magis quam in minimis tota sit' new relevance.

Swammerdam thought according to the lines sketched by Descartes. He was totally convinced that the generation of all creatures obeyed to the same laws. After studying the reproductive organs of men and women, he took a logical next step, and started to study the generation of other creatures, mostly insects. Soon he made a stunning discovery. In 1668, Swammerdam observed that the "king" bee was actually a queen, since he discovered egg masses in the creature's intestines! This discovery greatly stimulated his pioneering research on the anatomy and generation of insects in general, on which he would focus his research for the rest of his life. When the Florentine prince Cosimo de' Medici visited Swammerdam in June 1669, he was shown that in the entrails of a caterpillar, rudiments of limbs and wings of the future butterfly could be discerned. This was a revolutionary discovery, since it was commonly assumed that first the caterpillar would die, after which by a mystical process of metamorphosis, the butterfly would resurrect. Swammerdam's general theory on the generation of insects was revealed only some months later. In November 1669 he published his pioneering *Historia insectorum generalis, ofte, algemeene verhandeling van de bloedeloose dierkens* (translated into French in 1682, and into Latin in 1685).³⁹ Including some last-minute references to Malpighi's *De Bombyce*, Swammerdam self-confidently stated he had solved a mystery that had puzzled mankind since the days of Aristotle. He refuted three traditional assumptions concerning insects. Firstly, that they lack internal anatomy; secondly, that they originate from spontaneous generation; and thirdly, that they develop by metamorphosis. Swammerdam demonstrated

³⁹ Jan Swammerdam, *Historia generalis insectorum ofte Algemeene verhandeling van de bloedeloose dierkens* (Utrecht: 1669).

that all insects come from eggs, and that what was usually considered a sudden transformation in fact was a slow growth of limbs. In other words, there was no fundamental distinction between insects and the so-called higher animals: all belonged to the order of nature. *All* creatures had their origin *ex ovo*. Chance and contingency were excluded from Swammerdam's natural philosophy, as being incompatible with the power of God, the almighty Architect. Swammerdam even went so far as to call the theory of spontaneous generation 'the surest way to atheism'.

Much in train with the more radical Cartesians of the day, Swammerdam declared war on vulgar errors, symbolic thinking and superstitious beliefs. To Descartes himself, nature was a huge piece of mechanics, a giant item of clockwork. Physical phenomena were only fully explained when they were explained by the reciprocal physical contact bodies had upon each other. The implication was, of course, that nature was devoid of symbolic meaning. When Descartes explained, for example, the rainbow, he did so with the laws of mechanics, according to which particles of light collided with each other and were refracted. He wasted no words on any divine meaning, nor did he quote Genesis 9, the *locus classicus* in this context in which God promises Noah not to punish mankind with another Flood: 'I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth'.

Swammerdam vehemently attacked the symbolic interpretation of insects, and spent no words on biblical references or analogies concerning these creatures. In his militantly Cartesian *Historia*, Swammerdam used the work of the recently deceased Goedaert as a sitting target. Swammerdam called his books, which were full of biblical quotations and allegorical digressions, 'foolish', 'laughable' and 'ridiculous'. He overtly ridiculed the traditional metaphor of the bee-hive, since its leader turned out to be a queen and not a king. Describing his revolutionary discovery of the organs of the future butterfly in the intestines of a caterpillar, he remarked: 'So here we witness the digression of those who have tried to prove the Resurrection of the Dead from these obviously natural and comprehensible changes within the creature itself'.⁴⁰

Instead of using dubious analogies as a means to contemplation, Swammerdam pointed to the visible constitution of insects as a reference

⁴⁰ Jan Swammerdam, *Historia* 28.

to God, as an incontestable proof of His existence. Describing for example the ant, Swammerdam did not meditate on the creature's industry nor on the words of Proverbs 6, but on the animal's delicate anatomy. The glory of God was revealed by all of his creatures, be it elephants, lions, bees and ants, or gnats, cockroaches, lice or any other insect. There was no longer a fundamental difference between big and small, beautiful and ugly, or common and exotic, since all creatures belonged to the same order of Nature. But the ingenuity of the Creator showed itself most strikingly in the minute scale of the 'most disdained of creatures'. Wonder was now evoked by the marvelous design of insects, and not by their hidden qualities, deeper meaning and symbolic value. Swammerdam, himself a gifted draftsman, offered splendid illustrations of the various stages of the developing insects. Like in Hookes *Micrographia*, the creatures are depicted in incredible detail, without any material or symbolic context.

Swammerdam's *Historia* was essentially a programmatic book. Within an impressive theoretical framework, Swammerdam offered many remarkable observations, mostly of the external parts of insects and done with the naked eye. 'Part I', was the promising subtitle of the work. And, indeed, from 1670 until his death in 1680, Swammerdam worked on Part II – posthumously published as *Biblia Naturae – Bybel der nature* in 1737–1738. This massive work is essentially an expansion of the *Historia*, both in scope and in depth. Convinced that all insects were worth studying, Swammerdam collected and observed as many species as he could. Secondly, and most important, he now started to study the intestines of these creatures in a systematic way, using the microscope and highly refined dissecting techniques. Inspired (and perhaps challenged) by the splendor of Malpighi's *De Bombyce*, Swammerdam started to anatomize silkworms, may-flies, ants, stag-beetles, cheese-mites, bees and other insects. In every creature Swammerdam saw God's immense wisdom and omnipotence. Swammerdam's lyrical outburst on the anatomy of the louse – itself a work of incredible ingenuity – would become a *locus classicus* in apologetic literature: 'Herewith I offer you the Omnipotent Finger of God in the anatomy of a louse; wherein you will find miracle heaped on miracle and see the wisdom of God clearly manifested in a minute point'.⁴¹ Taking the

⁴¹ Jan Swammerdam, *Bybel der nature* 67.

Dutch conception of the Book of Nature as his point of departure, Swammerdam gave its interpretation a new twist. It was no longer biblical lines or preferences for certain creatures which pointed to God; it was each creature's delicate structure. Through his microscope, he observed things no man had seen before. Working on his treatise on the bee, Swammerdam wrote:

Look, so all-wonderful is GOD, in respect of these small animals, that I dare say, that in the insects GOD'S countless wonders are sealed up, which seals are revealed as one diligently turns over the leaves of the Book of Nature, the Bible of Natural Theology, in which GOD'S invisibility becomes visible; because treasuries of ineffable wonders then manifest themselves; and the hidden Creator becomes so manifest in these small Animals, that the experiences of the same, serve me as the biggest proofs to uphold without yielding his eternal Divinity and Providence against all his detractors.⁴²

Swammerdam's researches brought him so close to God that he sometimes remarked that he not only could see Him, but touch Him as well in the entrails of insects.

In the course of 1673, Swammerdam fell prey to a religious crisis. He had initially believed that his research was a tribute to the Creator; but now he feared he was worshipping an idol called *curiositas*. Swammerdam sought the spiritual comfort of the mystic prophetess Antoinette Bourignon (1616–1680) and joined her sect in Schleswig Holstein. Elsewhere, I have described this confusing part of Swammerdam's life.⁴³ Suffice it to say here that Swammerdam was back in Amsterdam in the spring of 1676. Contrary to what is often maintained, he resumed his microscopic research. 'I have more need of the bridle than the spur', he wrote to Henry Oldenburg, the secretary of the Royal Society. 'I was never at any time busier than in these days, and the chief of all architects has blessed my endeavors'.⁴⁴ He completed the manuscript of what later would be known as the *Biblia Naturae* only a few weeks before he died in February 1680. The work was nearly lost, but thanks to the good offices of the Leiden professor Herman Boerhaave at last published in 1737.

⁴² Ibid. 394.

⁴³ Jorink, "Outside God, there is nothing". See also Baar M. de, *'Ik moet spreken'. Het spiritueel leiderschap van Antoinette Bourignon (1616–1680)* (Zutphen: 2005) passim.

⁴⁴ Henri Oldenburg, *Correspondence* XIII 343–344.

Contrary to what is often maintained, Swammerdam was not an isolated and erratic mystic. Swammerdam made sure that his stunning discoveries, descriptions and illustrations became known in the scientific world, as for example his correspondence with Henry Oldenburg testifies. Colleagues and friends such as Gottfried Wilhelm Leibniz (1646–1716) and Nicolas Malebranche (1638–1715) knew his microscopic *work in progress* and used its results to substantiate their own natural or moral philosophy. Referring to Swammerdam's as yet unpublished study on the bees, father Malebranche wrote in his *Entretiens sur la métaphysique et religion* (1688); 'ces petits animaux sont l'ouvrage d'une sagesse infinie'.⁴⁵ The *Historia* was already widely known and applauded, running through several reprints, and being translated into French in 1682 and into Latin in 1685. John Ray (1627–1705), the influential author of amongst other things the apologetic *Wisdom of God manifested in the Works of creation* (1691) and a *Historia insectorum* (1705), wrote that Swammerdam's method 'seems to me the best of all'.⁴⁶ In other words, Swammerdam's influence was much greater than is usually assumed. His work was a herald of the natural theology of the eighteenth century.⁴⁷ God's grand design became visible in the whole of nature – in the celestial mechanics of the solar system, the variation of the seasons, the geometry of snowflakes and the anatomy of the human eye – but nowhere more strikingly than in the world of insects.

Epilogue

Around 1680, the study of insects had become incredibly popular in the Dutch Republic. A host of books were published on the subject. Antoni van Leeuwenhoek (1632–1723), who since 1673 published his microscopic observations in the *Transactions of the Royal Society*, carefully

⁴⁵ Nicolas Malebranche, *Oeuvres complètes*, 12 vols. (second edition, Paris: 1972–1984) XII 230.

⁴⁶ British Library, Ms Sloane 4062 f 210.

⁴⁷ Bots J., *Tussen Darwin en Descartes. Geloof en natuurwetenschap in de achttiende eeuw in Nederland* (Assen: 1972); Vermij R., *Secularisering en natuurwetenschap in de zeventiende en achttiende eeuw: Bernard Nieuwentijt* (Amsterdam: 1991); Stebbins S., *Maxima in minimis. Zum Empirie- und Autoritätsverständnis in der physikotheologischen Literatur der Frühaufklärung* (Frankfurt am Main: 1980).

described insects and, like Swammerdam, dismissed the theory of spontaneous generation. In 1688 the Cartesian Stephan Blankaart (1650–1704) followed this example in his *Schouw-burg*.⁴⁸ Referring to Swammerdam, Blankaart attacked insect-symbolism, gave matter-of-fact descriptions of various species, and gave advice on how to catch, collect, conserve and study them.

Within a very short time, insects found their way to the rich Dutch collections of natural curiosities.⁴⁹ Around 1660, these creatures had been virtually absent, with the notable exception of, for example, ‘a locust of the sort that St John the Baptist ate in the wilderness’, which the young John Ray observed in a Delft collection.⁵⁰ Within two decades, great quantities of all kinds of species were exhibited in the famous collections of, for example Nicolaas Witsen, Levinus Vincent and Albertus Seba. These cabinets included beautiful butterflies and all other kinds of rare and exotic sorts from the East- and West-Indies, arranged according to sort, and showing their successive stages of development. ‘Swammerdam states’, Vincent wrote in a descriptive catalogue of his collection, ‘that the smallest of creatures yield in nothing to the biggest’.⁵¹ Elsewhere in this volume, a laudatory poem stressed that even the most evil of atheists would be silenced in view of this magnificent collection of animals.

Collectors like Vincent often hired skilled artists to make drawings of their treasures. The creatures were no longer captured in emblematic mottos or *vanitas* still life paintings, but depicted *ad vivum*. If they were put in any context at all, it is that of the species to which they belong, or that of the plants they live on. The intention of these pictures and collections was clearly to show the structure and richness of God’s creation. The wealth of the Dutch collections of overseas insects even provoked the jealousy of English collectors, who were involved in the same program of natural theology. John Ray and Robert Hooke wrestled with the Dutch language in order to understand Swammerdam’s writings.

⁴⁸ Stephan Blankaart, *Schouw-Burg der Rupsen, Wormen, Maden en Vliegende dierkens daar uit voorkomende* (Amsterdam: 1688).

⁴⁹ Cf. Bergvelt E. – Kistemaker R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rareitewerzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992).

⁵⁰ John Ray, *Observations, topographical, moral & physiological made in a journey through parts of the Low-Countries, Germany, Italy and France* (London: 1673) 25.

⁵¹ Levinus Vincent, *Het tweede deel of vervolg van het Wondertooneel der Natuur* (Amsterdam: 1715) 11.

Sir Hans Sloane, president of the Royal Society, was deeply honored by the species his Dutch fellow-*virtuosi* sent him. Seba even presented him with two impressive folios, containing beautiful watercolors of insects from all over the world, writing 'As in my View in this undertaking has been to render my best Hommage to the Great Author of Nature, by displaying His curious and wonderfull Works'.⁵²

However, the changing attitude towards insects is perhaps best expressed by the fact that Dutch *virtuosi* now started to collect endemic species as well. The Delft burgomaster and physician Hendrik d'Acquet (1632–1709), for example, possessed not only insects from the Indies, but also many specimens from Holland. Mindful of Swammerdam's conviction that God manifested Himself even in the most ordinary Dutch louse, d'Acquet wrote in the description of his collection that he was the proud owner of a beetle he had found 'here in Delft', a butterfly 'from my garden', an unidentified insect 'I caught on the honeysuckle' and a waterlouse 'I found in my rain barrel'.⁵³

⁵² British Library, Ms. Sloane 4047 fol. 13r. See also Ms. Sloane 5273–5274 ('A book containing severall sorts of insects [...] from the collection of Mr. Albert Seba').

⁵³ Amsterdam, Koninklijk Instituut voor de Tropen, Ms. RG 84 (Henrik d'Acquet, 'Opus magnificentissimum et unicum [...] ad exemplaria naturalia summo studio ultra quinquaginta annos e universo terrarum orbe quaesita').

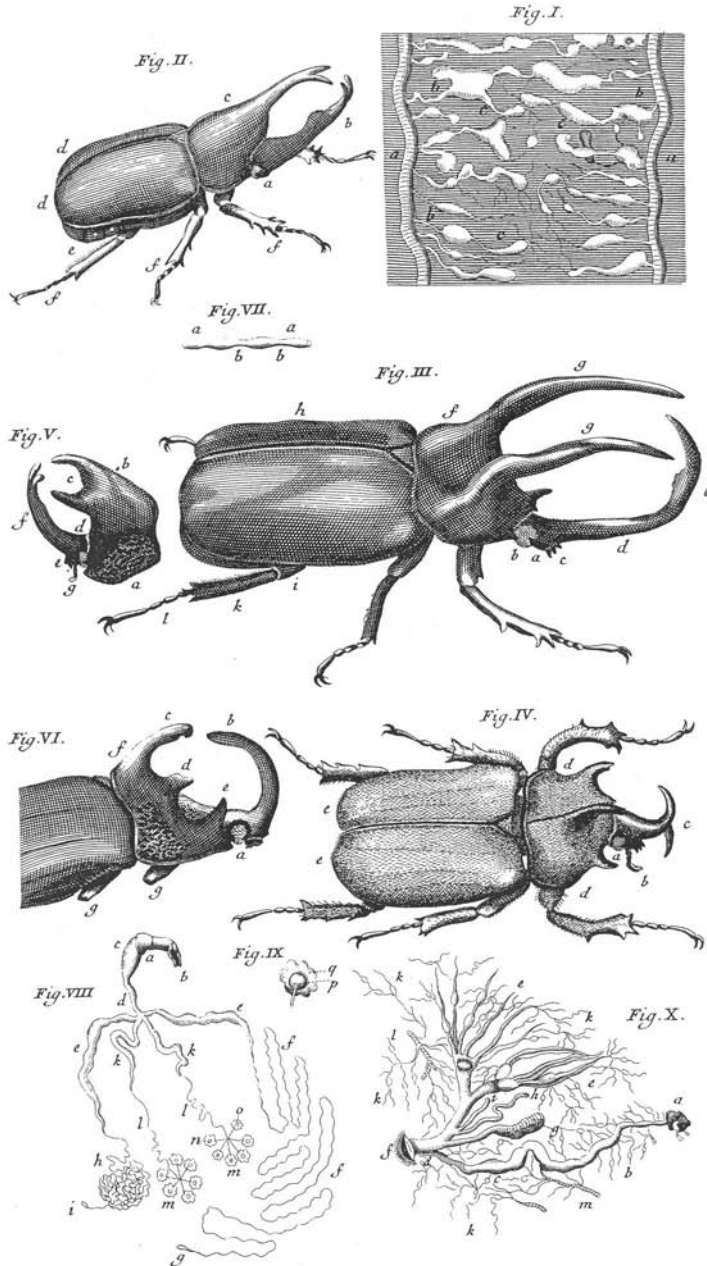


Fig. 1. Swammerdam's representation of various sorts of stag beetles. The details in Fig. VIII show the male genitals, Fig. X the female uterus. Engraving in Jan Swammerdam, *Bybel der natuure of historie der insecten. Biblia naturae, sive historia insectorum* (Leiden: 1737–1738) Tab. XXX.

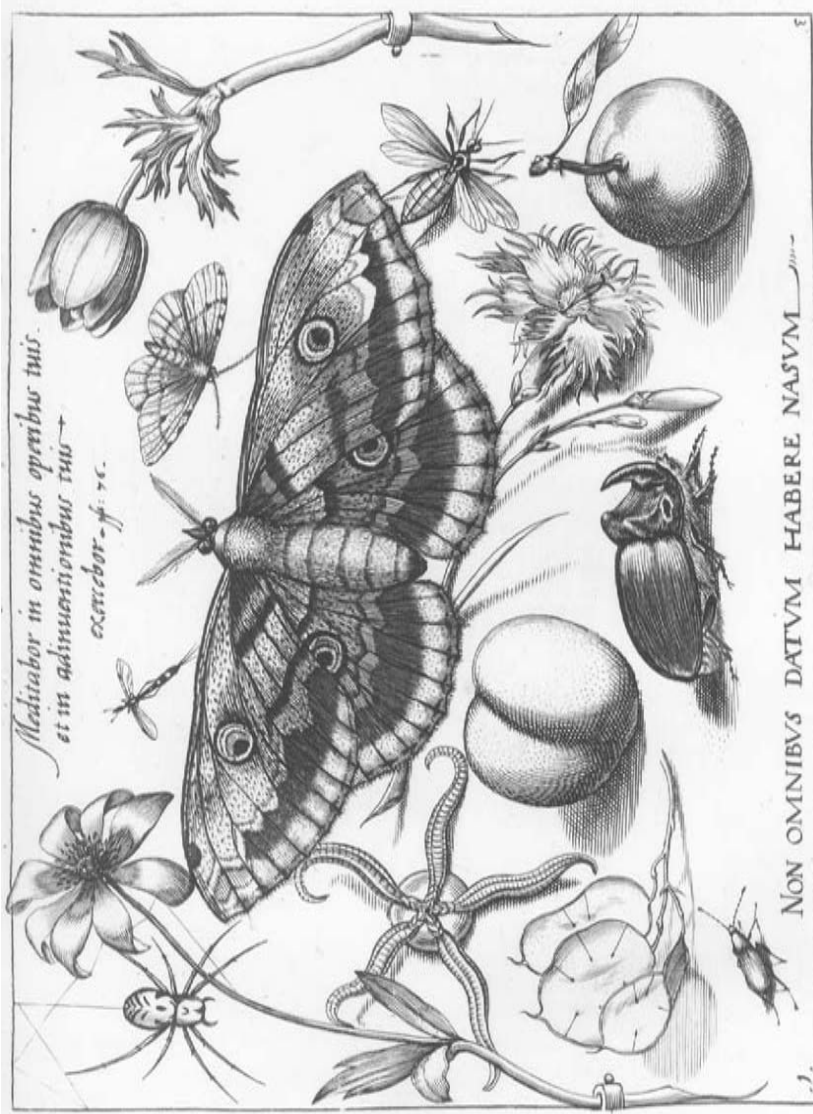


Fig. 2. The stag beetle amongst other creatures, as represented in Hoefnagel's *Archetypae*. The motto is derived from *Psalms* 77:14: 'I will meditate also of all thy work, and talk of thy doings'. From the *Archetypa studiosaque patris Georgii Hoefnagelii* (Frankfurt a.M.: 1592) pars I, 8.

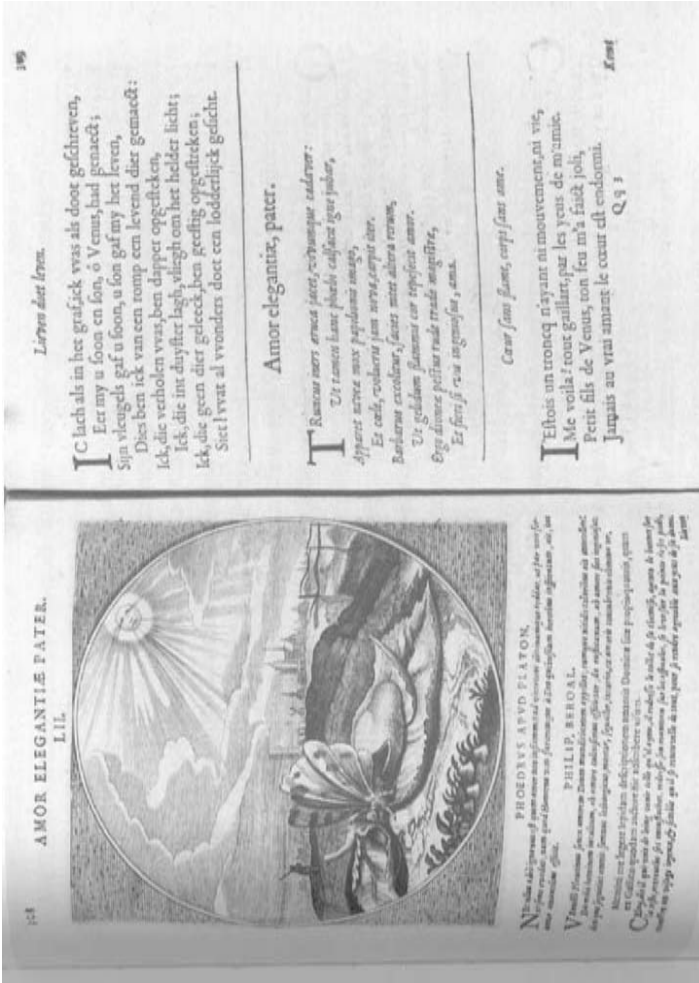


Fig. 3. A butterfly emerging from its cocoon. Emblem LII from Jacob Cats's *Silenus Alcibiadis sive Proteus* [...] (Middelburg: 1618). In the accompanying texts, Cats meditates on, amongst others, the Resurrection of the Dead.



Fig. 4 [COL. PL. I]. Johannes Goedaert, *A bouquet of roses in a glass vase*. Also depicted are various insects, amongst others a bee, a butterfly and a dragonfly. Oil on canvas, date unknown. Collection Zeeuws Museum Middelburg, inv. nr. M96-031.

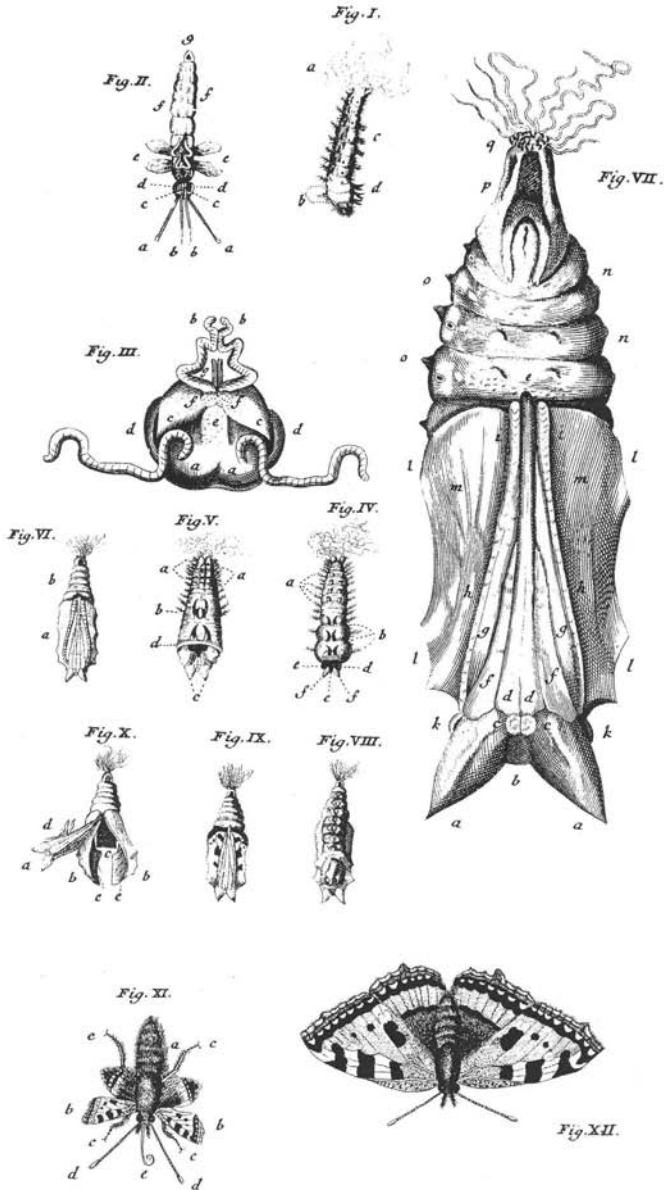


Fig. 5. One of Jan Swammerdam's most important discoveries was the fact that parts of the future butterfly were already discernable in the caterpillar. Swammerdam published his discovery in the *Historia insectorum generalis* (1669); this engraving is taken from Jan Swammerdam, *Bybel der natuure of historie der insecten. Biblia naturae, sive historia insectorum* (Leiden: 1737–1738) Tab. XXXV.

TAB. II

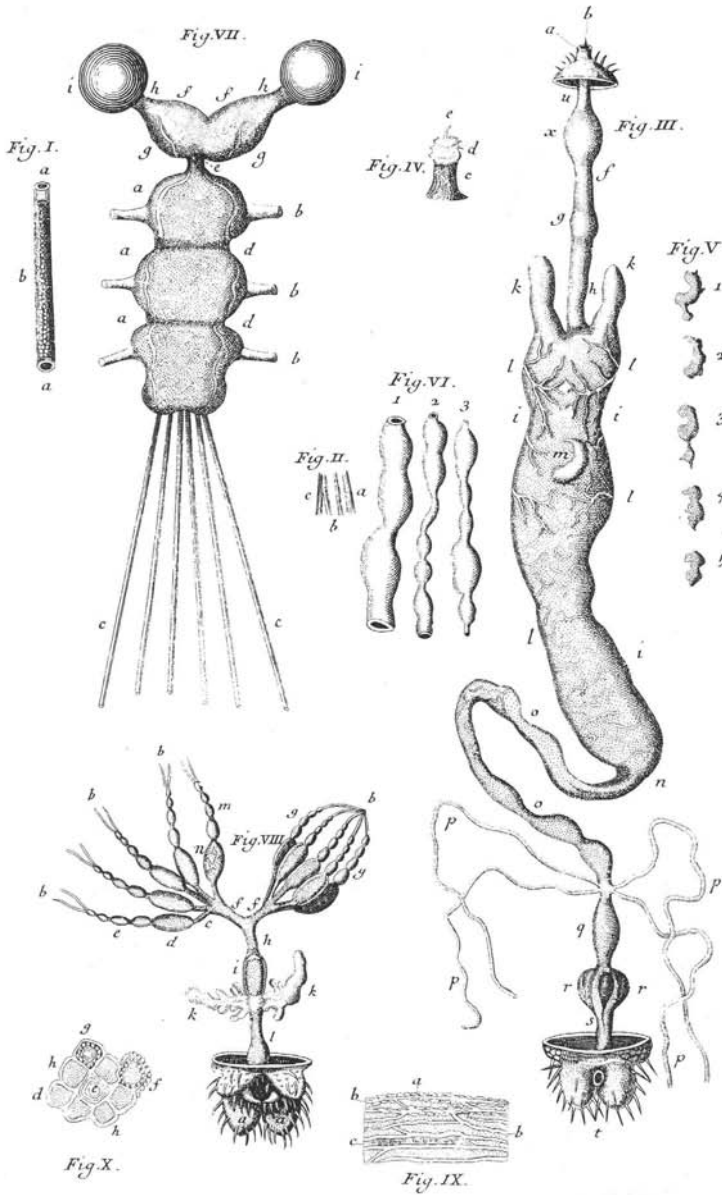


Fig. 6. In 1678, Swammerdam described the anatomy of the louse, which was published in the posthumous *Bybel der nature*. Fig III shows the gastrointestinal tract; Fig. VIII the female uterus. Jan Swammerdam, *Bybel der nature of historie der insecten. Biblia naturae, sive historia insectorum* (Leiden: 1737–1738) Tab II.

Selective Bibliography

- ARISTOTLE, *Historia animalium*, ed. Peck A.L. (Cambridge Mass.: 1965).
- ASHWORTH W., "Natural History and the Emblematic Worldview", in Lindberg D.C. – Westman R. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1993) 303–323.
- BAAR M. de, *'Ik moet spreken'. Het spiritueel leiderschap van Antoinette Bourignon (1616–1680)* (Zutphen: 2005).
- BERGSTRÖM I., *Dutch Still-Life Painting in the Seventeenth Century* (London: 1956).
- , "On Georg Hoefnagel's Manner of Working with Notes on the Influence of the Archetypa series of 1592", in Cavalli-Björkman G. (ed.), *Netherlandish Mannerism* (Stockholm: 1985) 177–188.
- BERGVELT E. – KISTEMAKER R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992).
- BLANKAART STEPHAN, *Schouw-Burg der Rupsen, Wormen, Maden en Vliegende dierkens daar uit voorkomende* (Amsterdam: 1688).
- BODENHEIMER F.S., *Materialien zur Geschichte der Entomologie bis Linné*, 2 vols. (Berlin: 1928).
- BOTS J., *Tussen Darwin en Descartes. Geloof en natuurwetenschap in de achttiende eeuw in Nederland* (Assen: 1972).
- BUNGE W. van, *From Stevin to Spinoza. An Essay on Philosophy in the Seventeenth-Century Dutch Republic* (Leiden: 2001).
- CATS JACOB, *Alle de Wercken*, 2 vols. (Amsterdam – The Hague: 1726).
- , *Silenus Alcibiadis dat is, Sinne- en minnebeelden*, ed. H. Luijten, 2 vols. (The Hague: 1996).
- CLUTIUS AUGERIUS, *Opuscula duo singularia. I. De nuce medica. II. De hemerobio sive ephemero insecto, et majali verme* (Amsterdam: 1634).
- CLUYT DIRCK OUTGERSZ, *Van de byen, hare wonderlicke oorspronc, natuer, eygenschap, crachtige, ongehoorde ende seldsame wercken: Waerin gemerct werden hare wonderlicke Politien en ordentelicke Regeringe, die sy met haren Coning ende onder melcandern onderhouden. Vervat in drie Boecken: Seer genuelich om te lesen* (Leiden: 1597).
- COBB M., "Malpighi, Swammerdam and the colourful silkworm: Replication and visual representation in early modern science", *Annals of Science* 59 (2002) 111–147.
- DASTON L. – PARK K., *Wonders and the Order of Nature, 1150–1750* (New York: 1998).
- FOURNIER M., *The Fabric of Life. Microscopy in the Seventeenth Century* (Baltimore: 1996).
- FRANCISSSEN F.P.M. – MOL A.W.M., *Augerius Clutius and his 'De hemerobio'. An Early Work on Ephemeroptera* (Marburg: 1984).
- GOEDAERT JOHANNES, *Metamorphosis naturalis, ofte historische beschrijvinge van den oirspronk, aerd, eygenschappen ende vreemde veranderingen der wormen, rupsen, maeden, vlieden, witjens, byen, motten en diergelyke dierkens meer; niet uit eenige boeken, maar alleenlyck door eygen ervartheit wytgezonden, beschreven ende na de konst afgeteykent* 3 vols. (Middelburg: s.d. [1660–1669]).
- , *Of insects. Done into English, and Methodized, with the Addition of Notes* (York: 1682).
- HARMS W., „Bedeutung als Teil der Sache in zoologischen Standardwerken der Frühen Neuzeit (Konrad Gesner, Ulysse Aldrovandi)“, in Boockmann H. (ed.), *Lebenslehre und Weltentwürfe im Übergang vom Mittelalter zur Neuzeit* (Göttingen: 1989) 531–553.
- HARWOOD J.T., "Rhetoric and graphic in *Micrographia*", in Hunter M. – Schaffer S. (eds.), *Robert Hooke: New Studies* (Woodbridge: 1989).
- HONDIUS PETRUS, *Dapes inemptae, of de Moufe-schans, dat is de soeticheydt des buytenlevens, verge-selschap met de boucken* (Leiden: 1621).
- JORINK É., "'Outside God, there is nothing'. Swammerdam, Spinoza, and the Janus-Face of the Early Dutch Enlightenment" in: Bunge W. van (ed.), *The Early Enlightenment in the Dutch Republic, 1650–1750. Selected papers of a conference held at the Herzog August Bibliothek, Wolfenbüttel 22–23 March 2001* (Leiden: 2003) 81–103.

- , “‘These wonderfull glasses’. Dutch humanists and the microscope”, in Grob B. – Hooijmakers H. (eds.), *Who needs scientific instruments? Conference on Scientific Instruments and their Users, 20–22 October 2005* (Leiden: 2006) 115–124.
- , *Het Boeck der Natuere. Nederlandse geleerden en de wonderen van Gods Schepping, 1575–1715* (Leiden: 2006).
- HUYGENS CHRISTIAAN, *Oeuvres complètes de Christiaan Huygens*, 22 vols. (The Hague: 1888–1950).
- HUYGENS CONSTANTIJN, *Mijn jeugd*, ed. C.L. Heesakkers (Amsterdam: 1987).
- , *De gedichten van Constantijn Huygens*, ed. J.A. Worp 9 vols. (Arnhem: s.d.).
- KAUFMANN T.D., *The Mastery of Nature. Aspects of Art, Science and Humanism in the Renaissance* (Princeton: 1993).
- LOVEJOY A., *The Great Chain of Being A Study of the History of an Idea* (Cambridge Mass.: 1936).
- MALEBRANCHE NICOLAS, *Oeuvres complètes*, 12 vols. (Second edition, Paris: 1972–1984).
- NIEUWENTIJT BERNARD, *Het regt gebruik der wereltbeschouwingen, ter overtuiging van ongodisten en ongelovigen* (Amsterdam: 1715).
- OLDENBURG HENRI, *The Correspondence of Henry Oldenburg*. ed. A.R. Hall and M.B. Hall, 10 vols. (London: 1965–1973).
- PLINY THE ELDER, *Naturalis historia*, ed. H. Rackham (Cambridge Mass.: 1940).
- RAY JOHN, *Observations, topographical, moral et physiological made in a journey through parts of the Low-Countries, Germany, Italy and France* (London: 1673).
- RUESTOW E., *The Microscope in the Dutch Republic. The Shaping of Discovery* (Cambridge: 1996).
- STEBBINS STEPHAN, *Maxima in minimis. Zum Empirie- und Autoritätsverständnis in der physiko-theologischen Literatur der Frühaufklärung* (Frankfurt a.M.: 1980).
- SWAMMERDAM JAN, *Historia generalis insectorum ofte Algemeene verhandeling van de bloedeeloose dienkens* (Utrecht: 1669).
- , *Bybel der natuure of historie der insecten. Biblia naturae, sive historia insectorum*, 2 vols. (Leiden: 1737–1738).
- VERBEEK Th., *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637–1650* (Carbondale: 1992).
- VERMIJ R., *Secularisering en natuurwetenschap in de zeventiende en achttiende eeuw: Bernard Nieuwentijt* (Amsterdam: 1991).
- VIGNAU-WILBERG Th., *Archetypa studiaque patris Georgii Hoefnagelii 1592. Natur, Dichtung und Wissenschaft in der Kunst um 1600* (Munich: 1994).
- VINCENT LEVINUS, *Het tweede deel of vervolg van het Wondertooneel der Natuur* (Amsterdam: 1715).
- WESTERBAEN JACOB, *Arctoa Tempe. Ockenburgh. Woonstede van den Heere van Brandwyck, in de Clingen buyten Loosduinen* (The Hague: 1654).
- WILBERG VIGNAU-SCHUURMAN Th., *Die emblematischen Elemente im Werke Joris Hoefnagels*, 2 vols. (Leiden: 1969).
- WILSON C., *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: 1995).

SHELL COLLECTING.
ON 17TH-CENTURY CONCHOLOGY, CURIOSITY
CABINETS AND STILL LIFE PAINTING

Karin Leonhard

Shell collecting was one of the favourite pastimes of the 17th century. These treasures from the sea united all of the opposites between art and nature which had become important in the Baroque period: their maritime provenance evoked the fact that all life had its origins in the sea – one reason why Aristotle used shells as an example of his theory of spontaneous generation. According to him, shells could be generated by the sun warming up the mud on the seabed – a *creatio ex nihilo* which brought dead material to life. We know that in the 17th century this theory was very much discussed but in the end proven to the contrary. Nevertheless, molluscs were still regarded as primitive creatures while their patterned and shaped shells were highly sought after by collectors and could fetch incredibly high prices. The baroque curiosity about molluscs was provoked by a series of contrasts: the soft, living creature versus its hard, robust shell; rough and weathered surfaces versus surfaces that were polished as smooth as glass; the perfect geometry of cones, spirals and curves versus their natural provenance – aesthetic qualities versus manifestly primitive ones.¹ However, for the coastal regions of England, France, Italy, Spain and the Dutch provinces, the sea was more than just the source of a powerful morphogenetic force of nature. The sea was also ruled by Poseidon, who patronized commerce, expeditions, sea wars, and conquests, and enabled the import of exotic herbs, spices, plants or animals as well as the colonization of foreign countries and archipelagos. Shells therefore became symbols of maritime and colonial power, and allegorical attributes of a national self-image [Fig. 1].

During the 16th and 17th centuries, these precious and exotic objects mainly served as diversions for members of the aristocracy, who were fascinated by their great diversity and began collecting shells in *curiosity*

¹ See Mauries P., *Shell Shock: Conchological curiosities* (London: 1994) 15.



Fig. 1 [COL. PL. II]. Still life painting with shells and birds (ca. 1640/50). Flemish, attributed to Jan Davidsz. De Heem, ca. 1640/50. Oil on canvas, 88.5 × 136 cm. Vienna, Kunsthistorisches Museum, Gemäldegalerie. These species of *Halotiidae*, *Strombidae*, *Muricidae*, *Comidae* and *Pectinidae* mainly come from the Indo-Pacific and fascinate by their various sculpturing and shape. The ship in the background evokes the sea trade routes of the Dutch East India Company.

cabinets. Early on, an encyclopedic impulse to create a systematic collection of natural objects rivaled the desire to impress viewers with rare specimen or *mirabilia* – wonders of creation that showed off Nature's artistic capabilities, her inexhaustible *vis plastica*, and the colourful design of her production. As time went on, these two collector's impulses went their separate ways, becoming mutually exclusive. Shell collections in baroque *curiosity cabinets* came to form the basis for the science of conchology. At the same time they presented a showcase for the creations of *Natura*, which were as artful as painted and designed objects.

This essay seeks to sketch some interrelations between the passion for shell collecting in the Baroque era, the beginnings of conchology as a discipline, and the birth of shell still life painting. The initial connections can be found in the 17th-century's intense preoccupation with shells, which in turn was closely related to:

- a formalistic approach to biology and zoology
- theories of spontaneous generation versus theories of biological procreation
- theories of the history of the earth²
- the emergence of a dynamic world view
- the adoption and domestication of the unknown
- a political iconography and national self-image.

I will only discuss certain aspects of these interrelationships here. In so doing, one of my main focuses will be early depictions of shells in art and the natural sciences, which raises questions regarding the place of these creatures in the baroque biological hierarchy. In the 17th century, the specific structures of shells and whelks were investigated and classified. At the same time scientists started to study the living animal, its functions and natural behavior.

² For additional information regarding the relationships between conchology, geology and paleontology, see the bibliography.

The formalist approach to nature

Aristotle was a gifted zoologist and the descriptions in his *Historia animalium* were unmatched for centuries – one reason why a great deal of zoological terminology is based on his writings. Aristotle named snails and shells ‘shell creatures’ (*Testacea, Ostracoderma*) after their most salient characteristic. Initially, these ‘shell creatures’ were contrasted with a group of noncrustaceans that were termed ‘soft creatures’ (*Mollusca, Malacia*). However, as a result of comparative anatomical studies realized around 1800, they were combined into a single phylum known as molluscs (*Mollusca*). The name of the discipline devoted to the study of molluscs (*Mollusca*) – malacozoology or malacology – stems from this period, whereas conchology was defined as the study of the shell structures of snails and molluscs.³

The increased prevalence of shell display cases in early Renaissance *curiosity cabinets* can be only attributed to a conchological interest, which went hand in hand with the formal study of natural objects. The focus on morphological issues then led to a desire for interchanges between the arts and sciences. The coloured speckles, lines and structures on seashells that often resembled the markings on tigers and leopards, and the iridescence of mother of pearl whose mutable colours were akin to those of peacock feathers and butterfly wings, had already struck Pliny as being painterly and had inspired artists as well. This gave rise to the common saying that their surfaces were ‘painted by nature’ which had its origins in the literature of antiquity and existed well into the 18th century. The well-known topos of “nature sporting” also allegorized the objects in baroque shell collections. As Barbara Stafford has put it: ‘Design is not a separable imprint or impresa stamped on the surface: Design is a real symbol of the development of that medium, radical immanence not transcendence’.⁴ And in fact the colouration on mollusc shells is not painted on the surface, but is the result of pigments embedding themselves in the shell as it develops. These pigments are secreted continuously, producing spiral or radial lines and bands, or discontinuously, giving rise to patterns of speckles and patches. The markings were directly associated with their carriers and interpreted as

³ Lindner G., *Muscheln und Schnecken der Weltmeere* (Munich et al.: 1999) 14.

⁴ See Stafford B., “Characters in Stones, Marks on Paper: Enlightenment Discourse on Natural and Artificial Taches”, *Art Journal* 44 (1984) 233–240.

a diagram of the creature's morphogenesis which was directly inscribed into the body. Thus for example, molluscs became a paradigm for the passage of time and historical growth – space-time made visible. The sculptural forms of gastropod shells fascinated baroque observers owing to the periodic progression of their surfaces, which to some extent resembled processes in sculpture, goldsmithing and pottery.

We now know that mollusc shells grow discontinuously, that their forms mutate in fits and starts, and that the shell develops in two directions: parallel to the periphery and perpendicular to the surface. Thus the periphery of the shell becomes larger and broader while its surface becomes progressively stronger. Periodically, the developmental process either stops or shifts to a different element of the shell's form. The presence of smooth interstitial surfaces indicates that the lip of the mantle abutted the shell without any folds while structural development was in progress. However, the mantle generates folds in most cases, leading to the development of ribs in shells and three dimensional spiral bands in gastropods, while during the fortification period, knobs, humps and spikes form. If axial and spiral three dimensional elements overlap, grid patterns form.⁵ The laws governing this morphological process were unknown in the 17th century, leading to a fascination with the mysterious biological "architectural" plan that rhythmically drove this generative process and in so doing sculpted patterns and forms into the surface of the shell.

This process also appealed to several preferences of the Baroque period. The seemingly endless variety of regular patterns and forms etched into the shells recalled machine-made products such as regularly patterned textiles or carefully turned pieces of ivory, of rotating musical clocks, mills, and gears.⁶ It was accompanied by an interest in mechanically produced whorls, curves, ellipses, and grids – infinite forms that could be endlessly combined with each other.⁷ The 17th

⁵ Lindner, *Muscheln* 31.

⁶ On the sophisticated mechanical dynamics of lathes and the close proximity of nautilus goblets and ivory objects to each other in *curiosity cabinets* see: Maurice K., *Der drehelnde Souverän* (Zurich: 1985). For a picture of a lathe from circa 1600 that produced logarithmic spirals, see Frieß P., *Kunst und Maschine* (Munich: 1993).

⁷ On the mathematical iconography of spiral shells (above all nautilus shells) see Mette H.-U., *Der Nautiluspokal: Wie Kunst und Natur miteinander spielen* (Munich et al.: 1995); Pickover C.A., "Mathematics and Beauty. A Sampling of Spirals and 'Strange' Spirals in Science, Nature and Art", *Leonardo* 21,2 (1988) 173–181; Fonseca R., "Shape

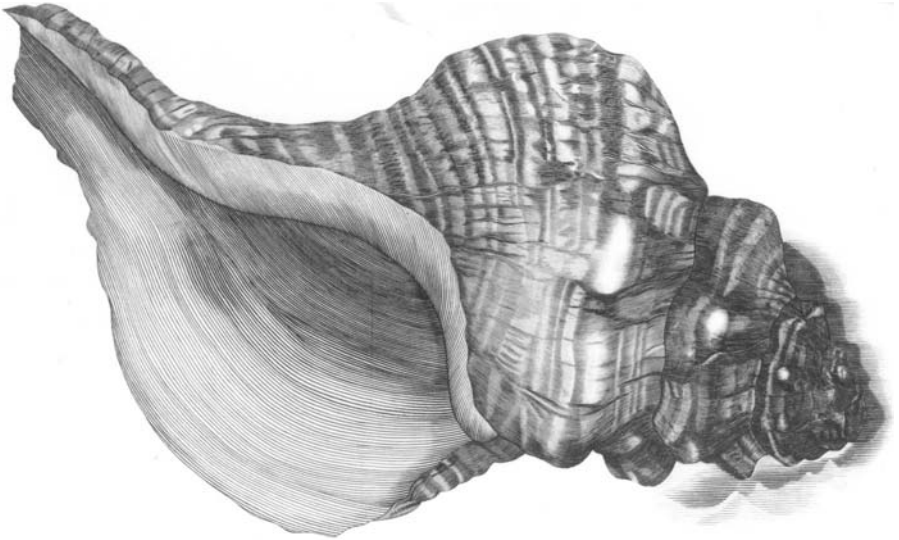


Fig. 2. Univalve gastropod shell. Large-sized engraving from Martin Lister, *Historia Conchyliorum* (London: 1685–1692). All gastropods have spiral forms and a structural affinity to baroque theories on biological and cosmological evolution.

century also adhered to a vertebral theory of the cosmos according to which material could be thickened by means of rhythmically iterative movements in such a way that mass centres, bodies and ultimately whole planets could come into existence. However, the occurrence of this phenomenon necessitated perpetual movement around a central axis. According to the Baroque theory, whorled gastropod shells were based on just such a cosmic principle, making them an allegory of the rotating universe – one that could be accommodated in a cabinet drawer [Fig. 2].

Dutch 17th-century shell collections and still life painting

In 1603 Hendrick Goltzius painted a portrait of the Rederijker and patron of the arts Jan Govertsz van der Aar standing before some shells

and order in Organic Nature. The Nautilus Pompilius”, *Leonardo* 26,3 (1993) 201–204; Holländer H., “Nautilus mirabilis”, *Aachener Kunstblätter* (1998) 461–464.

of his collection [Fig. 3].⁸ Van der Aar is depicted balancing on his fingertips what is perhaps the most precious object in the collection – a *Turbo marmoratus* whose mother of pearl surface gleams in the soft light. On the front edge of the table is a *Charonia* from the Bahamas.⁹ A portrait of van der Aar by Cornelisz Cornelis painted four years later also shows the shell collector standing before his treasures, this time encircled by personifications of the arts and sciences.¹⁰ This passionate desire to collect shells amongst the affluent bourgeoisie had been in full swing at least since the middle of the century and ultimately evolved into a veritable collecting mania. The trend rubbed some contemporaries up the wrong way, however: ‘It’s annoying what people spend their money on’,¹¹ said a caption in Roemer Visscher’s *Sinne-Poppen* [Fig. 4], which was critical of the high prices fetched by shells: a spiral *Wentletrap* could cost up to 500 guilders in the 17th century.¹²

The shell collections of baroque curiosity cabinets formed a natural springboard for all future research into molluscs. Upon returning from a trip from Holland, the famous art dealer Gersaint called that country the market leader, writing that ‘everyone there was curious’.¹³ In 1614, the Dutch poet Philibert van Borssele composed a lyric entitled “Beach” about the shells in the cabinet of Cornelis van Blijenburgh in Amsterdam, singing the praises of the multifaceted beauty of molluscs in over exuberant verses. The 17th century *curiosity cabinets* of Brayne and Reynst, of Frederik Ruysch, Johan Swammerdam, Albertus Seba and Uyttenbogaert in Amsterdam, the renowned museum of Delft’s burgomaster Henri D’Acquet, the early 18th-century *Wunderkammern*

⁸ See Bergvelt E. – Kistemaker R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992) 46, cat. no. 62. I am grateful to Claudia Fritzsche for her insights into the depiction of shells in still lives.

⁹ Fritzsche C., *Genuss und Disziplinierung. Zum Umgang mit Besitz und Wohlstand im holländischen Stillen im 2. Drittel des 17. Jahrhunderts* (Leipzig: 2000; unpublished manuscript) 61.

¹⁰ He is holding a specimen of *Hippopus hippopus* in his hand. In front of him are specimens of *Strombus pugilis*, *Trochus niloticus*, *Aulicina vespertilio*, *Harpa doris* Röding, and a *Conus* specimen. See Dance S.P., *Shell Collecting. An Illustrated History* (London: 1966) 34.

¹¹ Roemer Visscher, *Sinne-Poppen* (Amsterdam: 1614) vol. I, no. 4.

¹² Georg Eberhard Rumphius, *The Ambonese Curiosity Cabinet (D’Amboinsche Rariteitkamer)* (Amsterdam 1705), translated, edited, annotated, and with an introduction by E.M. Beekmann (Ann Arbor: 1999); see Dance, *Shell Collecting* 229. Additional information about prices can be found in Jutting G.W.S.S. van Bentheim, “Brief history of the conchological collections at the zoological museum of Amsterdam”, *Bijdragen tot de Dierkunde* (1938) 199–217.

¹³ Gersaint E.F., *Catalogue raisonné de coquilles, et autres curiosités naturelles* (Paris: 1736).



Fig. 3 [COL. PL. III]. A polished *Turbo marmoratus* presented by the Dutch shell collector Jan Govertsz. van der Aar. Hendrick Goltzius, Portrait of Jan Govertsz. van der Aar, 1603, 107.5 × 82.7 cm. Museum Boymans-van Beuningen, Rotterdam.



Fig. 4. "It is annoying what people spend their money on". Illustration from Roemer Visscher's *Sinne-Poppen* (Amsterdam: 1614) vol. I, no. 4.

of De La Faille in The Hague or J.C. Brandt and Simon Schijnvoet in Amsterdam contained substantial shell collections, among them such sought-after specimens as *Cedo Nulli*,¹⁴ *Scala pretiosa* (*Wentletrap*) and *Conus gloria maris* (*Glory of the Sea*). In England, William Courten (or Charlton) made his massive shell collection available to natural history enthusiasts, and Martin Lister used the collection as the chief source for his *Historia Conchyliorum*. The collection was later purchased by Henry Sloane, who had brought back to England exotic snails and shells that he had acquired in Jamaica. These specimens also found their way into Lister's *Historia*.

¹⁴ See Jutting, *Brief History* 200: 'Mr. De La Faille, a famous 18th century collector at The Hague, who possessed two specimens, refused to sell one for 6000 French pounds'.

Beginning in the 1630s, Dutch painters started developing a distinctive style of still life painting, the so-called shell still life.¹⁵ The first genuinely Dutch shell still lifes were painted by Balthasar van der Ast, probably in the 1630s. This subject was explored until the end of the century by artists such as Abraham Susenir and Willem Kalf, as well as by Adriaen Coorte in his alluring depictions. Ambrosius Bosschaert, Abraham van Beyeren, Dirck van Delen, Clara Peters and Maria van Oosterwijck all combined the colorfully patterned surfaces of fruit, flowers and shells in their still lifes, elevating this genre to the status of self-reflective trompe l'oeil painting, while Jan Davidsz de Heem integrated shells into sumptuous still lifes, thereby underscoring the national and political iconography of shells as well as the interrelations between commerce and riches in the new Dutch republic.

'The outer form of shell still lifes – a table with shells from various countries and parts of the earth carefully arrayed on a table next to each other – remained basically the same during this period, but the significance of their content gradually changed. Whereas the *curiosity cabinet* is still a palpable presence in van der Ast's depictions of shells, and although a natural science and encyclopedic interest in shells as well as a sense of the evanescence of the aesthetics of the picture prevail, they are treated primarily as a pretext for painting and composition by Willem Kalf, even though the shell motif lends itself to a broader interpretation'.¹⁶ Balthasar van der Ast [Fig. 5] devoted himself to the shell motif for aesthetic reasons as well, and in so doing indirectly cited Pliny by including in his still life a *Conus marmoreus*, two examples of the genus *Harpidae*, several serrated *Murex* shells, a magnificent polished Turban shell and a speckled Cowrie shell (*Cypraea tigris*) whose markings genuinely resemble leopard's spots. The beauty of their colours and patterns and the smoothness of their porcelain-like surfaces made this type of shell one of the most prized collector's items in the 17th century. The value of such precious curiosities was then translated to the canvas, thus heightening the artificiality and mediality of the painting. In this case, the supreme artist, *Natura*, first had a hand in creating the coloured patterns and forms on the shell surface, and the painter merely replicated this creative act. Nature as painter and nature imitating painting are mirror images of each other and are joyfully conjoined

¹⁵ For literature on shells in art see the bibliography.

¹⁶ Gemar-Koeltzsch E., *Stillebenmaler*, vol. I 29 <translation K.L.>.



Fig. 5 [COL. PL. IV]. Colours and patterns of *Conus marmoreus*, *Cypraea tigris*, *Turbo marmoratus* and *Conus ermineus*. Still life painting by Balthasar van der Ast, Shells and fruits, ca. 1620. Oil on wood, 29 × 37 cm. Dresden, Gemäldegalerie Alte Meister.

at the aesthetic margin of the canvas. In Willem Kalf's paintings, the light only grazes the smooth surface of the shells, which emerge radiantly from the dark background as colouristic bravura pieces. On the other hand, Adriaen Coorte's still lifes focus on the sculptured shape of a few singled out shells. They cast strong shadows and have a more tactile quality than those of any other artist, as if they could be picked up by the beholder and turned in his hand [Fig. 6].

Shell Books

Zoological taxonomy and nomenclature were originally based on purely visual analogies and were an outgrowth of baroque *curiosity cabinets*. Early illustrations of sea animals and shells can be found in Adam Lonitzer's *Naturalis historiae opus novum*¹⁷ (1551–1555) as well as Conrad Gesner's *Icones animalium quadrupedum et oviparorum* and *Historia animalium IV qui est de piscium et aquatilium animantium natura*¹⁸ (1553 and 1558). Pierre Belon's *De aquatilibus libri duo*¹⁹ (1553) contains some well-executed illustrations, while more than 100 molluscs were illustrated in Guillaume Rondelet's *Universae aquatilium historiae pars altera*²⁰ (1554–1555). Ulisse Aldrovandi's *De reliquis animalibus exanguibus*²¹ (1606) is an encyclopedic treatise on molluscs that set the standard for future generations, despite the work's rather crude illustrations. Two excellently illustrated works by Fabio Colonna²² (1616) set high standards and were the first works not to depict gastropods in reversed mirror images.²³ Jan Jonston's *Historiae naturalis de exanguibus aquaticis*, published in 1650, was also an important work for Baroque collectors.²⁴

¹⁷ Adam Lonitzer, *Naturalis historiae opus novum* [...], 2 vols. (Frankfurt a.M., Christoph Egenolph: 1551–1555).

¹⁸ Conrad Gesner, *Icones animalium quadrupedum viviparorum et oviparorum* [...] (Zurich, Christoffel Froschauer: 1553); *Historia animalium liber IV qui est de piscium et aquatilium animantium natura* [...] (Zurich, Christoffel Froschauer: 1558).

¹⁹ Pierre Belon, *De aquatilibus libri duo* [...] (Paris, Carolus Stephanus: 1553).

²⁰ Guillaume Rondelet, *Universae aquatilium historiae pars altera* [...] (Lyon, Mathias Bonhomme: 1555).

²¹ Ulisse Aldrovandi, *De reliquis animalibus exanguibus libri quatuor* [...] *nempe de mollibus, crustaceis, testaceis et zoophytis* (Bologna, J.B. Bellagamba: 1606).

²² Fabio Colonna, *Fabii Columnae Lyncei Purpura* [...]; *Aquatilium et terrestrium aliquot animalium* [...]. (two treatises bound together) (Rome: 1616).

²³ Dance, *A History of Shell Collecting* 24 and 19.

²⁴ Jan Jonston, *Historiae naturalis de exanguibus aquaticis libri IV* (Frankfurt a.M., Haeredes Merianei: 1650).

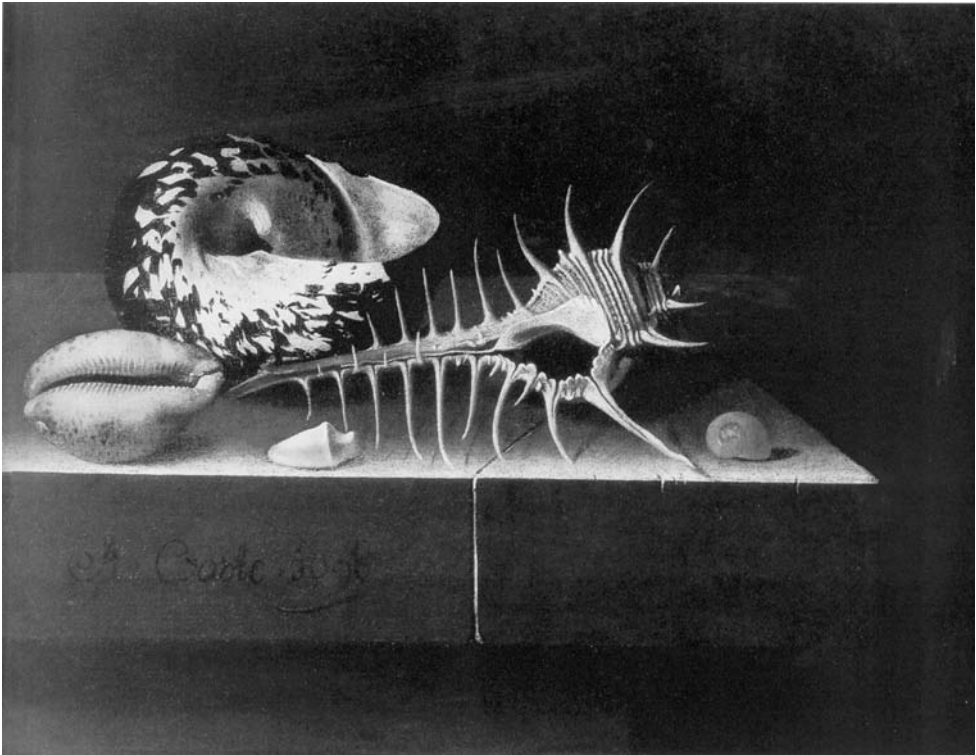


Fig 6 [COL. PL. V]. *Cypraea arabica*, *Murex troscheli*, *Cittarium pica* and *Syphoma gibbosum* in a still life painting. Adriaen Coorte, *Shells*, 1698. Oil on paper on wood, 17 × 22.5 cm. Boston, private collection. The shells were carefully selected and depicted in their natural size.

The description of Francesco Calceolari's collection published in 1584 counts as the first inventory of a *curiosity cabinet* to mention shells;²⁵ an additional description of the same collection published in 1622 contains several impressively accurate shell illustrations.²⁶ In addition, the two accounts of the famous natural collections of Basil und Michael Rupert Besler²⁷ (1616 and 1642) were frequently cited during the 17th century [Fig. 7]. Shells are mentioned but not illustrated in the account of Ole Worm's collection of natural objects (1655),²⁸ Ludovico Moscardo's description of his collection (1656) is illustrated with large engravings,²⁹ while accurately drawn figures, though reversed, are found in Adam Olearius's inventory (1666) of the Duke of Schleswig Holstein Gottorp's collection.³⁰ In England, John Tradescant, gardener to Charles I and a keen shell collector, established a museum of natural objects whose catalogue was published by Tradescant's son (1656) with a dedication to Elias Ashmole.³¹ The numbers of publications on shell collections and curiosity cabinets increased greatly, beginning in the mid 17th century and reaching a peak during its final two decades. It was then, when Filippo Buonanni published the earliest practical illustrated guide for collectors and students of shells, his *Ricreatione dell' occhio* (1681),³² while Martin Lister's *Historia Conchyliorum* (1685–92) and Georg Eberhard Rumphius's *D'Amboinsche Rariteitkamer* (1705) also appeared during this period.

²⁵ Olivi J.B. *De reconditis et praecipuis collectaneis in Museo Calceolaris asservatis* (Venice: 1584).

²⁶ Ceruti B. – Chiocco A., *Musaeum F. Calceolarii* (Verona: 1622).

²⁷ Basil Besler, *Fasciculus rariorum et aspectu dignorum varii generis quae collegit* (Nuremberg: 1616); Michael Rupert Besler, *Gazophylacium rerum naturalium e regno vegetabili, animali et minerali* (Leipzig: 1642).

²⁸ Ole Worm, *Musaeum Wörmianum. Seu historia rerum rariorum [...] quae [...] in aedibus authoris servantur* (Leiden: 1655).

²⁹ Ludovico Moscardo, *Note overo Memorie del Museo di L. Moscardo* (Padua: 1656).

³⁰ Adam Olearius (Ölschlager), *Die Gottorfische Kunstammer, worinnen allerhand ungemeyne Sachen* (Schleswig: 1666).

³¹ John Tradescant, *Musaeum Tradescantianum: or a collection of rarities, preserved at South Lambeth, near London* (London: 1656).

³² Dance, *Shell collecting* 43.

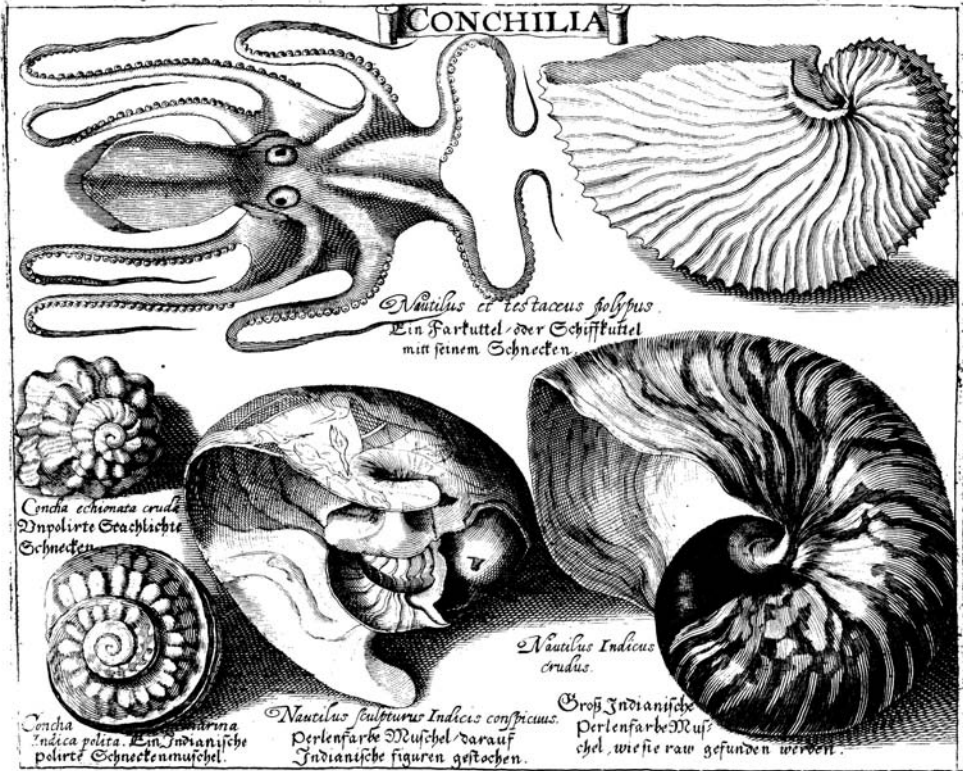


Fig. 7. The wafer-thin shell *Argonauta argo* and the large single-coiled shell *Nautilus pompilius* in Basil Besler's curiosity cabinet list. Next to the shell is a polished *Nautilus* engraved with "Indian figures". From Basil Besler, *Fasciculus rariorum et aspectu dignorum varii generis quae collegit et suis impensis aeri ad vivum incidi curavit atque evulgavit Basilius Besler* [...] (Nuremberg: 1616).

*Filippo Buonanni's Ricreatione dell'occhio (1681) versus
Antoni van Leeuwenhoek's Observations on Oysters (1696)*

By the end of the 17th century the interest in molluscs was overwhelming. Shells and gastropods were studied against the background of theories concerning the origins of life and cosmological evolution; their colours and features gave rise to a debate regarding visibility that was rooted in theoretical reflections on painting and sculpture. In 1681 the two-volume shell atlas *Ricreatione dell'occhio e della mente nell'observation' delle chioccioline* was published in Rome by the Jesuit priest Filippo Buonanni (1638–1725). This was the first treatise entirely devoted to molluscs and containing numerous copper-plate engravings in an extra volume. Like Rembrandt's etching of the *Comus marmoreus* [Fig. 8], the direction of the spirals was reversed due to the printing process. Such mirror images were avoided in later shell compendiums since they were regarded as falsifications of taxonomic properties. The spirals on virtually all snail shells are dextral. 'If the shell is held in such a way that the apex points upward and the entrance is facing the observer, the opening is located on the right side. Otherwise the shell is sinistral. Sinistral spirals are only found in a few species and as rare abnormalities in normally dextral shells'.³³ Kant later noticed this same law, which formed the basis for his ideas about naturally curved phenomena such as bean tendrils, snail shells, hair whorls and so on – Buonanni had previously wondered about the spirals on some shells. However, his illustrations are reversed, although his efforts to describe shell morphology with the greatest precision constitute the most notable achievement of his book. It led Peter Dance to conclude that Buonanni's 'illustrations would have been indispensable to collectors had they not been eclipsed by those in another book published in England a few years later. [...] Buonanni knew less about molluscan anatomy than did Aristotle and his ideas of classification were no more advanced. By and large he added very little to what was known on the subject in his day and upheld many of the superstitious and mythical beliefs of the earlier commentators. On the other hand he stoutly defended the practice of shell collecting, considered a useless pastime by many of his contemporaries [...]. Among the problems he investigated were the spiral form and the colouration of gastropod shells; and he also discussed the economic

³³ Lindner, *Muscheln* 45 <translation K.L.>.

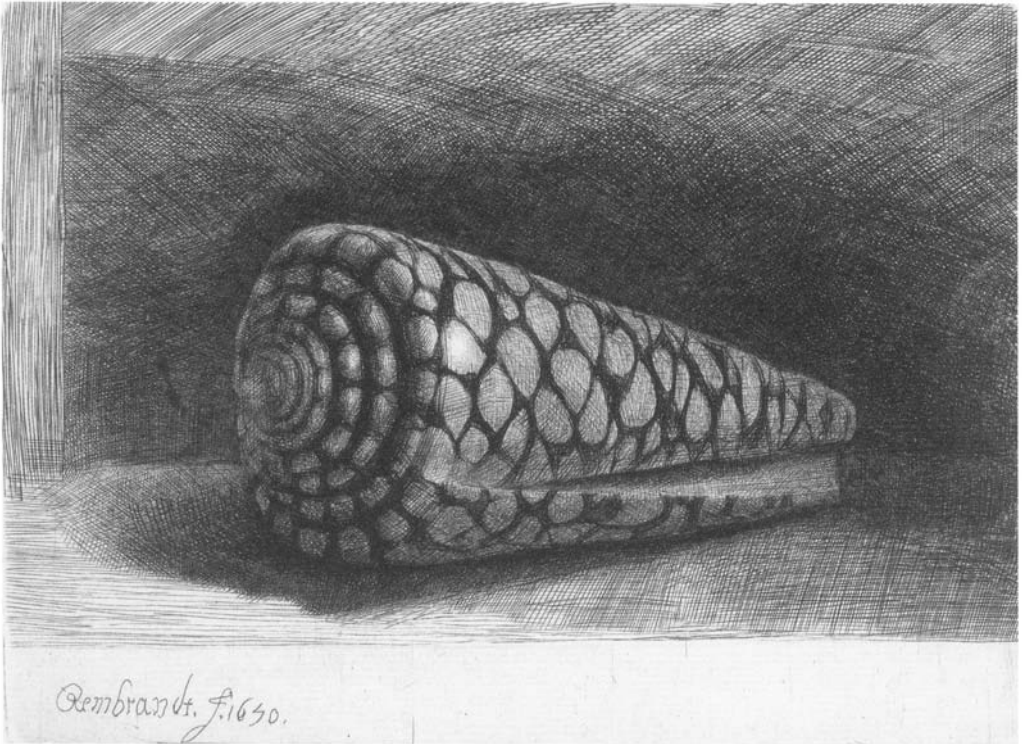


Fig. 8. A *Conus marmoreus* by Rembrandt van Rijn (1650). Engraving, Ashmolean Museum, University of Oxford. Due to the printing process the shell shows a reversed coil.

importance of molluscs'.³⁴ Buonanni's work is more notable for his exclusive interest in the unusual forms and colours of sea creatures than for classification on the basis of scientific criteria. In his study, he used objects from Athanasius Kircher's collection at the Jesuit College in Rome.³⁵ The book was intended as an introduction to conchology for shell collectors that regarded shells, as the title stated, mainly as objects of visual interest and 'recreation of the eyes', i.e. as precious ornaments for collectors' museums. However, as the earliest conchology compendium on record, this work made an important contribution in that it laid the foundation for a new discipline. And it is important to note that some of the illustrations depicted the insignificant creature inside the shell, thus giving rise to a new malacological interest [Fig. 9]. Nevertheless, Buonanni still adhered to Aristotle's theory of spontaneous generation.

In Protestant Holland, the microscopist Antoni van Leeuwenhoek broke with scholastic tradition and began searching for biological evidence that could prove Aristotle wrong. Aided by powerful microscope lenses, van Leeuwenhoek found that dissected oysters contained countless minute offspring, thus clearly indicating that procreation occurs naturally and contradicting the theory of spontaneous generation: 'Indeed, if others had seen the dissection of these three big Oysters as I saw them, they would no doubt say that in all Europe there are not as many people as there were living creatures in those three Oysters'.³⁶ In continuing the description of his findings, van Leeuwenhoek even made fun of himself: 'These Oysters were also as well-fed and white of flesh as ever one could behold Oysters with one's own eyes, and at ten o'clock in the evening I sent them, along with most of the living Animals therein, to my stomach, not being at all worried having such an inconceivably large number of living animals in my stomach, but not with as much pleasure as I should have done had I not seen the Animals and the further dissection of the Oysters. This proved my weakness, about which I laughed at myself'.³⁷

³⁴ Dance, *A History of Shell collecting* 43.

³⁵ See Dance, *A History of Shell Collecting* 29: 'Kircher's natural curiosities were described in another work by Buonanni in which the numerous figures of shells are of better quality than those in his *Ricreatione*'; Filippo Buonanni, *Musaeum Kircherianum sive Musaeum a P.A. Kircherio in Collegio Romano Societatis Jesu [...] descriptum [...]* (Rome: 1709).

³⁶ Anthoni van Leeuwenhoek, *Collected Letters* (1696–1699) (Lisse: 1993) vol. XII 6.

³⁷ *Ibid.*

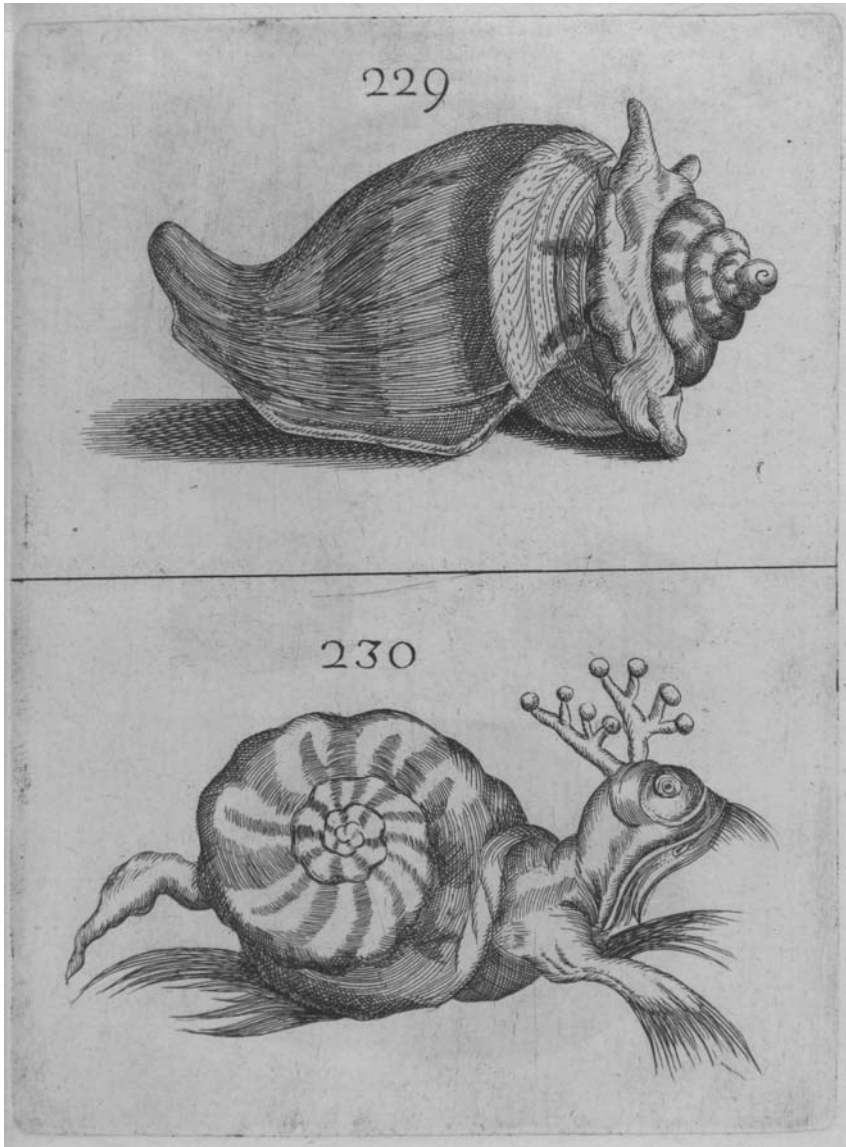


Fig. 9. Shell and living animal in Filippo Buonanni's *Ricreatione dell'occhio e della mente nell'observation' delle chiocciole* (Rome: 1681), Fig. 229. This was the first illustrated book devoted solely to shells.

Here we can observe that the 17th-century curiosity about molluscs and other marine life was not satisfied merely by *curiosity cabinets*, but instead centered around scientific investigations into the history of the earth and the origins of life. Filippo Buonanni and Athanasius Kircher were among the most prominent 17th-century proponents of Aristotle's theory of spontaneous generation, while Antoni van Leeuwenhoek (as well as Francesco Redi) was one of its fiercest opponents. Thus, opened and dissected molluscs became a battleground for conflicting theories of biological propagation. 'However, I will resume my investigations about it. I was pleased to see that those who consider that some generations take place spontaneously are daily receiving less credit and are confirming more and more the reputation of those who are more certain of their ground in their investigation of nature. I have had sent to me the summary of a book printed in Rome and edited by Father Philippus Bonnanus S.J.; in which the latter maintains that animate beings spring from inanimate beings, such as Shellfish from mud [...] I believe this Gentleman lacks correct observations'.³⁸

Martin Lister: Historia Conchyliorum, 1685–1692

Four years after the publication of Buonanni's compendium, the first volume of Martin Lister's encyclopedic large-format *Historia Conchyliorum* was published. The work, which appeared in four parts between 1685 and 1692 and contained over 1000 plates, was a systematic study of all of the mollusc groups and families known to exist at the time in native and foreign coastal regions.³⁹ Already in 1669 the avowed Baroque fascination with whorls or spiral movements that would later preoccupy Buonanni had led him to the publication of a first paper on molluscs that dealt with the 'odd turn of some shell-snails'.⁴⁰ It was 'followed, in 1678, by a more ambitious work on the spiders and molluscs of the British Isles, illustrated by accurate figures of shells,

³⁸ Leeuwenhoek refers here to *Observationes circa viventia, quae in rebus non viventibus reperiuntur* which was published by Filippo Buonanni in Rome in 1691.

³⁹ For a bibliography of Lister's work see: Kenyes K.G., *Dr Martin Lister: A Bibliography* (Godalming: 1981).

⁴⁰ Martin Lister, *Concerning the odd turn of some shell-snailes, and the darting of spiders, made by an ingenious Cantabrigian and by way of letter communicated to Mr. I. Wray, who was transmitted them to the publisher for R.p. Phil. Trans.* 4: 1011–6 (1669).

including fossil forms (*Historiae animalium Angliae tres tractatus*).⁴¹ In 1685 [Lister] distributed among his scientific friends a thin volume of copper-plate engravings of land shells mostly foreign to the British Isles and entitled *De Cochleis*.⁴² Realizing what a large amount of material was available, he embarked on a much larger work, along the lines of the *De Cochleis*, which was to include figures of all the recent and fossil shells then known. Thus the first of the major shell iconographies was born'.⁴³ The work referred to is Lister's monumental *Historia*, which his friends and family also worked on. In 1696 Lister published another treatise regarding (and entitled) *Conchyliorum Bivalvium*.⁴⁴

The value of Lister's *Historia* is almost exclusively a function of the quality of the illustrations and the taxonomical properties that they depict. 'There is no actual text [...]. The species figures are nearly all recognizable and none are reversed; and their scientific value is enhanced still further by numerous indications of locality. [...] He had intended to follow the plates of the *Historia* with anatomical descriptions of every 'family' in a systematic order and, undoubtedly, this would have improved its arrangement. Unfortunately the *Historia* was not completed and most of the illustrations of molluscan anatomy added to the second and subsequent editions were those previously published in the *Exercitationes*.⁴⁵ The *Historia Conchyliorum* represents, nevertheless, the first real attempt at a systematic arrangement of the Mollusca; Linnaeus cited figures from it and collectors and students used it as a reference work for many years'.⁴⁶ Lister's taxonomical investigations were based on a formalistic approach as well as on anatomical studies. For example, Lister's classification of the Venus shell (*Concha Veneris*) – 'unicolourous, black streaked, transversely waved, ringed or banded, black spotted, white spotted, transversely ribbed, granulated, smooth-mouthed or not toothed, umbilicated'⁴⁷ – embodies a complex formalistic strategy that refers to the sculptural and colouristic features

⁴¹ Martin Lister, *Historiae animalium Angliae tres tractatus* [...] (London: 1678).

⁴² Dance, *A History of Shell Collecting* 23.

⁴³ Dance, *Shell collecting* 44.

⁴⁴ Martin Lister, *Conchyliorum bivalvium* [...] *exercitatio anatomica tertia* [...] (London: 1696).

⁴⁵ Martin Lister, *Exercitatio anatomica* [...] (London: 1694); idem, *Exercitatio anatomica altera* [...] (London: 1695); idem, *Conchyliorum bivalvium* [...] *exercitatio anatomica tertia*.

⁴⁶ Dance, *Shell collecting* 46.

⁴⁷ Martin Lister, *Historia Conchyliorum* (London: 1685–92), section 9.

of the shells. On the other hand, comparative anatomical studies – laid down in the *Exercitationes* – helped Lister to devise a well founded mollusc classification system.

Martin Lister's *Historia Conchyliorum* successfully united art and science. It is due to the accuracy and variability of his illustrations that they are more impressive than Buonanni's. The thorough and systematic comparisons of forms enabled him to identify subspecies, define characteristics and work out the slightest differences and similarities. The taxonomical characteristics were traced in a purely visual process. Unlike the proprietors of curiosity cabinets, Lister was not particularly interested in exotic specimens and equally studied native specimens such as the small and unassuming limpets (*Patella*) whose varying sizes and sculptured forms are depicted with true accuracy; the common tower shell (*Turritella*) whose dextral spirals Lister printed correctly; as well as the hard, ribbed cockles (*Cardium*) that were regularly washed ashore on the English coastline. His friends sent him beach finds or small sketches which were later mounted in a scrapbook along with the watercolours that Lister's daughter Anna painted to prepare the copper plate engravings. Figure 10 shows a representative page that is revealing, because, in addition to the sketches realized by Lister's daughter for the *Historia*, it also contains a fresh print of Rembrandt's well known etching of a *Conus marmoreus* [Fig. 10]. Later Lister had this image copied and incorporated it into the *Historia*, and in so doing corrected the direction of the spiral [Fig. 11].

We can see that in addition to illustrations based on natural objects which reveal Lister's empirical interest in the exact morphology of molluscs, the *Historia* also contains copies of older shell illustrations that are interpolated into the book at various points as if they were quotes. These drawings constitute a thumbnail early history of conchology, in which Lister primarily cites illustrations by Colonna⁴⁸ and Buonanni, as well as the aforementioned Rembrandt engraving, all of which he simply intersperses among his own plates with no or with short comment. These indirect references enable us to identify the literature that formed the basis for his investigations. Besides that, Lister's sketchbook is a useful source of information. The sketches often bear Latin inscriptions not found on the plates and show that Lister had read the

⁴⁸ Colonna's outstanding illustrations of *Cardium costatum*, in Fabio Colonna, *Purpura*.

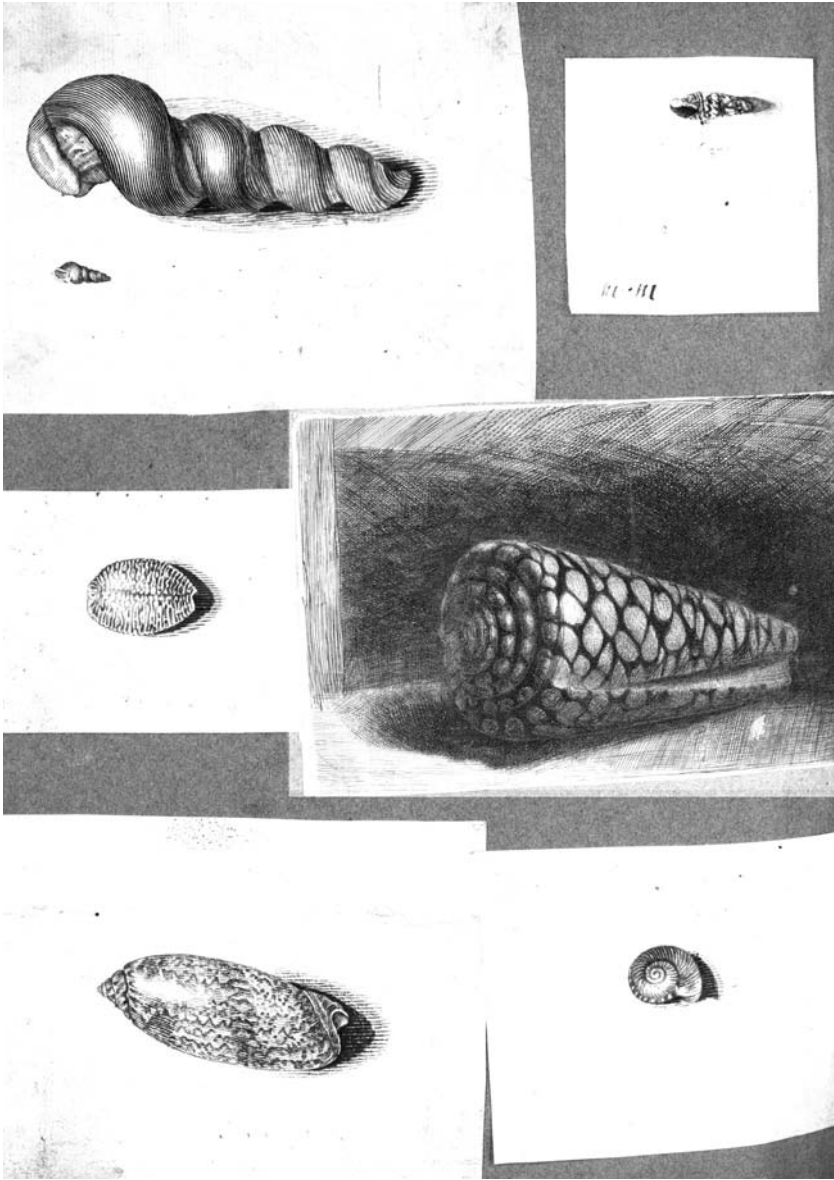


Fig. 10. Drawings of shells, along with an early print of Rembrandt's *Conus marmoreus* from Martin and Anna Lister, *Scrap-Book*, compiled in about 1680. MS Lister 9, fol. 29v. Bodleian Library, Oxford.

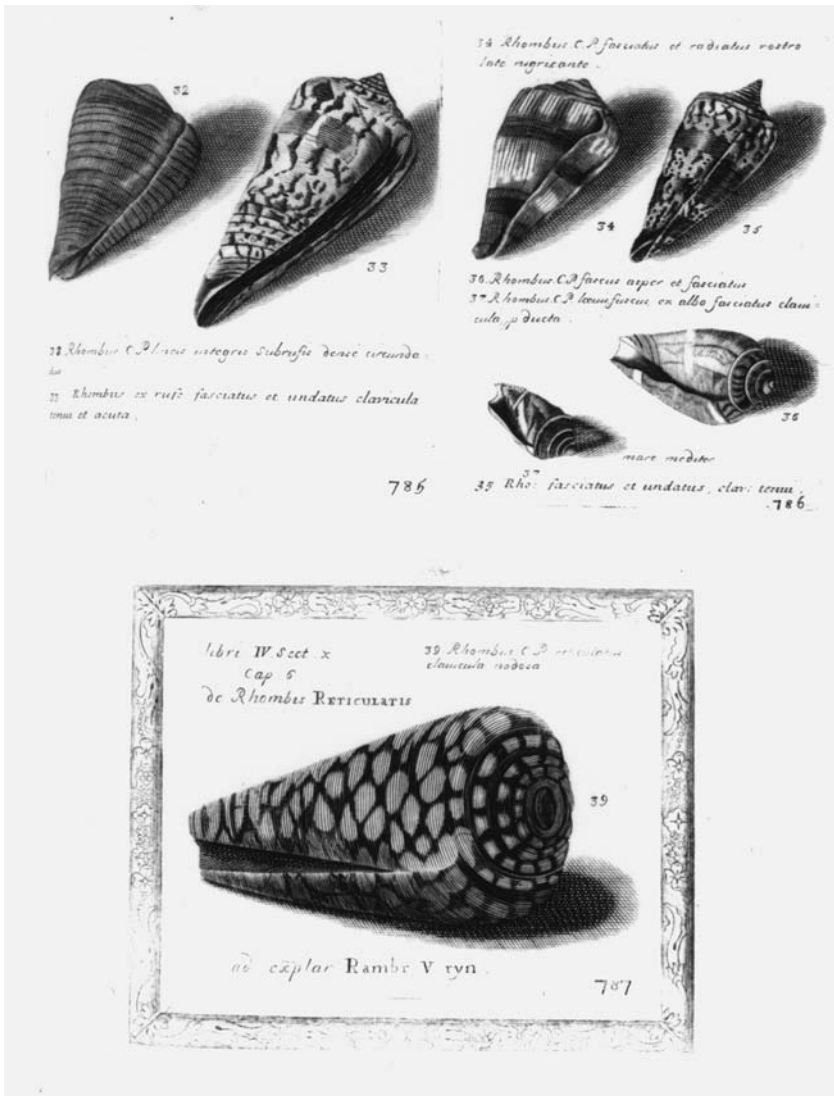


Fig. 11. Rembrandt's *Conus marmoreus*, here reprinted and reversed in Martin Lister, *Historia Conchyliorum* (London: 1685–92), Fig. 787.

works of Colonna and Buonanni, and above all those of Aldrovandi, Gesner⁴⁹ and Besler.⁵⁰

But the sketches are worthy of attention in their own right. The watercolours were executed in soft somewhat cautious brush strokes, and some are signed A.L. (Anna Lister). Then the scrapbook contains a few delicate pen and brown India ink drawings that were realized by another artist and are notable for their firm and short strokes. Other drawings, finely done in India ink, a few of them tinted, were realized with a fine brush. These drawings, which again can be traced back to Anna Lister, provide a fascinating insight into the phased process of the book illustrations. For example, before the watercolours could be sent to the printer, they had to be “translated” into black and white tones. However, in this case the conventional cross hatching was dismissed and instead the entire shell was translated into a series of parallel lines. Thus the brush drawings allowed for the reproduction of the minutest details in the *Historia*’s engravings, and the graphic abstraction process was realized by the Lister family itself rather than by the engraver.

As for the engravings themselves, again an unorthodox method was used. In contrast to what had almost universally been done up to that time, the shells were not rendered beginning from their outline, but were instead “palpated” line by line, as if a finger had been run over the irregular surface of the shell and had recorded the various rises and falls. The procedure is reminiscent of laser scanning, except that each line has a variable starting point rather than a fixed one. Concave and convex forms were reproduced by following the curves of the shells rather than modeling their light and dark values [Fig. 12]. A comparison with Rembrandt’s *Conus* reveals that Rembrandt renders plasticity by means of dense cross hatching, whereas Lister conveys the same quality using a few lines, which are deliberately used as an investigative tool. But Lister’s blue scrap-book – testimony to a process of conchological brainstorming – also shows us other methods of describing nature in pictorial terms. Within the scrapbook watercolours alternate with hard pen and ink drawings, their lines are parallel or hatched, bunched together or scattered; unfinished sketches rub elbows with carefully elaborated studies, rapidly executed sketches show Latin notes to consult

⁴⁹ Conrad Gesner, *Icones and Historia*; Ulisse Aldrovandi, *De reliquis animalibus exanguibus*.

⁵⁰ Basil Besler, *Fasciculus rariorum et aspectu dignorum* and Michael Rupert Besler, *Gazophylacium rerum naturalium*.

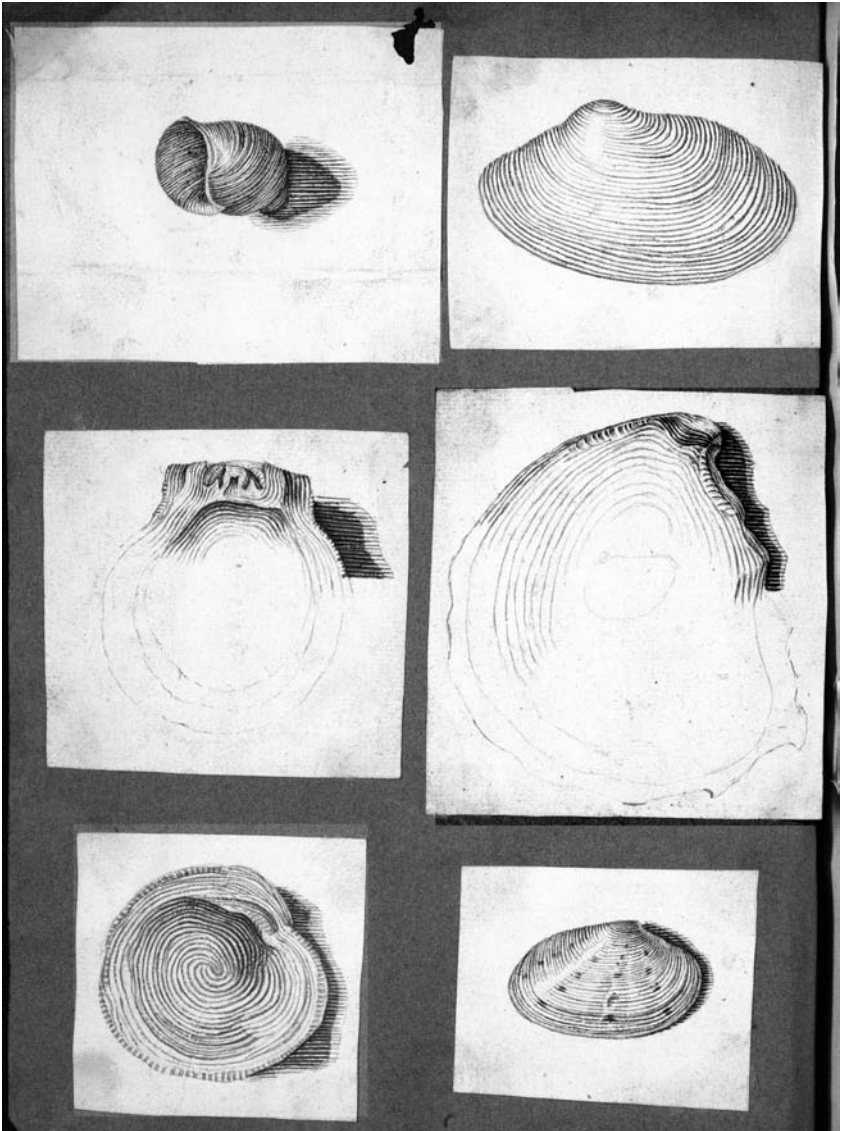


Fig. 12. Linear reconstruction of the shell's shape, fine brush and ink. Page from Martin and Anna Lister, *Scrap-Book*, written in about 1680, MS Lister 9, fol. 47v. Bodleian Library, Oxford. This work anticipated the process of engraving.

certain reference books; completed engravings follow hard upon monochrome studies realized with a fine brush. Some sketches were pinned to the pages with thin needles, and a crudely hand-coloured print of Rembrandt's *Conus* also appears.

Georg Eberhard Rumphius: D'Amboinsche Rariteitkamer (1705)

Georg Eberhard Rumphius (1627–1702) was a native of Hessen, Germany where his father was a construction engineer in the service of the prominent Solms family; during the Thirty Years War he mainly worked for members of the local aristocracy.⁵¹ 'Burning with an insatiable desire to know foreign lands',⁵² in 1652 Rumphius signed on with the East India Company and sailed off to Java. The East India Company had built a major trade center at Batavia, which was the name the Dutch had given to Java's capital city after conquering it in 1619. Rumphius's initial position as a *fabryck* or engineer, was mainly of a military nature, and before long he asked to be transferred to a new position, whereupon he became a trade overseer on a small island called Ambon. There, Rumphius soon began realizing botanical and zoological studies and sketches for an ambitious *magnus opus* entitled the *Amboinsche Kruid-boek*,⁵³ which he worked on concurrently with his conchological *Rariteitkamer*. During this period, Rumphius's own *curiosity cabinet* also grew and eventually contained 360 specimens of native shells and fossils. For financial reasons, Rumphius sold the collection to the equally avid patron of the arts and collector Cosimo III de Medici, Grand Duke of Tuscany in 1682. In the final chapter of his *Amboinsche Rariteitkamer*, Rumphius recalls the enormous effort that was involved in building up his collection. He then describes the animal habitats at length, a knowledge that he needed in order to acquire the various species, and points out the rarity of some of the specimens and the fact that they were often damaged or soiled. This account contains the parallel story of Baroque collection practices – which was

⁵¹ Georg Eberhard Rumphius, *The Ambonese Curiosity Cabinet (D'Amboinsche Rariteitkamer, Amsterdam 1705)*, translated, edited, annotated, and with an introduction by E.M. Beekmann (Ann Arbor: 1999) XLII. For literature on Rumphius see the selective bibliography at the end of this paper.

⁵² *Ibid.* XLIII.

⁵³ Georg Eberhard Rumphius, *Het Amboinsche Kruid-boek*, 2 vols. (Amsterdam et al.: 1741).

from the standpoint of the colonies. In fact it constitutes an implicit contemporary critique of the high aesthetic demands of Dutch shell collectors and proprietors of *curiosity cabinets*:

Our Compatriots and Friends in the Fatherland are commonly of the opinion that we find the Whelks and Curiosities on the beach, or haul them from the Sea, just as clean and pure as when we send them to those folks, and that consequently it requires little more than picking them up. It is almost not worth refuting this misconception at length; except that it is necessary to purge us, who live in India, from the suspicion that it is impolite or unreasonable of us, when we sometimes cannot fulfill our friends' demands nor answer to their cleanliness.⁵⁴

Such lines reveal Rumphius's sceptical attitude toward *art connoisseurs* and *liebhebers* who regarded exotic animals and other natural wonders solely as showpieces or refined consumer goods. Rumphius therefore discusses issues such as the uniqueness of some specimen, resource limits, and the rarity of certain species to distance himself from this world of pure *konst-liebhebery*: 'Besides the length of time that is required for this, I will also indicate all the trouble and tedium one has to endure in order to clean them and make them presentable'.⁵⁵ On the one hand he provides exact instructions for preparing, presenting and conserving them properly. But in many places in his book, Rumphius criticizes a consumptuous attitude, e.g. when writing about strange small stones known as *Mesticae* that are sometimes formed in plants and animals and are said to bring the finder good luck: 'They will only be lucky for the one who found them, or the person who received one as a gift, but not for someone who buys them'.⁵⁶ Some chapters before he had reported about his own lucky find: a large nautilus shell had practically fallen from the sky:

I should mention a rare event here. A Sea Eagle, being a bird that constantly hunts at sea, took such a Nautilus, while it was floating in the Sea, and bore it aloft, but while his business was with the fish, and since he did not care about it as a curiosity, he struck his claws mostly into the fish, wherefore the shell came to fall out of his claws and, by rare fortune, it fell on a small spot of sand between rocks in such a way, that nothing was broken off, except for a small corner of the foremost

⁵⁴ Rumphius, *The Ambonese Curiosity Cabinet* 223.

⁵⁵ *Ibid.* 224.

⁵⁶ *Ibid.* 328.

edge; and a fisherman who was wandering thereabouts, quickly picked it up and brought it to me; and since this fell out of the sky like another Palladium, as if a small likeness of the fabled ship Argos, I sent it in the year 1683 as a memento to Mr. Johan Michael Fehr <and> the Collegium in which I was accepted as a Member in the same year.⁵⁷

Rumphius thanked the renowned Collegium for having accepted him as a member by sending them the same *Carina nautili* that good fortune had caused to fall at his feet. We know that the reference to the fabled ship Argos pertains to a very common element of Baroque iconography. For example, an early emblem book by Joachim Camerarius (1604) contains an illustration of an *Argonauta argo* (paper boat) whose wafer-thin shell was able to remain afloat on the surface of the sea. This was regarded as a symbol of good fortune and of a ship's ability to survive ocean voyages in both fair and foul weather.⁵⁸

Another specimen of *Nautilidae*, the more robust *Nautilus pompilius* (pearly nautilus) with its pearl-like shell served as a baroque dining table showpiece and symbolized the economic power of a seafaring nation. Fig. 13 shows a nautilus shell of this type as depicted in a still life painting by Willem Claesz Heda. But for the 17th century it also represented a masterpiece of hydraulic engineering: the whelk contains separate flotation chambers that are interconnected by siphon-like channels. A cross-section reveals its main feature: the exponentially growing spiral whose plane Archimedes had attempted to calculate using a specific method which came close to the differential calculus of the Baroque period. As a non-platonic figure, the spiral corresponded to the Baroque taste for dynamic forms that required physical force and symbolized movement, growth or expansion [Fig. 14].⁵⁹

In 1670 Rumphius went blind. The expressive portrait at the beginning of the *Amboinsche Rariteitkamer* (after a drawing by his son Paulus Augustus) shows the author in old age with fingers bent into a claw trying to touch some shells on a table⁶⁰ – the folded whelk of an *Argonauta argo* is clearly distinguishable [Fig. 15].⁶¹ It was such a *paper boat*

⁵⁷ Ibid. 94.

⁵⁸ Joachim Camerarius, “Tutus per summa, per ima”, in idem, *Symbolorum et emblematum ex aquatilibus et reptilibus desuntorum* [...] (Nuremberg: 1605 [1604]).

⁵⁹ Cf. note 7. The suggestive cross-section in Rumphius's *Rariteitkamer* harks back to Frans Halma and Simon Schijnvoet.

⁶⁰ Rumphius, *The Ambonese Curiosity Cabinet* IV.

⁶¹ Ibid. (*Nautilus Tenius*).



Fig. 13 [COL. PL. VI]. Still life painting with Nautilus goblet, showing its mother-of-pearl surface. Willem Claesz. Heda, *Still life with Nautilus cup*, 1649. Oil on wood, 49.5 × 68.2 cm. Schwerin, Staatliches Museum.

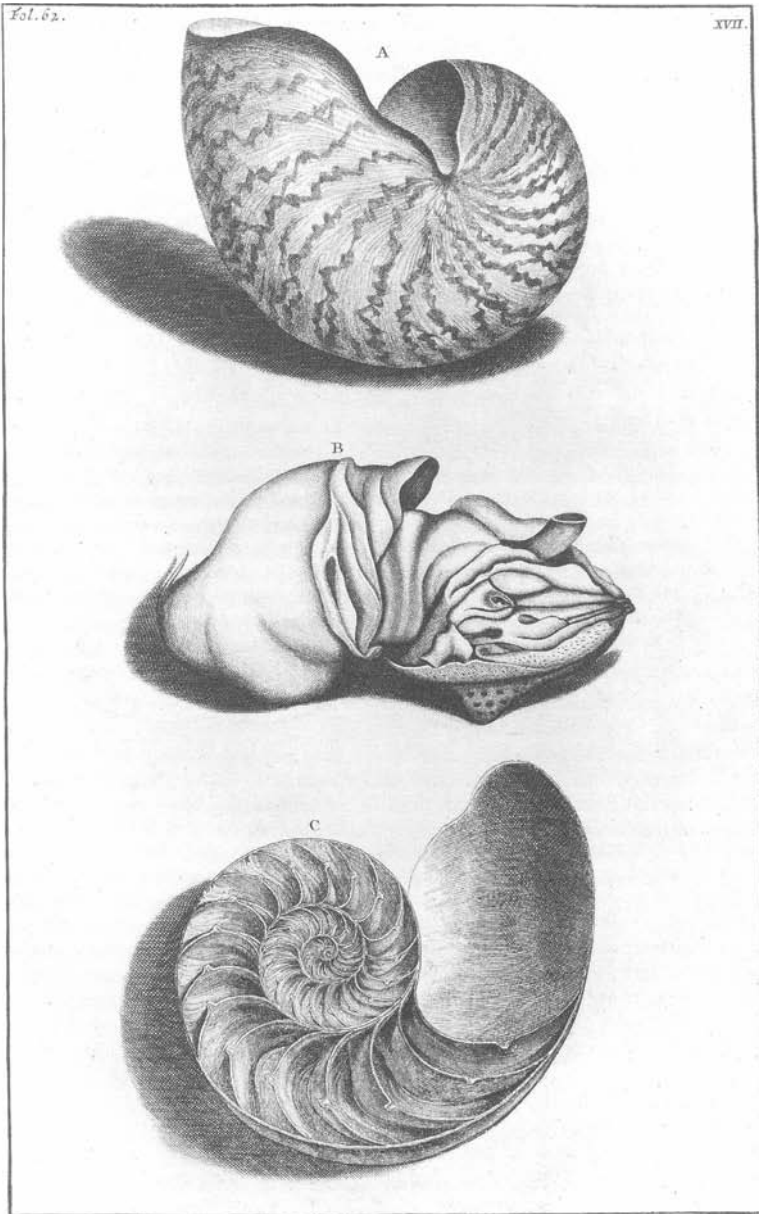


Fig. 14. The popular *Nautilus pompilius* and the spiral arrangement of the internal chambers in Georg Eberhard Rumphius, *The Ambonese Curiosity Cabinet* (*D'Amboinsche Rariteitkamer, Amsterdam 1705*), Fig. 62. This object was inherited by Henri D'Acquet, the Delft Mayor, whose shell collection was used to complete the illustrations.



Fig. 15. Portrait of the blind malacologist Georg Eberhard Rumphius after a drawing by his son Paulus Augustus (1696): 'Though he is blind, his mental eyes are so sharp that no one can beat him in inquiry or discernment'. From Georg Eberhard Rumphius, *The Ambonese Curiosity Cabinet* (*D'Amboinsche Rariteitkamer*, Amsterdam 1705), title page.

that had been carried up to the sky by a sea-eagle till its shell came off and fell on the ground. He also mentions it in the first chapters of his second book which is devoted solely to hard shellfish and was therefore most widely used by shell collectors:

Now this is the true Nautilus which we [...] call the thin or fine one, and which seems to have been the only one known to the Ancients, because it has the right shape of a galley, with a narrow keel and two high sides [...], fashioned from a single thin shell that has the thickness of parchment, partially transparent, exceedingly white, like paper [...]. The entire whelk is covered with folds. [...]The Fish that lives there is notably similar to a Polypus or Many-Feet, [...]its flesh entirely soft, [...]white and covered with warts, and which it spreads out like a rose when swimming [...].⁶²

This is followed by a magnificent description of the behaviour of these unusual creatures. For several centuries, this passage was to remain the sole account of the living nautilus and is yet another testimony to Rumphius's fascination with shells that shows how very different he was from his "curious" contemporaries.⁶³ Unlike them, Rumphius emphasized the importance of functional morphology and in so doing emulated Aristotle's emphasis on the priority of field observation. Beekman correctly observed that what made Rumphius remarkable was his precise notation of habitats and sites and his talent for classification.⁶⁴

However, Rumphius's book also contains detailed descriptions of shells' shapes and patterns, and he draws numerous comparisons with similar forms in calligraphy, painting, sculpture and architecture. For example, Rumphius identifies small letters or images on shell surfaces, some of which remind him of the bluish perspectives that were common in Dutch landscape painting:

Chama optica, Little Perspectives, are roundish and bossed little Shells, [...] decorated with blackish designs, which represent hills, little houses and peaks, in such a way, that the ones nearest to the edge are the largest and blackest ones; if one follows the other ones towards the back, one will see that they gradually become smaller and bluer, and fainter, just as if ones saw a drawing of a distant Landscape or one in perspective.⁶⁵

⁶² Ibid. 93.

⁶³ Ibid.

⁶⁴ Ibid. XCVIII.

⁶⁵ Ibid. 193.

The patterning on the *Chama ciricinata* reminded Rumphius of ‘small towers or houses’,⁶⁶ while another shell evoked ‘certain tents with tiny flags on top, like a Turkish army in the field’.⁶⁷ *Letter Shells*, as Rumphius termed them, have ‘black stripes or marks, which make for the letter W, and the more these are crowded together, the better the shell’.⁶⁸ Shells known as *Voluta* or (in Dutch) *whirlpools* are named after architectural volutes: ‘*Voluta*, is an art word, from Architecture, by which is meant the curls, which one sees on Ionian and Corinthian pillars, and these Whelks have been called after them because of their resemblance to this: because they have a flat head, made from many whorls that flow into each other, in the shape of a *linea spiralis*, or snake line’.⁶⁹ Known as *Conidae* today, these shells were favorite collector’s items in the 17th century owing to its elegantly curved forms and elaborate patterns. Rumphius could identify ‘rough, black, and square Characters’ on their surfaces, as well as similarities to ‘Music notes; but the Characters are long on some, and those next to them, are a little shorter, like the letters one sees in the little ABC books of children’ [Fig. 16].⁷⁰ Other patterns evoked ‘white church windows’,⁷¹ while others were ‘marked with little gold stars or flowers’⁷² or ‘yellow feathers’,⁷³ or had ‘russet, crooked veins’⁷⁴ or ‘thin and hacked Characters, that look quite like the ghosts, which the Map makers paint in the big and dreadful desert called Lob, to the west of Sina’.⁷⁵ ‘These spots resemble various shapes, such as Clouds, Animals, or People carrying a large box, or whatever a clever person wants to contemplate therein’.⁷⁶ Although such natural structures were regarded as a morphological phenomenon, the approach was not exclusively formalistic. Indeed, the observer was stimulated to use his semiotic capabilities to fill these forms and patterns with meaning.

Behind the Baroque interest in so-called ‘surfaces painted by nature’ lay the question as to the origin of these signs and symbols. If *Natura* herself had inscribed series of signs in the shells, these signs meant that

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid. 144.

⁷⁰ Ibid. 146.

⁷¹ Ibid. 148.

⁷² Ibid.

⁷³ Ibid. 149.

⁷⁴ Ibid. 150.

⁷⁵ Ibid.

⁷⁶ Ibid. 146.

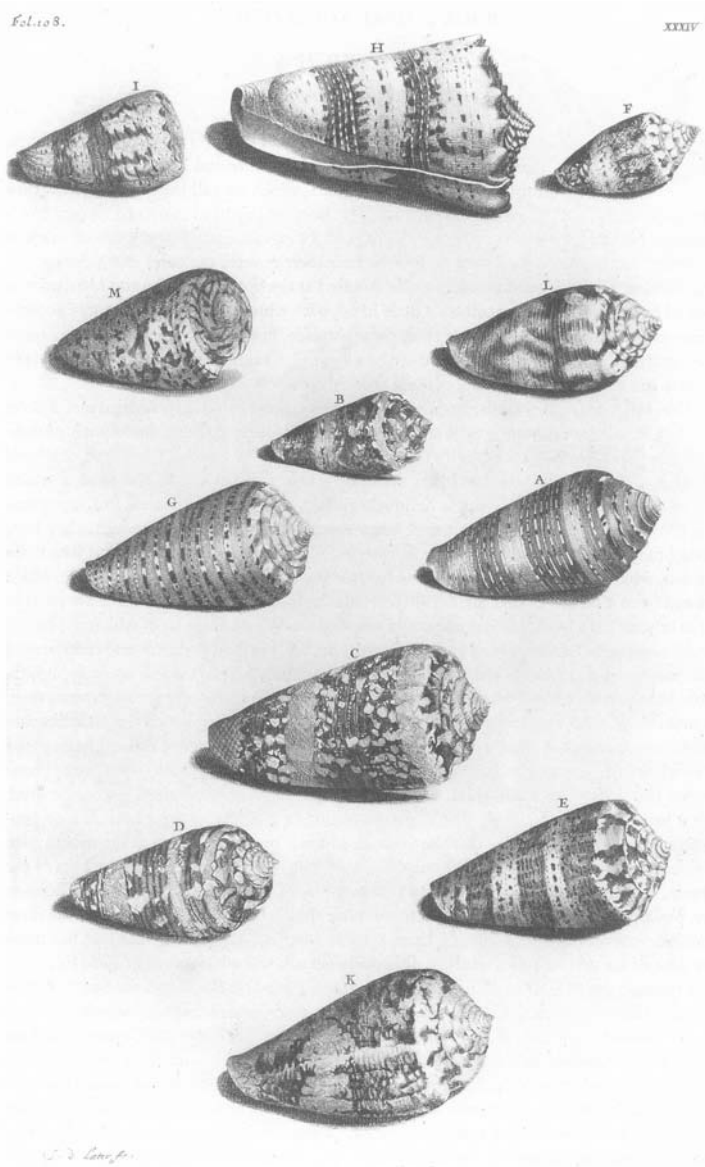


Fig. 16. Richly patterned species of *Conidae* as described in Georg Eberhard Rumphius's *D'Amboinsche Rariteitkamer*. The characters and signs on the surface seem to be directly 'painted by Nature'. The *Conida* injects poisonous barbs into its prey before devouring it. Georg Eberhard Rumphius, *The Ambonese Curiosity Cabinet* (*D'Amboinsche Rariteitkamer*, Amsterdam 1705), Fig. 104.

an alternative to the man-made writing systems of western cultures must exist. It was based first and foremost on visual phenomena – to read nature’s writing meant to be able to interpret natural traces, e.g. cracks in surfaces or colour differences. This may explain why specimens from the *Conidae* family were among the favourite subjects of Dutch shell still life paintings: in fact their patterns looked very much like some mysterious scripture or scribble. The possibility that both image and text had a common origin in a natural iconography was widely debated during the 17th century and both explored by means of linguistic models and by theory of art.

But, on the other hand, baroque observers may also have been so captivated by the *Conidae* species because of the fact that behind their alluring surface lurked the hidden danger of a highly toxic poison, a phenomenon that was well known to fishermen and collectors at that time. It is again Rumphius who described the deadly sting that the animals of this species deploy in self-defense if they are touched. For example, *Mitra papalis* or *Pope’s Crown* ‘is an oblong smooth little Whelk. [...] It can deliver a poisonous sting, when you hold it in your hand, and has killed some people: [...] who could tell, that such a holy *Pope’s Crown* would conceal such deadly venomen?’⁷⁷ In the annotation it is then laconically stated: ‘The venomous little sting, which the Author noted in this fish, should be ignored by the Roman Catholic collectors’.⁷⁸ The obvious beauty – danger and evanescence – mortality interconnections evoked by these shells opened up a whole new realm of possible iconographical interpretation. However, the radical distinction between the alluring outer shell (conchology) and the living creature within (malacology) was becoming increasingly apparent, and with it the distinction between the formal and functional morphology of molluscs.

⁷⁷ Ibid. 137.

⁷⁸ Ibid. 140.

*Selective Bibliography**Rumphius*

- BALLANTIJN G., *Rumphius. De blinde ziener van Ambon* (Utrecht: 1944).
- BEEKMAN E.M., *The Poison Tree. Selected Writings of Rumphius on the Natural History of the Indies* (Amherst: 1981).
- GRESHOFF M. (ed.), *Rumphius-Gedenkboek, 1702–1902* (Haarlem: 1902).
- HUET C.B., *Het land van Rembrand. Studies over de Noordnederlandse beschaving in de zeventiende eeuw (1883–84)* (Amsterdam: 1987).
- MARTELLI U. (ed.), *Le Collezioni di Giorgio Everardo Rumpf, acquistate dal Granduca Cosimo III de Medici* (Florence: 1903).
- MARTENS E. von, “Die Mollusken (Conchylien) und die übrigen wirbellosen Thiere in Rumpf’s Rariteitkamer”, in Greshoff (ed.), *Rumphius Gedenkboek* 109–136.
- RUMPHIUS GEORG EBERHARD, *The Ambonese Curiosity Cabinet (D’Amboinsche Rariteitkamer, Amsterdam 1705)*, translated, edited, annotated, and with an introduction by E.M. Beekmann (Ann Arbor: 1999).
- SIRKS M.J., “Rumphius, the Blind Seer of Amboina” in Honig P. – Verdoorn F. (eds.), *Science and Scientists in the Netherlands Indies* (New York: 1945) 295–308.
- STRACK H.L. – Goud J., “Rumphius and the ‘Amboinsche Rariteitkamer’”, *Vita Marina* 44,1–2 (1996) 29–39.
- WIT H.C.D. DE (ed.), *Rumphius Memorial Volume* (Baarn: 1959).
- ZAUNICK R., “Georg Eberhard Rumphius und Cosimo III von Medici”, *Physis. Rivista di storia della scienza* 3,2 (1961) 125–136.

Conchology, Palaentology and Geology

- ALBRITTON C.C., *The Abyss of Time: Changing Conceptions of the Earth’s Antiquity after the Sixteenth Century* (San Francisco: 1980).
- ARIEW R., “A New Science of Geology in the Seventeenth Century?” in Barker P. – Ariew R. (eds.), *Revolution and Continuity: Essays in the History and Philosophy of Early Modern Science* (Washington D.C.: 1991).
- COHN N., *Noah’s Flood: The Genesis Story in Western Thought* (New Haven: 1996).
- CUTLER A., *The Seashell on the Mountaintop* (New York: 2004).
- GOULD S.J., *Time’s Arrow and Time’s Cycle: Myth and Metaphor in the Discovery of Geological Time* (Cambridge: 1987).
- LINDNER G., *Muscheln und Schnecken der Weltmeere* (Munich et al.: 1999).

Dutch shell collections

- JUTTING W.S.S. VAN BENTHEIM, “A brief history of the conchological collections at the zoological museum of Amsterdam”, *Bijdragen tot de Dierkunde* (1938) 167–245.
- BERGVELT E. – KISTEMAKER R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992).
- BERGVELT E. – JONKER M. – WIEGHMANN A. (eds.), *Schatten in Delft, burgers verzamelen 1600–1750* (Zwolle: 2002).
- DANCE S.P., *A History of Shell Collecting* (Leiden: 1986).
- , *Shell Collecting An Illustrated History* (London: 1966).
- DIETZ B., “Mobile objects: the space of shells in eighteenth-century France”, *The British journal for the history of science* 39,3 (2006), 363–382.
- ENGEL H., “Alphabetical list of dutch zoological cabinets and menageries”, *Bijdragen tot de Dierkunde* (1938) 247–346.

KISTEMAKER R., „Seba und Ruysch: Die Anfänge der petrinischen Kunstkammer; Peters Besuche in Holland“, in *Palast des Wissens: Die Kunst- und Wunderkammer Zar Peters des Großen* (Munich: 2003) 54–66.

ROEMER B. VAN DE, „Neat nature: The relations between nature and art in a Dutch cabinet of curiosities from the early eighteenth century“, *History of Science* (2004), 47–84.

Shells in art

BARTEN S. (ed.), *Die Muschel in der Kunst: von der Renaissance bis zur Gegenwart* (Zurich: 1985).

HOGENDORP PROSPERETTI L. VAN, “‘Conchas legere’: Shells as trophies of repose in Northern Europe Humanism“, *Art History* 29,3 (2006) 387–413.

KEMP M., “Palissy’s Philosophical Pots: ceramics, grottos and the ‘Matrice’ of the earth“, in Tega W. (ed.), *Le origini della Modernità* (Florence: 1999) 69–88.

LEONHARD K., “Ueber Links und Rechts und Symmetrie im Barock“, in Guenzel S. (ed.), *Topologie* (Weimar: 2007) 135–151.

MAURIES P. (ed.), *Shell Shock: Conchological curiosities* (London: 1994).

METTE H.-U., *Der Nautiluspokal: Wie Kunst und Natur miteinander spielen* (Munich et al.: 1995).

SHELL H.R., “Casting Life, Recasting Experience: Bernard Palissy’s Occupation between Maker and Nature“, *Configurations* 12,1 (2004) 1–40.

Shell still life painting

ATWATER G.D., *The impact of trade by the Dutch East India Company on seventeenth-century Netherlandish art* (Kansas: 1992).

BERGSTRÖM I., *Dutch still-life painting in the seventeenth century* (London: 1956).

BOL L. (ed.), *Adriaen Coorte, stillevenschilder ex. cat.* Dordrecht 1958 (Dordrecht: 1958).

— *Adriaen Coorte: A unique late seventeenth century Dutch still-life painter* (Assen: 1977).

GRISEBACH L., *Willem Kalf 1619–1693* (Berlin: 1974).

GROHÉ S., *Stilleben: Meisterwerke der holländischen Malerei* (Munich et al.: 2004).

GEMAR-KOELTZSCH E., *Holländische Stillebenmaler im 17. Jahrhundert*, ed. by K. Ertz (Lingen: 1995).

LOWENTHAL A., *The Object as Subject. Studies in the Interpretations of Still Life* (Princeton: 1996).

LUTHER G., „Stilleben als Bilder der Sammelleidenschaft“, in Langemeyer G. – Peters H.-A. (eds.), *Stilleben in Europa* (Münster: 1979) 88–128.

SEGAL S., *A fruitful past. A survey of the fruit still lives of the Northern and Southern Netherlands from Brueghel till van Gogh* (Brunswick: 1983).

— *A prosperous past. The Sumptuous Still-Life in the Netherlands 1600–1700* (The Hague: 1989).

— *Flowers and Nature. Netherlandish flower paintings of four centuries* (The Hague: 1990).

THE CONSTRUCTION OF THE ANIMAL
IN ZOOLOGICAL ILLUSTRATIONS

IN MINIMIS MAXIME CONSPICUA.
INSEKTENDARSTELLUNGEN UM 1600
UND DIE ANFÄNGE DER ENTOMOLOGIE

Thea Vignau-Wilberg

Als eines der seltsamsten, mit Sicherheit aber als eines der kostbarsten Kompendien von Tierdarstellungen haben sich vier Alben mit Miniaturen erhalten, die der flämische Miniaturist Joris Hoefnagel (1542–1600) am Ende des 16. Jahrhunderts schuf.¹ Nach van Mander zahlte Kaiser Rudolf II. die exorbitant hohe Summe von 1000 Goldkronen, um sie seiner Kunstkammer einverleiben zu können.² Die vier kleinen, querechteckigen Bändchen enthalten naturalistische und kunstvoll auf Pergament gemalte Darstellungen verschiedener Tiere. Die Tierbilder sind auf dem Blatt jeweils von einem schmalen ovalen Goldrahmen eingefasst. Über und unter dem Oval steht häufig ein (meist lateinischer) Sinnspruch oder eine längere Sentenz klassischer oder biblischer Provenienz, wodurch sich die Blätter in der Struktur dem klassischen Emblem nähern. Die Tiere sind jeweils einem der Vier Elemente der antiken Elementenlehre zugeordnet: der Erde (terra), dem Wasser (aqua), der Luft (aier) und dem Feuer (ignis). Die Miniaturenfolge wird gewöhnlich als *Die vier Elemente* bezeichnet,³ die Titelblätter der Alben tragen entsprechende Aufschriften: „Terra: animalia quadrupedia et reptilia“; „Aqua: animalia aquatilia et conchiliata“; „Aier: animalia volatilia et amphibia“; „Ignis: animalia rationalia et insecta“.

Diese augenscheinlich ausgefallene Anordnung der Tiere nach den Vier Elementen entspricht größtenteils der traditionellen Klassifizierung, wie man sie beispielsweise in Conrad Gesners *Historia animalium* findet:

¹ Washington D.C., National Gallery of Art, Gift of Mrs. Lessing J. Rosenwald, Inv. Nr. 1987.205–20.8. Dazu in erster Linie Hendrix M.L., *Joris Hoefnagel and the „Four Elements“: a study in Sixteenth-Century Nature Painting* (Ann Arbor: 1985) (Diss. Princeton University: 1984).

² Karel van Mander, *Het Schilder-boeck* (Haarlem: 1604) fol. 263r.

³ Zu den einzelnen Miniaturen in verschiedenen Sammlungen siehe Hendrix, *Four Elements* 8 und 126, Anm. 10; Vignau-Wilberg Th., „Naturemblematik am Ende des 16. Jahrhunderts“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 82/83 (1986/87) (145–156) 145, Anm. 3.

Vierfüßer (terra), Fische (aqua) und Vögel (aier).⁴ Dem Element Feuer wird gewöhnlich kein Tier zugeordnet, außer manchmal der Salamander. Als erste Darstellung in Hoefnagels Band *Ignis*, in dem „animalia rationalia“ und Insekten zusammengefasst sind, ist eine Miniatur des so genannten Haarmannes Petrus Gonsalus (Pedro Gonzales) und seiner (unbehaarten) Frau aufgenommen, die nächste zeigt ihre beiden behaarten Kinder.⁵ Sie galten in dieser Zeit als medizinische Wunder: Wesen mit tierischer Behaarung und mit menschlichem Geist begabt. Gonsalus, gebürtig aus Teneriffa, wurde an den europäischen Höfen vorgeführt und – laut dem Text von Hoefnagel in den *Vier Elementen* „comparuit Monachii boiorum anno 1582“ – hielt er sich einige Zeit in München auf (im Kunstkammerinventar von Schloss Ambras, 1621, wird er als „rauch man zu München“ bezeichnet).⁶

Nach den zwei Miniaturen der Haarfamilie folgen in *Ignis* fast ausschließlich Abbildungen von Insekten oder von Kleintieren wie Spinnen, die damals zu den Insekten gerechnet wurden. Sie sind meist zu mehreren und zusammen mit Pflanzen im golden umrahmten Oval angeordnet. Ihre Wiedergabe ist naturgetreu und meist lebensgroß; die einzelnen Tiere sind jeweils durch kleine farbige Zahlen nummeriert. Seitlich des Ovals erscheint eine römische Nummerierung. Zwischen den bemalten Pergamentblättern wurden gleich bei der Entstehung dünne Papierblätter eingebunden, die einerseits zum Schutz der Miniaturen dienten, andererseits durch den Künstler als Träger weiterer Kommentare verwendet wurden. Sie enthalten Zitate aus der Bibel, aus antiken und humanistischen Schriften. Die arabischen Zahlen neben den einzelnen Tieren, die es auch in den drei anderen Bändchen gibt, legen nahe, daß ursprünglich ein separates Verzeichnis existierte, in

⁴ Conrad Gesner, *Historia animalium*, 4 Bde. (Zürich, Christoffel Froschauer: 1551–1558).

⁵ Hendrix, *Four Elements* 266–267; *Bestiaire*, Cod. Min. 129, fol. 1 und 2. Siehe Haupt H. – Vignau-Wilberg Th. – Irblich E. – Staudinger M., *Le Bestiaire de Rodolphe II. Cod. Min. 129 et 130 de la Bibliothèque Nationale d'Autriche* (Paris: 1990), Text 46–47 und 92–97.

⁶ So im Porträtinventar 1621 Schloss Ambras, in dem vier Gemälde und zwei Kopien verzeichnet sind. Siehe Kenner F., „Die Porträtsammlung des Erzherzogs Ferdinand von Tirol“, *Jahrbuch der Kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses* 15 (1894) (147–259) 250–251; Haupt et alii, *Bestiaire* 46; Scheicher E., *Die Kunst- und Wunderkammern der Habsburger* (Wien: 1979) 134–135. Nach Hendrix, *Four Elements* 100–101, sind die Miniaturen Kopien nach den vier lebensgroßen Ölbildern in Ambras. Nach Kenner wurden sie in München im Auftrag von Herzog Wilhelm V. gemalt und gelangten als Geschenke in die Kunstkammer von Ferdinand von Tirol.

dem jedes Tier namentlich aufgeführt wurde. Hier waren wohl weitere Texte aufgenommen, die jenen in den gedruckten zoologischen Werken entsprechen, in denen man sich auf die Forschungsergebnisse älterer Autoren (Aristoteles, Plinius, Gesner u. a.) berief.

Während die Tiere der Elemente terra, aqua und aier größtenteils nach gemalten, in Kupfer gestochenen oder in Holz geschnittenen Vorlagen zeitgenössischer Künstler (Hans Bol, Adriaen Collaert, Nicolaes de Bruyn u. a.)⁷ gemalt wurden – eine gängige und keineswegs abwegige Vorgehensweise –, ist das bei den Tieren von *Ignis* nicht der Fall. Es existierte noch keine illustrierte Publikation über die Welt der Insekten, auf die Hoefnagel hätte zurückgreifen können. Das erste neuzeitliche Werk über die Insekten,⁸ *De animalibus insectis libri septem cum singulorum iconibus ad vivum expressis* von Ulisse Aldrovandi, erschien erst 1602, zwei Jahre nach Hoefnagels Tod.⁹ Trotz des vielsprechenden Titels (*cum singulorum iconibus ad vivum expressis*) ist Aldrovandis Buch spärlich und noch dazu kümmerlich illustriert. Als nächstes und künstlerisch weitaus wichtigeres Insektenbuch erschien das *Insectorum sive minimorum animalium theatrum* des Engländers Thomas Mouffet (1553–1604). Es kam 1634, dreißig Jahre nach Mouffets Tod, heraus.¹⁰

Im gelehrten Europa war um 1600 das Interesse für die Insektenwelt groß. Man entdeckte in diesen winzigen Kreaturen die in Bezug auf die Artenzahl weitaus größte Tierklasse, ihre skurille Schönheit und die schnelle Abfolge der Generationen. Gelehrte wie Mouffet und Aldrovandi korrespondierten um 1590 über diese Tierchen ebenso wie Clusius (Vermerk im Buch von Mouffet, siehe unten) und Joachim Camerarius der Jüngere (1534–1598). Der gelehrte humanistische Künstler Hoefnagel, war, wie seine Korrespondenz zeigt, ein

⁷ Siehe Hendrix, *Four Elements* passim.

⁸ Plinius hatte mit seinem elften Buch der *Naturalis historia* bereits ein Buch über die Insekten geschrieben. Er konzentrierte sich auf wenige Arten: Biene, Seidenraupe, Spinne, Skorpion, Zikade, Käfer, Heuschrecke, Ameise, Schmetterling.

⁹ Ulisse Aldrovandi, *De animalibus insectis libri septem cum singulorum iconibus ad vivum expressis* [...] (Bologna: 1602). Im Vorwort vom 1. April 1599 der Ausgabe 1602 wird das kaiserliche Privileg für zehn Jahre verbrieft.

¹⁰ Thomas Mouffet, *Insectorum sive minimorum animalium theatrum. olim ab Edoardo Wottono, Conrado Gesnero, Thomaque Pennio inchoatum: tandem Thomae Mouffeti Londinatis opera sumptibusque maximis concinnatum, auctum, perfectum et ad vivum expressis iconibus supra quingentis illustratum* (London: 1634); englische Zitate nach der Facsimile-Ausgabe *The Theater of Insects: or Lesser living Creatures, as Bees, Flies, Caterpillars, Spid[e]rs, Worms* [...] (London: 1658; Facsimile-Ausgabe Edward Topsell, *The history of Four-Footed Beasts and Serpents and Insects*, vol. III. *The Theater of Insects* by T. Muffet (New York: 1967)).

hochgeschätztes Mitglied desselben Kreises. Camerarius starb 1598, Hoefnagel 1600, Mouffet 1604, Clusius im Jahr 1609. Sie gehören derselben Generation an.

In der flämischen Buchmalerei, besonders während ihrer späten Blüte in den Gent-Brügger Streublumenhandschriften, finden sich bereits vereinzelt Insekten, allerdings häufig kombiniert mit einer Pflanzendarstellung. Es sind bunte Schmetterlinge, Raupen und Libellen, sie werden – zusammen mit der Blume – häufig im Rahmen der marianischen Symbolik verwendet. Der in Antwerpen gebürtige Hoefnagel, der als Kaufmann ausgebildet wurde, übte die Miniaturmalerei ursprünglich nur als Freizeitbeschäftigung aus. Obwohl Außenseiter und kein zunftverbundener Maler, sollte er sich zum virtuosesten Miniaturisten der zweiten Hälfte des 16. Jahrhunderts nördlich der Alpen entwickeln (die spezialisierten englischen Porträtminiaturisten Nicholas Hilliard und Isaac Olivier seien bei dieser Wertung außer Betracht gelassen). Hoefnagel schließt in einigen seiner Werke gezielt an die Tradition der Gent-Brügger-Handschriften an, so auch bei manchen Illuminationen des Missales für Erzherzog Ferdinand II. (Ferdinand von Tirol)¹¹ und vor allem bei seinen in Miniatur gemalten Ergänzungen im Stundenbuch für Philipp von Kleve in Brüssel, das bereits Ende des 15. Jahrhunderts illuminiert worden war.¹²

Ebenso große Wirkung ging von den Aquarellen mit Blumen und kleinen Tieren von Albrecht Dürer aus. Sie waren schon zu Hoefnagels Zeiten berühmt und dieser Ruhm sollte nie verblasen. Kaiser Rudolf II. war bemüht, alles, was sich aus Privatbesitz erwerben ließ, in seinen Besitz zu bringen: den Liegenden Feldhasen (1502) und das Große Rasenstück (1503). Als weiteres bedeutendes Blatt ist der Hirschkäfer (1505) zu nennen [Abb. 1].¹³ Dürers Zeichnung charakterisiert zum ersten Mal ein Insekt in seiner *malerischen* Gestalt – sein

¹¹ Wien, Österreichische Nationalbibliothek, Cod. 1784, fol. 83r; 347v; 403r etc.

¹² Brüssel, Bibliothèque Royale de Belgique, Ms. IV, 40; Hendrix, *Four Elements* 37; Thoss D., „Georg Hoefnagel und seine Beziehung zur Gent-Brügger Buchmalerei“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 82/83 (1986/97) 199–212; Vignau-Wilberg Th., „Die Randilluminationen und Initialen“, in *Das Gebetbuch Kurfürst Maximilians I. von Bayern* (Frankfurt-Stuttgart: 1986) (65–118) 85–86.

¹³ Wien, Albertina, Inv. Nr. 3073 (Hase) und Inv. Nr. 3075 (Großes Rasenstück). Los Angeles, J. Paul Getty Museum, Inv. Nr. 84 GC.214 (Hirschkäfer). Koreny F., *Albrecht Dürer und die Tier- und Pflanzenstudien der Renaissance* (München: 1984; Ausstellungskatalog Wien, Albertina 1984/85) Nr. 43, 61 und 36.



Fig. 1. Albrecht Dürer, Hirschkäfer, 1505. Los Angeles, J. Paul Getty Museum.

glänzender, knackiger Panzer, sein skurilles „Geweih“ – und zeichnet es damit zugleich wissenschaftlich-determinierend auf: Es bleibt nichts im Unklaren. Dürers Großes Rasenstück, in dem sich der Bezug der kleinen Natur, des Mikrokosmos, zum All, zum Makrokosmos, in einer ansprechenden Form und einer für die Humanisten des 16. Jahrhunderts völlig verständlichen Bildsprache ausdrückt,¹⁴ sowie das lebensgroße Bildnis des Hirschkäfers hatten starke Auswirkung auf die Künstler seiner eigenen und späterer Generationen.¹⁵

Als Georg Flegel in Frankfurt den Hirschkäfer am Anfang des 17. Jahrhunderts in einem Aquarell darstellte [Abb. 2],¹⁶ geschah dies selbstverständlich auch mit einem Blick auf Dürers Hirschkäfer. Vor Flegel hatte es bereits Joris Hoefnagel in den *Vier Elementen* (vgl. *Ignis* V) und in einem dazugehörigen Einzelblatt getan.¹⁷ Hoefnagel ahmt in seiner Wiedergabe der ersten Miniatur nicht nur Dürers Aquarell nach, sondern versucht, es zu übertreffen. Neben der *imitatio* strebten die Künstler die *aemulatio*, die das Original übertreffende Nachbildung, an. Hoefnagel gab das Insekt nicht nur, wie Dürer, diagonal in leichter Seitenansicht wieder, sondern auch in Aufsicht, mit Blick auf den Rücken, wie aufgespießt mit ausgebreiteten Flügeln, in der stofflichen Wiedergabe dennoch völlig lebendig [Abb. 3]. Neben vielen anderen Insekten erscheint in einem Einzelblatt zu *Ignis* ein weiterer und ebenso eindrucksvoller Käfer, der Nashornkäfer (korrekter: Elefantenkäfer).

Zahlreich sind in den *Vier Elementen* die Darstellungen von Faltern und Schmetterlingen. Es fehlt dabei auch die sogenannte vollkommene Metamorphose nicht, die in ihren drei Stufen abgebildet ist: die Raupe, die Puppe und der Schmetterling. Wie nahe Hoefnagel bei seinen Darstellungen der Natur folgt, lässt sich an der Miniatur der drei Libellen (*Ignis* LIV) ablesen; bei zwei Exemplaren sind die Flügel wahrhaftiger Libellen an der entsprechenden Stelle auf das Pergament geklebt [Abb. 4]. Sicher ist das auch eine Spielerei. Man darf es sich wohl nicht so vorstellen, dass Hoefnagel vor einem (toten) Insekt oder vor einem Präparat (vgl. den Hirschkäfer mit den ausgebreiteten Flügeln) saß und es direkt auf das Pergament porträtierte. Die Möglichkeiten zur Korrektur der Darstellung bei dem hochempfindlichen, präparierten

¹⁴ Vgl. Vignau-Wilberg, „Naturemblematik“ 145–156.

¹⁵ Siehe Koreny, *Tier- und Pflanzenstudien* zu Nr. 61 und 36.

¹⁶ Ehem. Berlin, Kupferstichkabinett, Kriegsverlust.

¹⁷ Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, KdZ 4807. Koreny, *Tier- und Pflanzenstudien* Nr. 39.

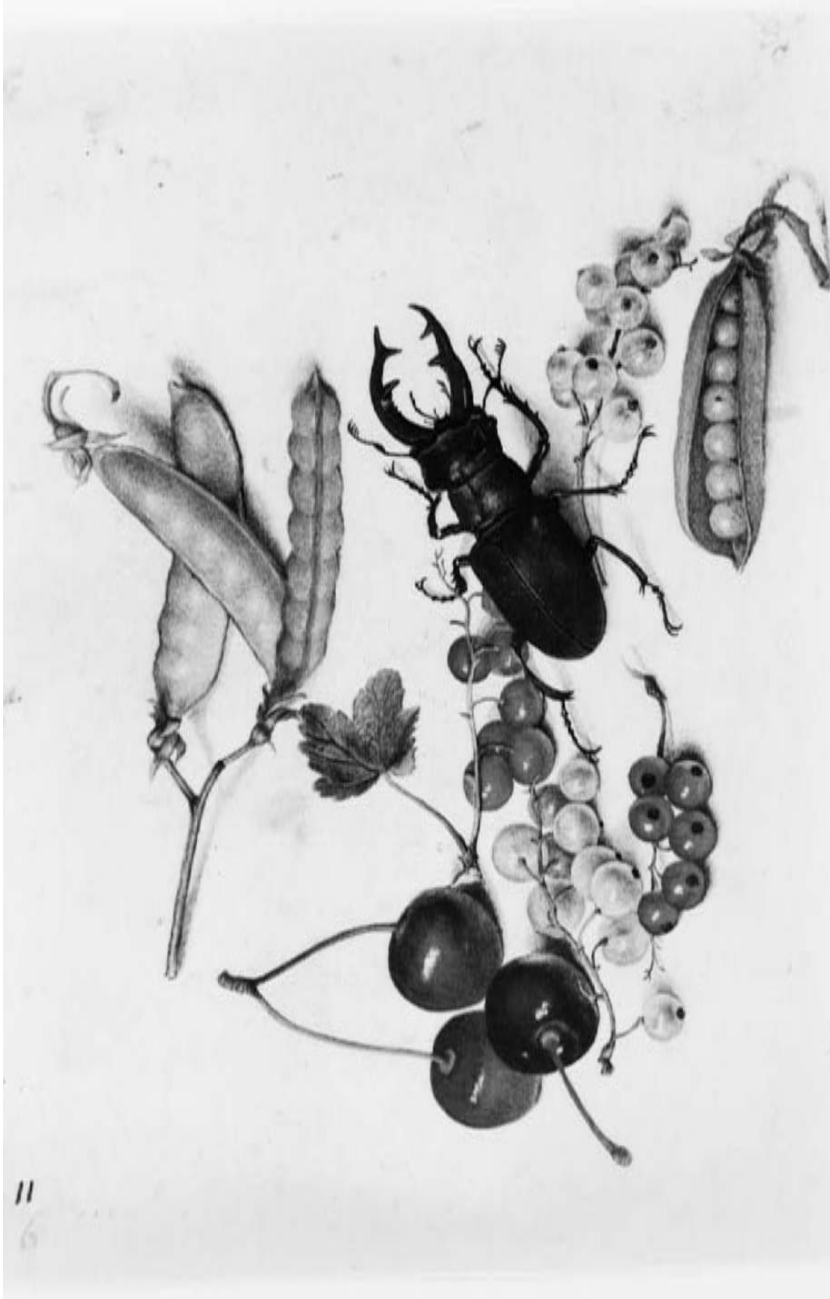


Fig. 2. Georg Flegel, Stülben mit Hirschkäfer, um 1630. Ehem. Berlin, Kupferstichkabinett (Kriegsverlust).



Fig. 3 [Col. pl. VII]. Joris Hoefnagel, Hirschkäfer, Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett.

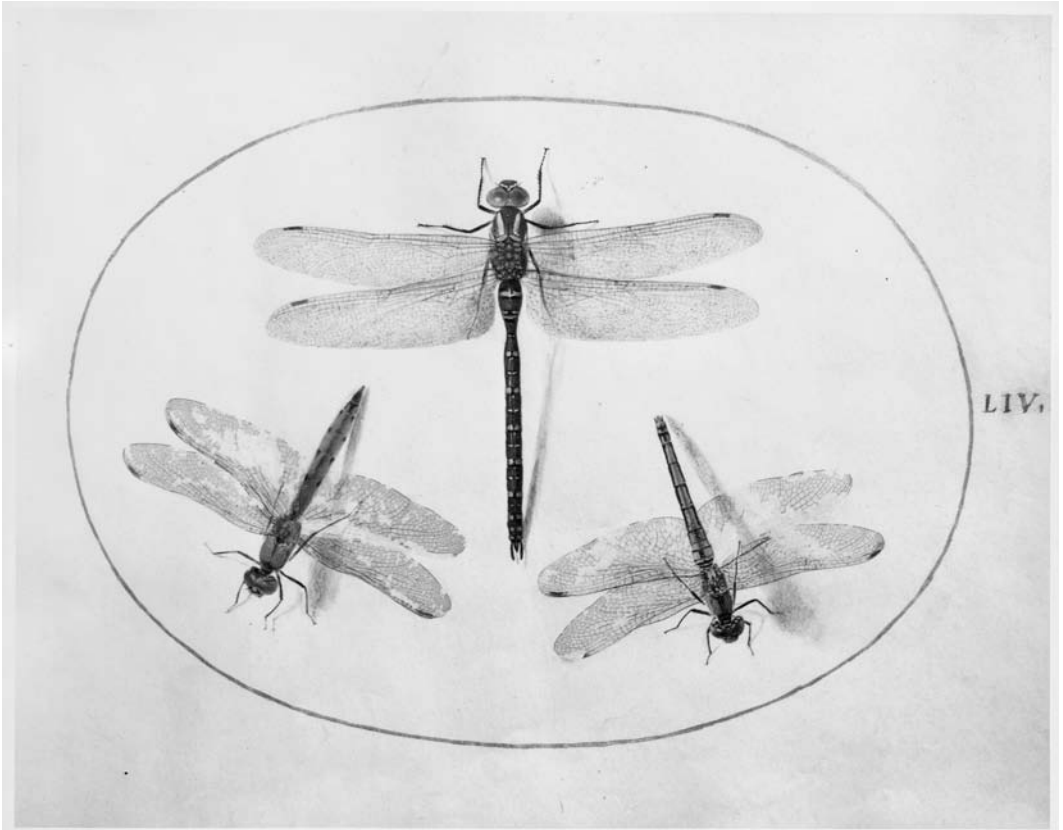


Fig. 4. Joris Hoefnagel, *Die Vier Elemente – Ignis* LIV. Washington D.C., National Gallery of Art.

Pergament wären dafür zu gering, das Material Pergament zu kostbar gewesen. Hoefnagel arbeitete, wie andere Maler auch, bei den *Vier Elementen* mit Hilfe einer Vorlagesammlung, eines Musterbuchs, in dem er seine Motive zeit seines Lebens sammelte und aus dem er bei Bedarf kopierte. Nur so lässt sich erklären, dass sich bestimmte Naturmotive in Werken, die in Abstand von bis zu zwanzig Jahren gefertigt wurden, in derselben Form wiederholen.

Hoefnagel malte neben den Miniaturensolgen und den Illuminationen in Handschriften auch Naturdarstellungen auf einzelnen Pergamentfolien, die in einer geschlossenen Komposition stillebenartig angeordnet sind. Seine Bildgegenstände sind wild wachsende und gezüchtete, exotische Pflanzen (Tulpen) sowie eine Vielzahl von Insekten und kleinen Tieren. Sie liegen gleichsam auf dem Pergament auf und werfen dort ihren Schatten [Abb. 5]. Fast immer wurde eine solche Darstellung durch einen lateinischen Sinnspruch inhaltlich ausgelegt und leitete in dieser Weise zur Kontemplation und Meditation an. Das feine Pergament wurde meistens auf eine Holztafel aufgeklebt und das Gemälde sorgfältig in ein Futteral gelegt und in der Schublade eines Kunstschranks verwahrt. Es sind erlesene Kunstkammerstücke, die zum kontemplativen Betrachten hervorgeholt wurden.¹⁸ Diese Kabinettminiaturen mit Naturobjekten und emblematischen Deutungen waren am Hof Kaiser Rudolfs II. und unter der Hocharistokratie sehr gefragt und nur in diesem Kreis bekannt.

Joris Hoefnagel selbst ergriff die Initiative, aus der Motivsammlung seines Musterbuchs Bildkompositionen zusammenzustellen und diese durch einen Sinnspruch sinnbildlich zu vertiefen. Sein 1573 in Antwerpen geborener Sohn Jacob, der im Gegensatz zum Vater eine Ausbildung als Maler genossen hatte, stach die achtundvierzig Vorlagen in Kupfer. Als *Archetypa studiaeque patris Georgii Hoefnagelii* erschienen die Kupferstiche 1592 in Frankfurt.¹⁹ Die *Archetypa*, d. h. der Formenschatz seines Vaters, wurden ihrerseits von Künstlern als Musterbuch verwendet, die Hoefnagel-Motive wurden bis ins 19. Jahrhundert hinein kopiert. Einzelne Blätter der *Archetypa*-Folge wurden von Künstlern und Liebhabern liebevoll koloriert und wie profane Andachtsbildchen behandelt. Auch in den *Archetypa* finden sich der Nashorn- (Elefanten-) Käfer

¹⁸ Über Hoefnagels Kabinettminiaturen generell siehe Vignau-Wilberg Th., „Unbekannte Kabinettminiaturen von Joris Hoefnagel“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 85/86 (1989/90) 67–77.

¹⁹ Kommentierte Facsimile-Ausgabe (München: 1994).

(I, 1) und der Hirschkäfer (I, 6), durch das Stechverfahren seitenverkehrt zum gemalten Bild. Der diagonale Hirschkäfer in leichter Seitenansicht (*Archetypa* II, 1) [Abb. 6] ist Mittelpunkt einer Komposition, bei der Hoefnagel im Text auf das einmalige Werden und Vergehen, auf die Vergänglichkeit alles Irdischen anspielt: Dafür verwendet er die von ihm häufig benutzte symbolische Gegenüberstellung der knospenden und der verblühten Rose mit dem Spruch „Rosam quae praeterierit ne quaeras iterum“²⁰ („Frage die verblühte Rose nicht um eine neue Blüte“). Auf den Hirschkäfer selbst bezieht sich ein nicht ganz passendes Zitat (in *Ignis* V, erhielt er denselben Kommentar), wie viele andere den *Adagia* von Erasmus entnommen.²¹ Er lautet: „Scarabei umbra“ („der Schatten eines Skarabäus“), und macht das Tier (Erasmus folgend) zum Sinnbild unbegründeter Furcht, weil es mit schrecklichem Getöse im Nachtflug zu imponieren versucht. Die Wiedergabe des Schattens bei den einzelnen Naturegegenständen suggeriert, dass sie frisch abgepflückt oder eingefangen auf das Pergament gelegt wurden. Die Schattengebung ist wie bei einem Stilleben konsequent durchgeführt, auch zum Beispiel bei den zarten Beinchen der Spinnenartigen, nicht aber bei den im seitlichen Rahmen „befestigten“ Blumen. Bei der gemalten Darstellung kommt das Licht von links, im Stich durch die Umkehrung von rechts.

Der Hirschkäfer in Rückenansicht beherrscht das Blatt 6 der ersten Folge der *Archetypa* (I, 6) [Abb. 7]. Er folgt der gleichen Vorlage wie der Hirschkäfer auf dem Einzelblatt in Berlin (siehe oben). Während der untere Spruch, „Habet et Musca splenem et Formicae sua bilis inest“ („Es hat auch eine Fliege eine Milz [d. h. zum Lachen] und eine Ameise eine Galle [d. h. Zorn]“), mit einem erneuten Zitat aus den *Adagia* des Erasmus nur lose auf die Darstellung der Fliege links und der Ameise anspielt²² (das gleiche Zitat findet sich in *Ignis* LXXV), ist der Bezug des oberen Spruches zum Hirschkäfer von größerer Bedeutung: „Me neque mas gignit neque foemina concipit: autor // Ipse mihi solus seminiumque mihi“ („Mich zeugt weder ein männliches Wesen, noch empfängt mich eine Frau. Für mich ist Gott allein der Schöpfer und der Samen zugleich“). Dem Hirschkäfer wurde die ungeschlechtliche Fortpflanzung nachgesagt, die Jungfernzeugung. Nur so ist es zu erklären, dass der Hirschkäfer zum Sinnbild Christi werden konnte, wie dies sichtlich der

²⁰ Desiderius Erasmus, *Adagia* (Basel: 1559) chil. II, cent. VI, XL.

²¹ Desiderius Erasmus, *Adagia* (Basel: 1559) chil. III, cent. II, XLV.

²² Desiderius Erasmus, *Adagia* (Basel: 1559) chil. III, cent. V, VII.

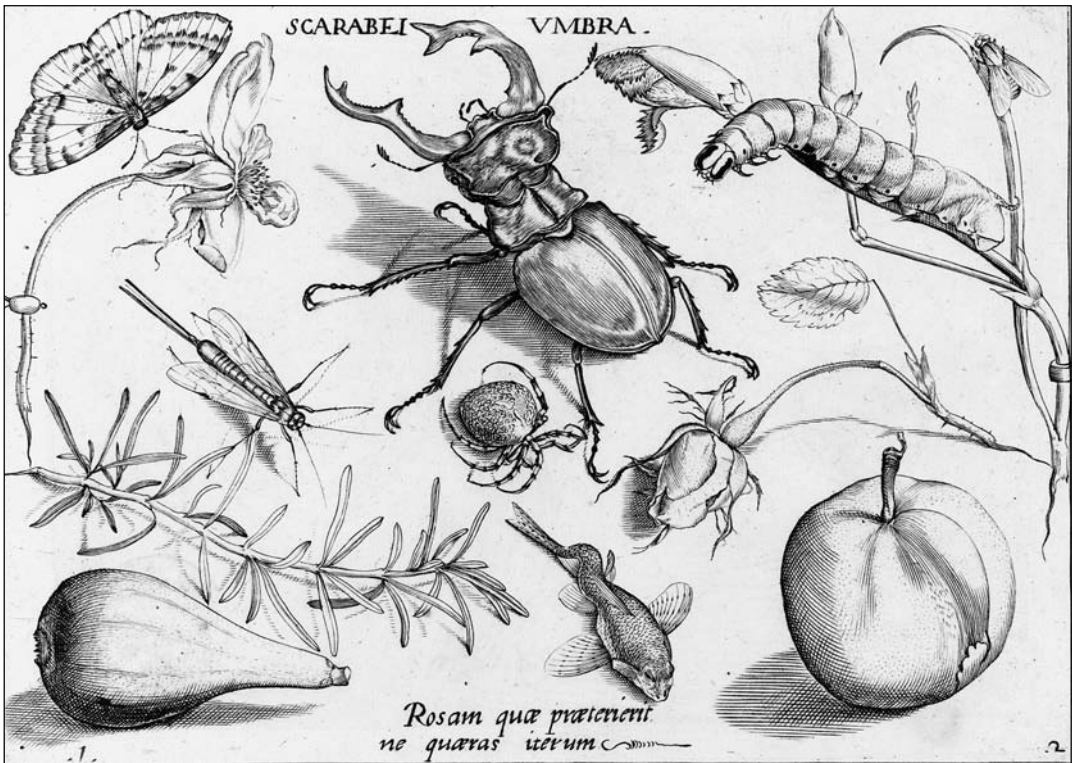


Fig. 6. Jacob Hoefnagel nach Joris Hoefnagel, *Archetypa studiaque patris Georgii Hoefnagelii* (Frankfurt: 1592) II, 1, Kupferstich. München, Staatliche Graphische Sammlung.

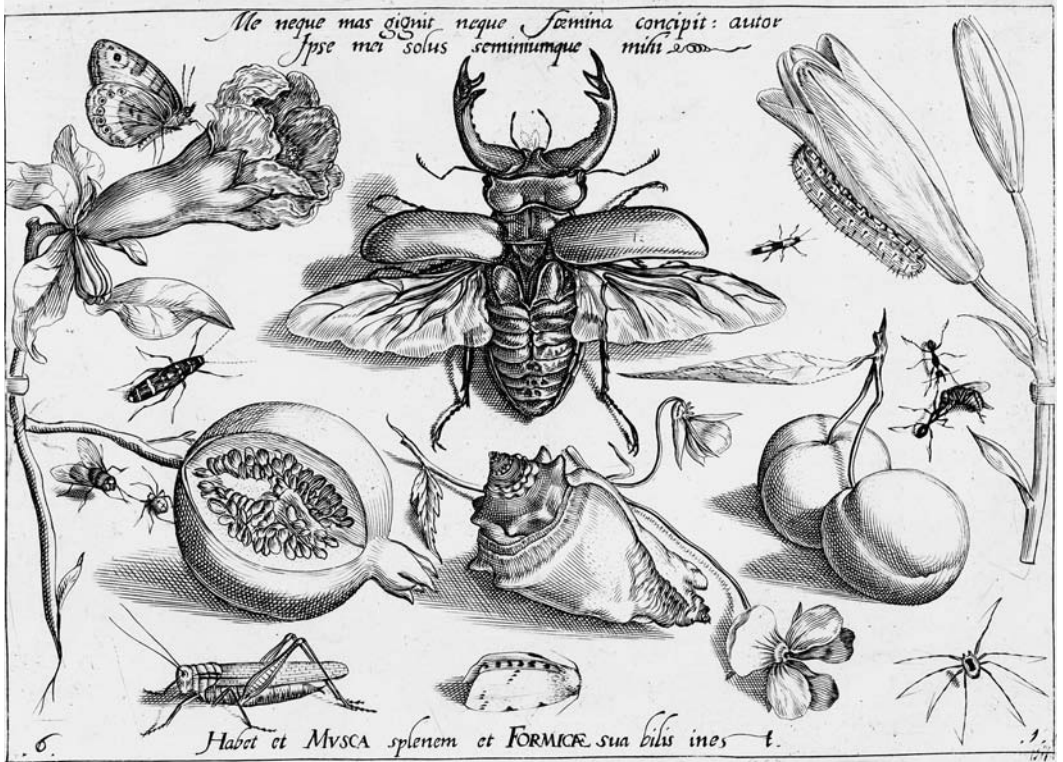


Fig. 7. Jacob Hoefnagel nach Joris Hoefnagel, *Archetypa studiaque patris Georgii Hoefnagelii* (Frankfurt: 1592) I, 6, Kupferstich. München, Staatliche Graphische Sammlung.

Fall ist auf Dürers Aquarell Maria mit den vielen Tieren.²³ Derselbe Spruch findet sich auch in dem Insektenwerk von Mouffet, allerdings nicht zum Hirschkäfer, sondern zum Großen Nashornkäfer (korrekter: Elefantenkäfer), den er ebenfalls abbildet [Abb. 8].²⁴ Der Spruch stammt nach Mouffet von Joachim Camerarius, aus dessen Sammlung, wie er schreibt, auch die Vorlage zum Großen Nashornkäfer stammt, die über Thomas Penny zu Mouffet gelangte. Sie porträtiert das Tier nach dem Exemplar aus der Kunstkammer, dem Naturalienkabinetts des Herzogs von Sachsen.²⁵ Der Nashornkäfer²⁶ stimmt völlig überein mit jenem in den *Archetypa* I, 1 [Abb. 9]. Mouffet erwähnt auch einen Kleinen Nashornkäfer und bildet ihn ab; er ist identisch mit dem Kleinen Nashornkäfer in den *Archetypa* III, 1. Vom letzteren Käfer wurde ihm laut Text die Vorlage aus Wien von Carolus Clusius geliefert; er sei dort zu Lande häufig.²⁷ Der Große Nashornkäfer in den *Archetypa* ist ein angsteinflößendes Prachtexemplar, er ist würdig, die Folge der *Archetypa* bedeutungsvoll einzuleiten. Die Sprüche, die das Tier im Kupferstich begleiten, sind nicht so sehr symbolisch auf ihn bezogen als dass sie die demütige Ehrfurcht vor der Schöpfung und die Verehrung des christlichen Humanisten für die Vielfalt und Allmacht des Schöpfers zum Ausdruck bringen. Der obere Spruch ist ein Psalmzitat („Dicite Deo quam terribilia sunt opera tua, Domine, in multitudine virtutis tuae mentientur tibi inimici tui“; Ps. 65/66, 3: „Sprechet zu Gott: wie wunderbar sind Deine Werke. Es wird Deinen Feinden fehlen vor Deiner großen Macht“). In *Ignis XXXV* erscheint es bei demselben Tier. Der zweite Sinnspruch ist ein persönliches Motto des Künstlers Hoefnagel: „Danti mihi artem dabo gloriam“ („Demjenigen, dem ich meine Kunstfertigkeit verdanke, werde ich durch sie Ehre erweisen“).

²³ Wien, Albertina, Inv. Nr. 3066. Koreny, *Tier- und Pflanzenstudien* Nr. 35. Man hat versucht, die Symbolik vom Hirschen als Sinnbild des gläubigen Menschen des 41. (42.) Psalms herzuleiten.

²⁴ Thomas Mouffet, *Insectorum sive minimorum animalium theatrum* 150; *The Theatre of Insects* 1009.

²⁵ Thomas Mouffet, *Insectorum sive minimorum animalium theatrum* 150: „Cantharorum lege faeminam non habet, at ipse suae sibi faber est formae; faetum solo sibi genitum producit, quod Joachim Camerarius filius non incite expressit, cum ad Pennium huius insecti iconem e Ducis Saxoniae rerum naturalium penu mitteret“.

²⁶ Das Insekt wird in der heutigen Entomologie als Elefantenkäfer (*Coleoptera Dynastidae*, *Megasoma elephas*) bezeichnet.

²⁷ Thomas Mouffet, *Insectorum sive minimorum animalium theatrum* 151: „secundam Nasicornium speciem raram atque pulcherrimam, Mercurio sacram, Carolus Clusius Viennae depictam misit, in cuius agro frequens est.“



Fig. 8. Großer Nashornkäfer (Elefantenkäfer). Aus Thomas Mouffet, *The Theater of Insects: or Lesser living Creatures, as Bees, Flies, Caterpillars, Spiders, Worms etc. a most Elaborate Work by Thomas Mouffet, Doctor in Physick* (London: 1658) 1009.

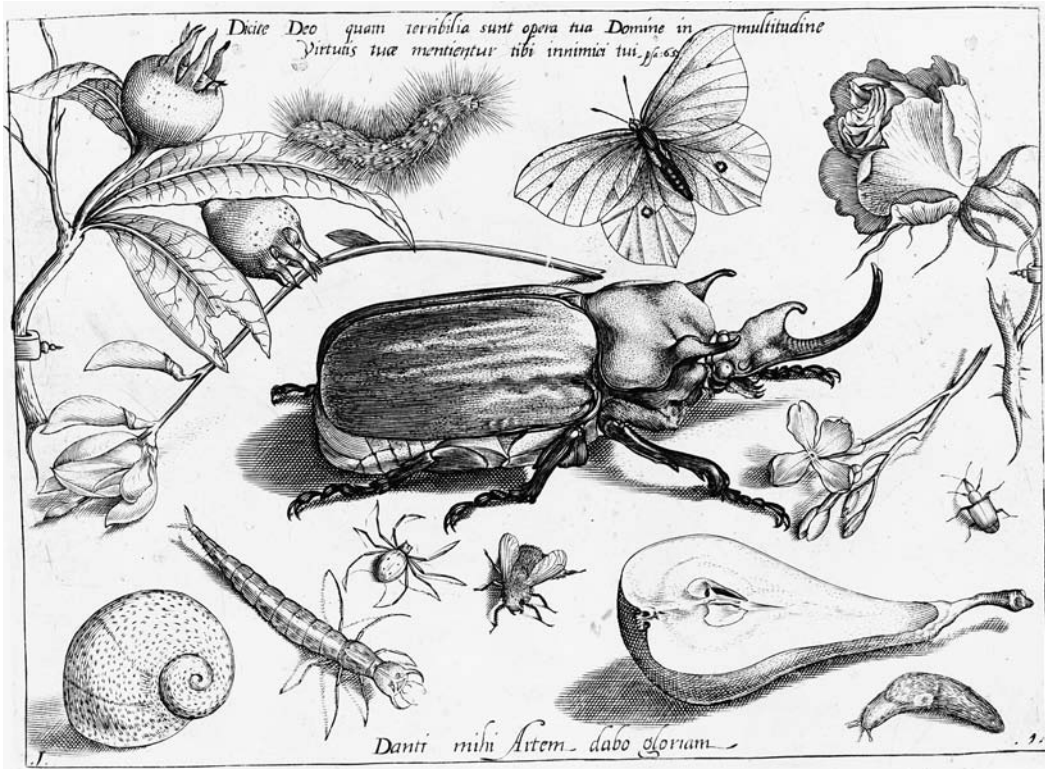


Fig. 9. Jacob Hoefnagel nach Joris Hoefnagel, *Archetypa studiaque patris Georgii Hoefnagelii* (Frankfurt: 1592) I, 1, Kupferstich. München, Staatliche Graphische Sammlung.

Man könnte sich vorstellen, dass mehrere Miniaturen von Insekten von Joris Hoefnagel den Ausgangspunkt von Mouffets Insekten Darstellungen bildeten. Sie wurden jeweils kopiert, befanden sich unter den Naturalien in den Kunstkammern und kursierten, wie man sieht, beigelegt in der Korrespondenz der humanistischen Gelehrten. Aldrovandi nennt in seinem oben erwähnten Insektenwerk als Gewährsleute neben Carolus Clusius, Josephus und Julius Caesar Scaliger, Justus Lipsius und Lambertus Dodonaeus, auch den Maler „Georgius“.²⁸ Damit lässt sich allerdings nicht unbedingt auf einen persönlichen Kontakt zwischen Aldrovandi und Hoefnagel schließen. Aldrovandis Bildquelle könnten auch die *Archetypa* gewesen sein, wobei zu bedenken ist, dass Aldrovandis Insektenbuch kaum Illustrationen aufweist.

Hoefnagels musterhafte Darstellung der Eintagsfliege (Ephemeroptera) in *Ignis XXXIV* und in den *Archetypa* II, 10 [Abb. 10] war die Grundlage für eine Buchpublikation, die Outgert Cluyt, Augerius Clutius, Sohn des Dirck Outgertsz. Cluyt, Direktor des Hortus Botanicus der Leidener Universität und rechte Hand von Carolus Clusius, diesem Tier widmete: *De hemerobio sive ephemero insecto* (Amsterdam: 1634). Clutius schreibt in seiner Einleitung: „Accessit et altera occasio perscrutandi, quod Caesaris Rudolphi II pictor eximius Houfnagel bestiolae ad vivum depictae (Palingenia longicauda) imaginem mihi donavit, cum brevi historia natalis eius“.²⁹

Wie wir oben hinsichtlich des Hirschkäfers sahen, hat sich auch Joachim Camerarius mit dem Studium der Insekten beschäftigt. Camerarius gehörte zum gleichen Kreis wie Hoefnagel³⁰ und Mouffet und es existiert auch ein umfangreicher Briefwechsel zwischen Clusius und Camerarius.³¹ Der Arzt und Naturwissenschaftler Camerarius hatte 1580 den schriftlichen Nachlass von Conrad Gesner (1516–1566) erworben. Er war selbst ein ausgezeichnete Latinist, sein Vater Joachim Camerarius der Ältere (1500–1574) hatte noch zum Humanistenkreis um Albrecht Dürer gehört.³² Vom jüngeren Camerarius erschien zwischen

²⁸ In „Catalogus Authorum quibus in hoc opere de Insectis usus sum“.

²⁹ Augerius Clutius, *De hemerobio sive ephemero insecto* (Amsterdam: 1634) 66–67.

³⁰ Siehe den Brief von Hoefnagel in München, Bayerische Staatsbibliothek, HS. Clm 10378, fol. 61r; publiziert in Vignau-Wilberg Th., „Joris Hoefnagels Tätigkeit in München“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 81 (1985) (103–167) 161.

³¹ Briefe von Clusius in der *Collectio Cameriana* (München, Bayerische Staatsbibliothek, HS. Clm 10378); von Camerarius an Clusius in Leiden, Universitätsbibliothek, Cod. Vulc. 101.

³² Siehe Vignau-Wilberg, „Naturemblematik“.

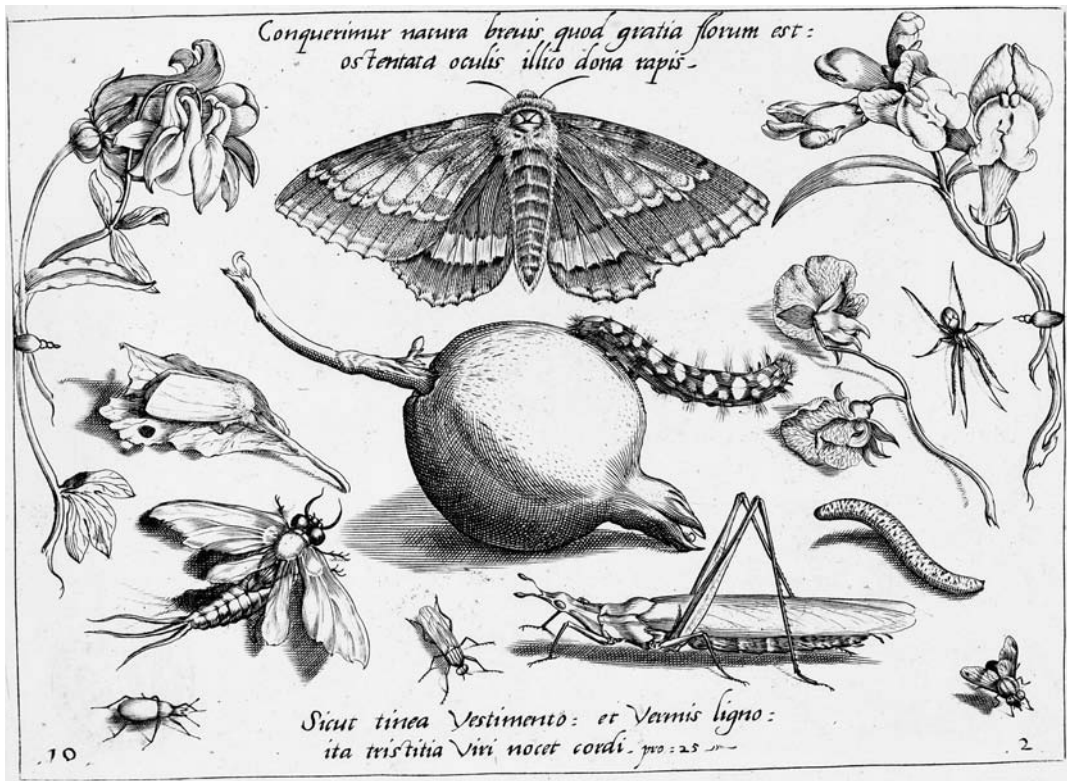


Fig. 10. Jacob Hoefnagel nach Joris Hoefnagel, *Archetypha studiaque patris Georgii Hoefnagelii* (Frankfurt: 1592) II, 10, Kupferstich. München, Staatliche Graphische Sammlung.

1590 und 1604 in Nürnberg ein vierbändiges Emblembuch, dessen Embleme Naturobjekte zum Gegenstand haben. Der erste Band von 1590 (erschienen 1593) handelt von den Pflanzen, der zweite, 1595 publiziert, von den Vierfüßern, der dritte, 1596, von Vögeln und Insekten und der vierte, 1604 postum erschienen, von Wassertieren und Reptilien.³³ Diese Klassifizierung der Tiere ist noch konventionell. Die Insekten-Embleme erwecken die Neugierde, jedoch beschäftigen sich von den hundert Emblemen weniger als zehn mit Insekten (Embleme XC bis IC; C ist dem Phönix gewidmet). Es handelt sich größtenteils um die schon bei Plinius behandelten Insekten: die nützliche Biene (Embleme XC, XCI und XCIII), das Glühwürmchen (Emblem XCI-III), die (biblische) Heuschrecke (Emblem XCVI), die von der Flamme angezogene und durch sie versengte Motte (Emblem XCVII), die Fliege (Emblem XCVIII), die Spinne im Gewebe (Emblem XCIX) und undefinierbare fliegende Insekten. Auch ihre Auslegung folgt der Tradition. Camerarius war offensichtlich nicht sonderlich an Insekten interessiert.

Der englische Gelehrte Thomas Penny hatte von Camerarius die entomologischen Aufzeichnungen aus dem Gesner-Nachlass erworben. Er verleihte sie seiner eigenen insektenkundlichen Sammlung, die größtenteils von Thomas Wotton stammte, ein. Als Penny 1589 starb, setzte Mouffet die Vorbereitungen für die Herausgabe des entomologischen Werks von Penny fort. Im Jahr 1590 betrachtete Mouffet die Arbeit als nahezu abgeschlossen.³⁴ Als Mouffet selbst 1604 starb, war das Werk jedoch noch nicht erschienen.

Unter den vielen Darstellungen in Mouffets Insektenbuch finden sich mehrere nach Vorlagen von Hoefnagel. Mouffet ließ sie offenbar nicht aus den *Archetypa* kopieren, sondern nach gemalten Vorlagen zeichnen. Die Insektendarstellungen, die ihm Clusius schickte, stammen vermutlich von Hoefnagel oder gehen auf seine Darstellungen zurück. In diesem Zusammenhang sei auf einen Brief von Mouffet an Clusius aus dem Jahre 1590 hingewiesen.³⁵

³³ Joachim Camerarius, *Symbolorum et emblematum ex re herbaria desuntorum centuria una/ altera/ tertia/ quarta*.

³⁴ Siehe den Brief an Clusius, zitiert in Hoefnagel, *Archetypa* 39.

³⁵ Brief Leiden, Universitätsbibliothek, Cod. Vulc. 101, 10: London, Kal. Aprilis 1590 (teilweise zitiert in Hoefnagel, *Archetypa* 39).

Das vollendete Insektenbuch blieb nach Mouffets Tod vorerst unpubliziert liegen. Mouffets Widmung an Königin Elisabeth veraltete.³⁶ Nach der Zueignung heißt es: „He [Mouffet] thought it no indignity to Dedicate to the greatest Princess the miracles of Nature, which are most conspicuous in the smallest things; which testifie the infinite power of the supreme Creator of all things, and raises the mindes of Princes who are the children of the most Highest, to the cause of all causes [...]“. Nach einer allgemeinen Betrachtung über einzelne Insekten und kleine Tiere erhebt der Text die Insekten zu Objekten der Kontemplation und der christlichen Philosophie. Das Verhalten der Biene und der Ameise wird als Muster für die optimale Regierungsform bzw. für vernünftiges wirtschaftliches Denken gesehen („Monarchical government of Bees, the Democratical of Ants, and the oeconomical providence of them both“). Die sogenannte vollkommene Metamorphose von Raupe über Puppe zu Schmetterling spiegelt das irdische Leben, der Todesschlaf und die Auferstehung „crowns all the meditations of a Christian man“.

In der Vorrede schreibt Mouffet, daß er zum ersten Mal 150 Illustrationen wiedergibt, die Gesner und Penny noch nicht kannten. Mouffet kommentiert im Vorwort seines Insektenwerkes, sich auf die Tiere beziehend, folgenderweise:

[...] that in the universal world there is nothing more divine than these, exept Man. For however in shew [= show] they are most abject and sordid, yet if we look more nicely into them, they will appear far otherwise than they promise in the bare outside. [...] It will be easie to observe, that the divine force and power shew themselves more effectually in mean things, and they are far more miraculous, than those things the world with open mouth respects so much and admires [...]. And truly, if the fabrick of Insects were worthy of so great and divine Artificer, how can the contemplation of them be unworthy of the understandings of poor contemptible men?

Das erste Kapitel, über die Fliegen (Kap. X), ist eine allgemeine Betrachtung dieser Gattung, im nächsten Kapitel folgen die Beschreibung und die Darstellung zahlreicher Fliegenarten. Hier werden auch die Quellen der Darstellungen erwähnt: „The figure of this Fly did the abovesaid Joachim send to Pennius“ und „The third of these Carolus Clusius sent from Vienna“ (S. 938). Seite 941 besteht ausschließlich aus Abbildungen von geflügelten Insekten (hauptsächlich Libellen).

³⁶ Der besseren Verständlichkeit wegen wird hier nicht aus dem lateinischen Erstdruck, sondern aus der englischen Übersetzung zitiert.

Der Titel von Kap. XII heißt „Of the use of Flyes“ (Seite 944 ff.). An vielen Stellen ist die Rede von gezeichneten oder gemalten Insekten, die Clusius aus Wien an Mouffet schickte (Seite 948, 959, 963 und 983). Auch der Antwerpener Jacobus Quicquelberg (Quiccheberg) und der Nürnberger Camerarius werden als Lieferanten von Bildquellen genannt (Seite 997, 1001, 1007 und 1015). Der Große und der Kleine Nashornkäfer wurde nach den Vorlagen von Joris Hoefnagel in Holz geschnitten [Abb. 11]. Die Beschreibung des Großen Nashornkäfers folgt auf Seite 1008–1009:

Like to Beetles it hath no female, but shapes its own form it self. It produceth its young one from the ground by it self. Joachim Camerarius did elegantly express, when he sent to Pennius the shape of this Insect out of the storehouse of natural things of the Duke of Saxony, with these Verses:

A Hee begat me not, nor yet did I proceed
From any Female, but my self I breed.³⁷

Das Tier stirbt einmal pro Jahr und wird, wie ein Phönix, nach dem Tod durch die Sonnenhitze wieder zum Leben erweckt. Durch die Wiedergeburt wird der symbolische Bezug des Tieres zu Christus noch evidenter:

A thousand summers heat and winters cold
When she hath felt, and that she doth grow old,
Her life that seems a burden, in a tomb
Of spices laid, comes younger in her room.

Es ist wohl kein Zufall, dass etwa zur gleichen Zeit, als Mouffets Insektenbuch auf Betreiben der Royal Society in London erschien, in Amsterdam bei dem rührigen Verleger Claes Jansz. Visscher, ein „neues“ Stichwerk nach Werken des „berühmten“ Joris Hoefnagel erschien, das ausschließlich Darstellungen von Insekten enthält: *Diversae insectarum volatiliū icones* (Amsterdam: 1630).³⁸ Die Insekten sind dekorativ über das Blatt angeordnet, jedes Insekt ist ein Nachstich eines Tieres aus den *Archetypha* und erscheint seitenverkehrt. Die Wiedergabe ist schematischer und weniger subtil als sie es in den *Archetypha* war. Der breitflügelige Hirschkäfer erscheint als zentrale Bildfigur auf Blatt 4 [Abb. 12], der diagonale Hirschkäfer in Seitenansicht auf Blatt 10, der Nashornkäfer

³⁷ Siehe oben.

³⁸ Claes Jansz. Visscher, *Diversae insectarum volatiliū icones*.

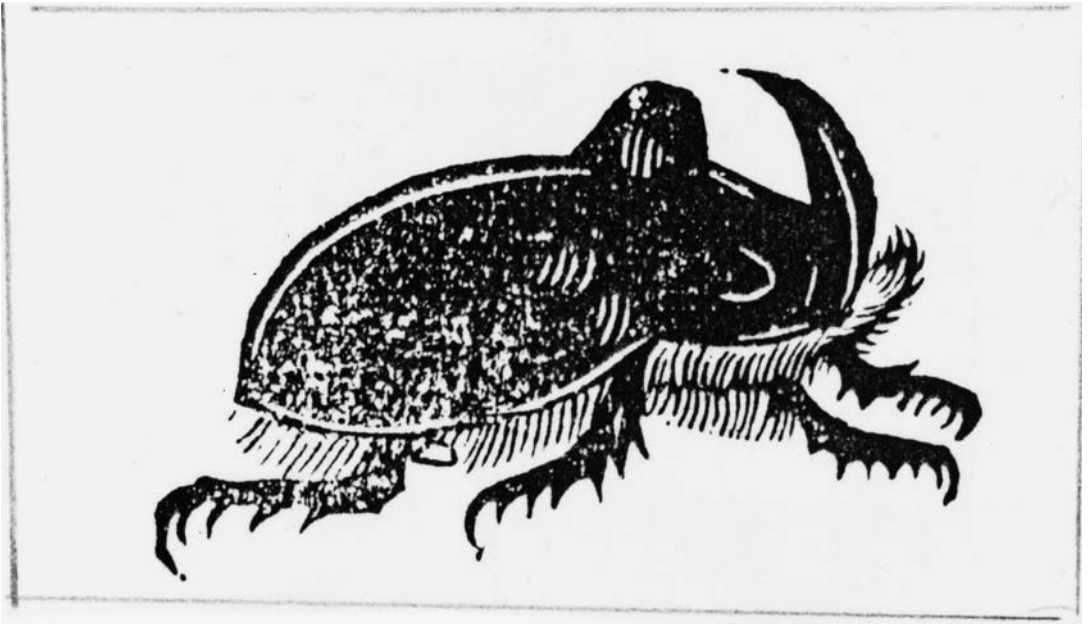


Fig. 11. Kleiner Nashornkäfer; Aus Thomas Mouffet, *The Theater of Insects: or Lesser living Creatures, as Bees, Flies, Caterpillars, Spiders, Worms etc. a most Elaborate Work by Thomas Mouffët, Doctor in Physick* (London: 1658) 1009.

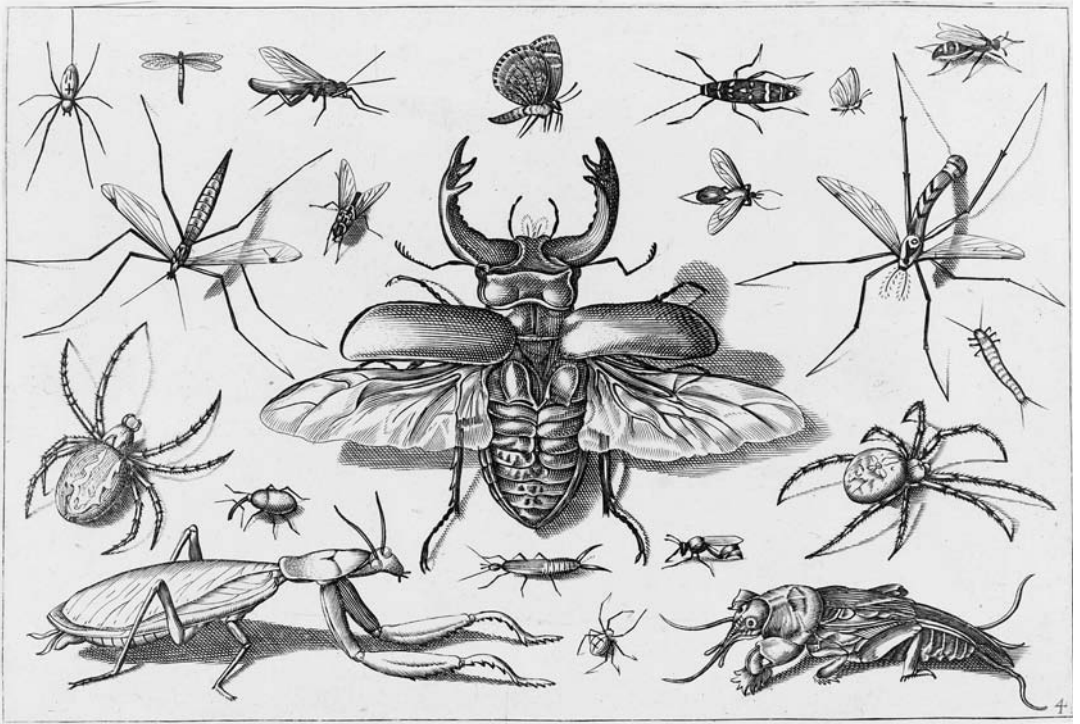


Fig. 12. Claes Jansz. Visscher, *Diversae insectarum volatilium icones ad vivum accuratissime depictae per celeberrimum pictorem D. I. Hoefnagel typisque mandatae a Nicolao Ioannis Vißcher* (Amsterdam: 1630) 4, Kupferstich. München, Staatliche Graphische Sammlung.

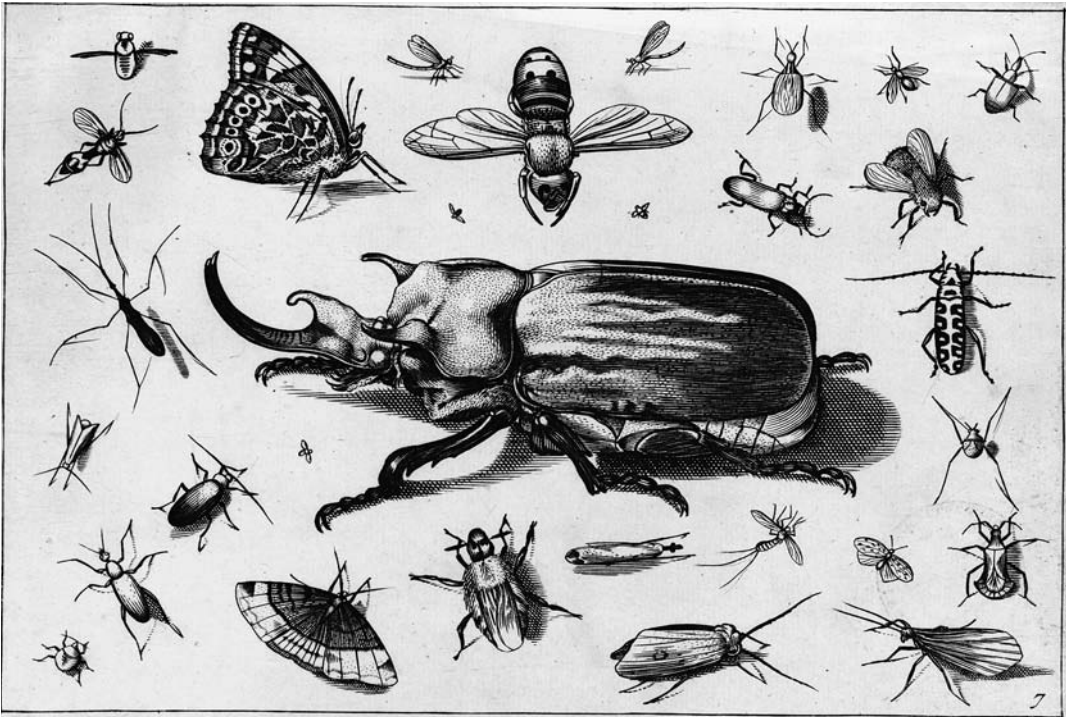


Fig. 13. Claes Jansz. Visscher, *Diversae insectarum volatiliū icones ad vivum accuratissime depictae per celeberrimum pictorem D. I. Hoefnagel typisque mandatae a Nicolao Ioannis Visscher* (Amsterdam: 1630) 7, Kupferstich. München, Staatliche Graphische Sammlung.

(Elefantenkäfer) auf Blatt 7 [Abb. 13] und der Kleine Nashornkäfer auf Blatt 13, jeweils mit dem gleichen Schattenwurf, den er in den *Archetypa* hatte. Während die *Archetypa* bis ins 19. Jahrhundert immer wieder aufgelegt wurden, blieb es bei dem Insektenwerk nach Hoefnagel wohl nur bei einer einzigen Auflage.

Im letzten Viertel des 16. Jahrhunderts, als man bemüht war, die gesamte Tierwelt systematisch zu erfassen, wurden durch die Gelehrten des Humanismus die Insekten als eigene zoologische Tierklasse entdeckt, deren Vielfalt und skurille Erscheinungsform sie faszinierten. Unter den Naturalien der Kunst- und Wunderkammern dieser Zeit befanden sich auch Käfer, die von kundigen Künstlern porträtiert wurden und in Kopien für andere Sammler kursierten. Hinzu kam, dass es durch die fortschreitende Entwicklung verschiedenartiger geschliffener Linsen möglich war, auch sehr kleine Lebewesen zu betrachten und wiederzugeben (das Mikroskop aus dem frühen 17. Jahrhundert hatte ja Wegbereiter). Auch der Miniaturmaler Joris Hoefnagel kann nur mit vergrößernden Linsen gearbeitet haben. Kunstvolle Vorlagen bildeten die Basis der Illustrationen der Insektenwerke, die ab 1600 erschienen. Von ihnen ist Mouffets postum publiziertes Insektenbuch das bedeutendste.

Naturwissenschaft und Philosophie waren um 1600 noch in großer Selbstverständlichkeit verbunden. In der Naturwissenschaft bestand das Bedürfnis, überliefertes Wissen mit der auf empirische Wahrnehmung beruhenden neuesten Forschung in Einklang zu bringen oder mit ihr zu verbinden. Man suchte im Studium zu Erscheinungsform und Verhaltensweise der Tiere Aufschluss über den Plan der Schöpfung und war der Meinung, dass sich gerade in den aller kleinsten Lebewesen Sinn und Ziel der Schöpfung und des Schöpfers am klarsten manifestiert.

Auswahlbibliographie

- ALDROVANDI ULISSE, *De animalibus insectis libri septem cum singulorum iconibus ad vivum expressis* [...] (Bologna: 1602).
- CAMERARIUS JOACHIM der Jüngere, *Symbolorum et emblematum ex re herbaria desumptorum centuria una collecta* [...] (Nürnberg: 1590).
- , *Symbolorum et emblematum ex animalibus quadrupedibus desumptorum centuria altera collecta* [...] (Nürnberg: 1595).
- , *Symbolorum et emblematum ex volatilibus et insectis desumptorum centuria tertia collecta* [...] (Nürnberg: 1596).
- , *Symbolorum et emblematum ex aquatilibus et reptilibus desumptorum centuria quarta a Ioachimo Camerario* [...] *coepta; absolutum post eius obitum a Ludovico Camerario* (o.O. [Nürnberg]: 1604; Nürnberg: 1605).
- CLUTTIUS AUGERIUS, *De hemerobio sive ephemero insecto* (Amsterdam: 1634).
- ERASMUS DESIDERIUS, *Adagiorum chiliades quatuor* (Basel: 1559).
- GESNER CONRAD, *Historiae animalium Liber I* (Zürich: 1551); *Icones animalium quadrupedum* (Zürich: 1553); *De avium natura Liber III* (Zürich: 1555); *Historiae animalium Liber IV qui est de piscium et aquatilium animantium natura* (Zürich: 1558).
- HAUPT H. – VIGNAU-WILBERG TH. – IRBLICH E. – STAUDINGER M. (Hrsg.), *Le Bestiaire de Rodolphe II. Cod. Min. 129 et 130 de la Bibliothèque Nationale d'Autriche* (Paris: 1990).
- HENDRIX M.L., *Joris Hoefnagel and the 'Four Elements': a study in Sixteenth-Century Nature Painting* (Ann Arbor: 1985, diss. Phil. Princeton University: 1984).
- HOEFNAGEL JORIS, *Archetypa studiique Patris Georgii Hoefnagelii* (Frankfurt: 1592; Facsimile-Ausgabe Staatliche Graphische Sammlung München: 1994).
- KENNER F., „Die Porträtsammlung des Erzherzogs Ferdinand von Tirol“, *Jahrbuch der Kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses* 15 (1894) 147–259.
- KORENY F., *Albrecht Dürer und die Tier- und Pflanzenstudien der Renaissance* (München: 1984; Ausstellungskatalog Wien, Albertina: 1984/85).
- MANDER KAREL VAN, *Het Schilder-boeck* (Haarlem: 1604).
- MOUFET THOMAS, *Insectorum sive minimorum animalium theatrum olim ab Edoardo Wottono, Conrado Gesnero, Thomae Pennio inchoatum: tandem Thomae Mouffeti Londinatis opera sumptibusque; maximis concinnatum, auctum, perfectum, et ad vivum expressis iconibus supra quingentis illustratum* (London: 1634).
- , *The Theater of Insects: or Lesser living Creatures, as Bees, Flies, Caterpillars, Spiders, Worms etc. a most Elaborate Work by Tho. Mouffët, Doctor in Physick* (London: 1658; Facsimile-Ausgabe Edward Topsell, *The history of Four-Footed Beasts and Serpents and Insects*, vol. III. *The Theater of Insects* by T. Muffet. New York: 1967).
- ROTH M., unter Mitarbeit von PÉNOT S., *Georg Flegel. Die Aquarelle* (München: 2003).
- SCHNEIDER E., *Die Kunst- und Wunderkammern der Habsburger* (Wien: 1979).
- THOSS D., „Georg Hoefnagel und seine Beziehung zur Gent-Brügger Buchmalerei“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 82/83 (1986/97) 199–212.
- VIGNAU-WILBERG TH., „Joris Hoefnagels Tätigkeit in München“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 81 (1985) 103–167.
- , „Naturemblematik am Ende des 16. Jahrhunderts“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 82/83 (1986/87) 145–156.
- , „Die Randilluminationen und Initialen“, in *Das Gebetbuch Kurfürst Maximilians I. von Bayern* (Frankfurt-Stuttgart: 1986) 65–118.
- , „Unbekannte Kabinetttminiaturen von Joris Hoefnagel“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 85/86 (1989/90) 67–77.
- VISSCHER CL. J., *Diversae insectarum volatilium icones ad vivum accuratissime depictae per celeberrimum pictorem D.I. Hoefnagel typisque mandatae a Nicolao Ioannis Vischer* (Amsterdam: 1630).

CURIOUS FISH: CONNECTIONS BETWEEN SOME SIXTEENTH-CENTURY WATERCOLOURS AND PRINTS

Florike Egmond

Two fishes

If the similarities between two sets of sixteenth-century watercolours depicting peculiar fish are so great that they can hardly be a coincidence, what should we conclude? This question was only the first of a series of queries that emerged while probing the possible reasons for (and implications of) these similarities. Was the one the model for the other? How could we know, and what were the implications? The following paragraphs, which also touch upon questions about the contexts in which these particular watercolours could be studied, and the problem of to which genre they actually belong, present our by no means final findings.

The two sets of remarkably similar pictures of fish belong to two very different sixteenth-century collections of watercolours depicting *naturalia*. The first is the collection known as *Libri Picturati* A. 16–31, held at the Bibliotheka Jagiellonska in Kraków and consisting of sixteen volumes of mainly botanical and some zoological watercolours. The core of this collection originated in the Southern Netherlands during the 1560s under the patronage of the aristocratic collector Charles de Saint Omer (1533–1569), lord of Moerkercke, who was assisted and probably inspired by his protégé, the famous botanist Carolus Clusius (1526–1609).¹ The circa 1500 watercolours contained in these volumes have been recognised at least since the 1930s as one of the largest and most important European collections of sixteenth-century watercolours depicting natural history on account of both their quantity and their

¹ For an extensive discussion see Egmond F., “Clusius, Cluyt, Saint Omer. The origins of the sixteenth-century botanical and zoological watercolours in *Libri Picturati* A. 16–30”, *Nuncius* 20 (2005) 11–67. All botanical watercolours of the *Libri Picturati* A.18–30 will be published in Koning J. de – Zemanek A. – Zemanek B. (eds.), *Botanical illustrations of the sixteenth century. An enquiry into the Libri Picturati A.18–30* (forthcoming, 2007–2008).

artistic and scientific quality. The botanical volumes are at least on a par with the famous (but much smaller), more or less contemporary botanical watercolours of Conrad Gessner and the so-called *Camerarius Fiorilegium*.² The second collection that is relevant to this essay consists of the richly illustrated manuscript albums with the titles *Visboock* (i.e. *Fish Book*, 1577–1581, comprising 125 folios) and *Walvisboock* (i.e. *Whale Book*, 1584–1586, 421 folios) that were written and illustrated by Adriaen Coenen (1514–1587), the self-taught son of a local fisherman from Scheveningen near The Hague, and wholesaler in fish.³

The differences seem obvious. The core of the first collection dates from the 1560s, while Coenen produced his albums between the late 1570s and mid 1580s; the former belongs to the Southern Netherlands, the latter to the North – an important distinction in these decades in which the Northern Dutch Provinces had initiated their revolt against Habsburg rule and were in the process of splitting off from the Southern ones. Originally the *Libri Picturati* consisted of a vast collection of loose sheets with watercolours. These sheets were only bound together and (re)organized in the seventeenth century, by a later owner. They mainly focus on botanical subjects and the sheets contain very little annotation. Only the first two volumes (A. 16 and A. 17) specifically concentrate on animals. The majority of the *Libri Picturati* watercolours are of outstanding artistic quality. Several artists must have been involved, and we do not yet know for certain whether the same artists who made the botanical watercolours also produced the zoological ones. Coenen's albums focus almost exclusively on animals living in and near the sea and in some rivers. Coenen painted his watercolours directly in bound albums, accompanying them with texts which present descriptions of the depicted fish and marine creatures, anecdotes, quotations and anything else he considered relevant. Text and pictures are generally closely linked. The voluminous *Visboock* forms a cross between an early encyclopaedia of marine life and a 'paper collec-

² Both are in the Trew collection in the Library of Erlangen. On this collection see especially Schnalke T. (ed.), *Natur im Bild. Anatomie und Botanik in der Sammlung des Nürnberger Arztes Christoph Jacob Trew* [Exhibition catalogue] (Erlangen: 1995).

³ On Coenen and his manuscripts see Egmond F. – Mason P., *The Whale Book. Whales and other marine animals as described by Adriaen Coenen in 1585* (London: 2003); and Egmond F., *Het Visboek. De wereld volgens Adriaen Coenen 1514–1587* (Zutphen – The Hague: 2005). The complete *Visboock* is accessible via the website of the Koninklijke Bibliotheek in The Hague (www.koninklijkebibliotheek.nl). All references in this article to folio numbers of the *Visboock* match the *new* numbering made by the Koninklijke Bibliotheek and thus the numbering on the website).

tion', while the *Walvisboock* looks much more like a sixteenth-century 'coffee table book': it contains much less text than the *Walvisboock* and the format is oblong. Coenen, however charming his pictures and accurate his rendering of many fish, was decidedly an amateur artist. The gap between a vast collection belonging to an aristocratic collector of curiosities and the personal albums of a self-taught Dutchman of humble background is considerable. So why do these pictures resemble each other so closely?

A tattooed tuna

Libri Picturati A. 16 contains watercolours of many fish and a smaller number of four-footed beasts. Folio 5 shows an intriguing figure of a fish painted in grey-blue colours with a large pointed nose or beak, facing right [Fig. 1]. It has a dark, round eye, which looks more like a hole than an eye, although the outline of a deep lying eye can be discerned with some difficulty. It has two dorsal fins and an almost symmetrical and smooth tail. The picture does not look like the work of a great artist; it seems stiff and lacks background and shading. In this sense it differs from many other watercolours in the botanical as well as the zoological volumes of the *Libri Picturati*. This fish has one characteristic which makes it completely unique: on its skin dark figures may be discerned which look somewhat like tattoos. The 'tattoos' depict several types of ships: some look like galleys with rowers and occasionally a mast and rolled up sail; others show larger ships with masts and fully deployed sails, but without rowers. The latter can be found along the back of the fish and on its tail and underbelly. Detail is such that even some miniature figures of the rowers in the galleys can be discerned. Curiously, above and to the left of the eye of the fish a 'castle' or turreted gate is depicted in lighter colour on the dark skin of the fish. Just to the left of it, there is another 'black hole', reminiscent of the blow holes of certain whales, although this fish does not resemble a whale at all. There is no annotation, we do not know who the artist is, and the sheet of paper bears a watermark that has not yet been dated or identified.⁴

⁴ See Ramón-Laca L., "Charles de l'Écluse and *Libri Picturati* A. 16–30", *Archives of Natural History* 28 (2001) 195–243, especially its appendix listing watermarks and annotation for all sheets of the *Libri Picturati* volumes A. 16–30.

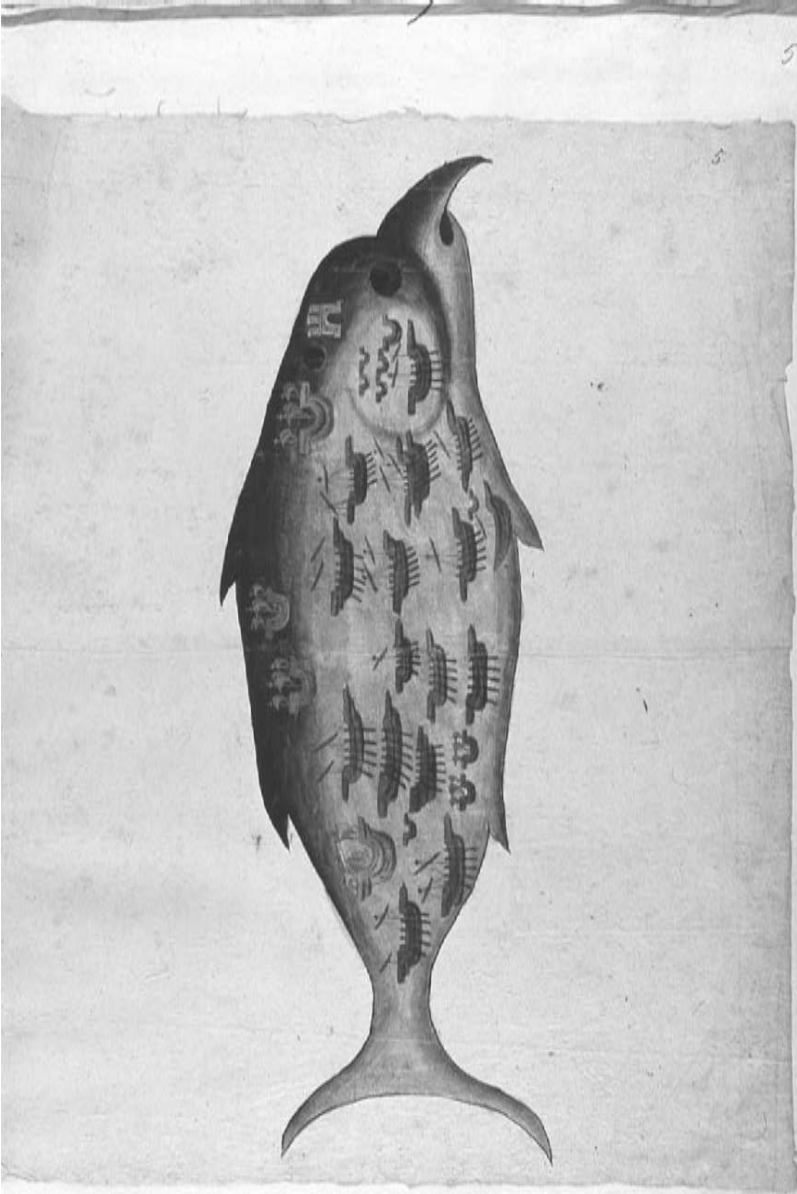


Fig. 1 [COL. PL. VIII]. Tattooed tuna. From *Libri Picturati* A. 16, fol. 5r. Courtesy of Bibliotheka Jagiellonska, Kraków.

The same fish – and it must be the same precisely because of its curious ‘tattoos’ – is depicted in Coenens *Visboock* (fol. 49v) [Fig. 2] and again, in an almost identical way in Coenens *Walvisboock* (I fol.15r) [Fig. 3]. As the illustration from the *Visboock* shows, Coenens fish faces the other way, to the left, and Coenen has added a purple background, and an attractive decoration at the bottom of the page, showing a sandy beach covered in shells. Coenen’s fish is more even in colour (a pale blue), has slightly larger fins, and its beak is slightly more open, while its tail is more frayed, but in other respects the two pictures are extremely similar. Coenen’s style of painting is more amateurish but less stiff than in the case of the *Libri Picturati* fish; the way in which he has painted the ships and galleys on the skin of the fish is less detailed and their distribution less well organized than on its counterpart. Yet, Coenen’s manner of distributing the two types of ship is roughly the same, and he even depicts the ‘blow hole’ above and in this case to the right of the fish’s eye. Interestingly, the ‘castle’ seems to be the only ‘tattoo’ which Coenen depicts in more detail than the *Libri Picturati* artist.

Given the dating, it is tempting to assume that Coenen had somehow had access to the *Libri Picturati* picture and made a copy. Yet, the reversal of the picture poses problems, because such reversals occur generally when a *print* is made after an original. An artisan would cut a copy of the original picture in a wood block (or engrave it in a copper plate), and when printed the picture would automatically be reversed. Here, however, we are dealing with two hand-painted originals. A partial answer can be found in the text that Coenen included in his *Visboock* and at more length in his *Walvisboock*. He explains that he copied the picture and accompanying text from a pamphlet printed in Antwerp by Hans Liefrinck figure cutter [= woodcutter or engraver] at the Lombaerdveste in *t Gulden Turcxhoof*t. Coenen had received this pamphlet via a friend and patron who belonged to the lower nobility in Holland: Cornelis Suys, president of the Court of Holland. Suys had received the pamphlet from Brabant, probably from Antwerp where it was printed.⁵ Since we know from Coenen’s own writings that contacts between Coenen and Suys ceased (for political and religious reasons) around the year 1566 or 1567, it is more than likely that Coenen received this pamphlet not long after it had been printed in 1565. Coenen included the pamphlet itself in

⁵ See *Visboock* fol. 49v–50r, and *Walvisboock* I fol. 15r. Cornelis Suys (1514–1580), knight and lord of Rijswijk, was president of the Court of Holland from 1559 to 1572.



Fig. 2 [Col. pl. IX]. Tattooed tuna. From Adriaen Coenen, *Visboeck*, fol. 49v. Koninklijke Bibliotheek, HS. 78 E 54. Courtesy of the Koninklijke Bibliotheek, The Hague.



Fig. 3 [Col. PL. X]. Tattooed tuna. From Adriaen Coenen, *Walvisboek I*, fol. 15r. Courtesy of the Koninklijke Maatschappij voor Dierkunde, Antwerp.

an album (now lost) which he was making at that time and which he gave to the leader of the Dutch Revolt, prince William of Orange, in 1574. But he copied both text and illustration for later use, and thus included his own versions of them in his *Visboock* and *Walvisboock*.

There is at present only one copy extant of a German edition of the Dutch pamphlet to which Coenen refers as his source. At the time both versions must have circulated. This single extant copy of the (German) pamphlet was printed in Augsburg and can be found in the sixteenth-century Wickiana collection in Zurich which belonged to the Zurich parson Johann Jacob Wick (1522–1588).⁶ It has the woodcut by Matthäus Franck from 1565. It is probably that the Dutch and the German versions of this pamphlet bore the same illustration, and the picture by Franck illustrated here thus was in all likelihood the source of Coenen's picture [Fig. 4]. As could be expected, both the fish in the printed pamphlet and Coenen's fish face left. The two fish look identical in every respect, including the slightly more elaborate 'castle' and the somewhat frayed tail – two very minor points in which they differ from the *Libri Picturati* fish.

Quoting from the printed text in the pamphlet, Coenen relates that it depicts a curious tuna fish which had been caught in the Mediterranean:

Certificate from Gibraltar of a wondrous tunny, May 1565:

I, Johan Frutuoso, royal notary, a resident of this noble city of Gibraltar, attest and witness to all who shall see this that it is the truth. Certain information has been given to me, the notary of the court of law of this city, by six witnesses clearly indicating that 15 or 16 days ago a tunny was found on the coast of the sea in the city of Ceuta on which are painted, as it were, many galleys, masts, oars, rowers, artillery and more vessels and an armed galliot which appeared to want to storm one another. This was all done in a very natural and realistic manner as if a drawing had been made in the skin and flesh of this tunny in a wondrous way, never seen before. Done in Gibraltar, 13 May 1565, and below I have set my signature as a witness to its truth, signed Johan Frutuoso.

This rare tuna fish must have been one of the famous natural curiosities of the sixteenth century or it would hardly have deserved a special pamphlet.

⁶ Pictures of it can be found in Barthelmess K. – Münzing J., *Monstrum horrendum. Wale und Waldarstellungen in der Druckgraphik des 16. Jahrhunderts und ihr motivkundlicher Einfluss* (3 vols., Hamburg: 1991) 64–65; and Strauss W.L., *The German single-leaf woodcut 1500–1600. A pictorial catalogue* (3 vols., New York: 1975) 197. The Wickiana collection now belongs to the Zentralbibliothek in Zurich.

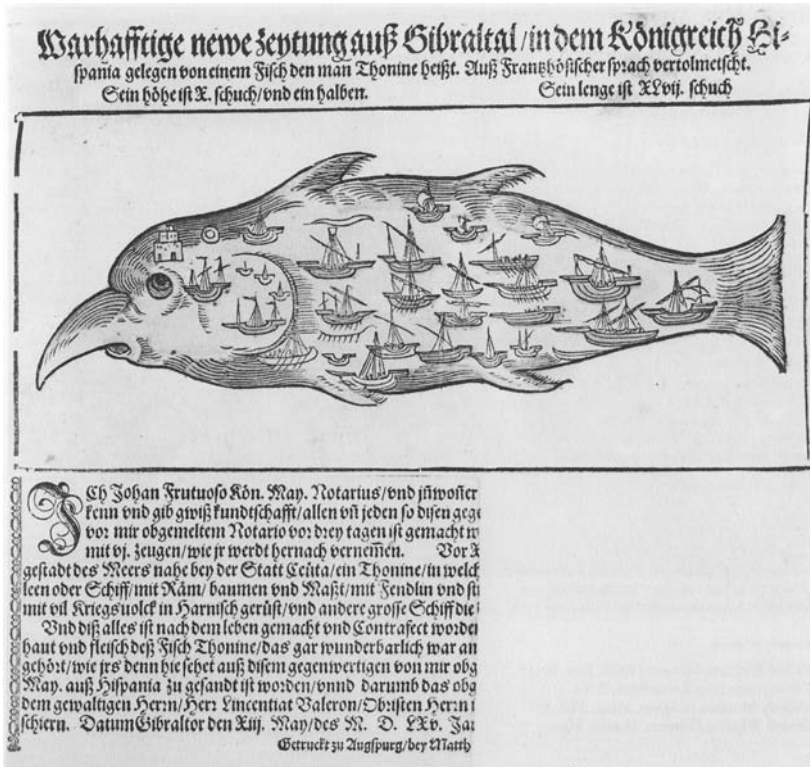


Fig. 4. Tattooed tuna. From a pamphlet dated 1565, with a woodcut by Matthäus Franck, printed in Augsburg. Original now in the Wickiana collection, Zentralbibliothek Zurich.

Via this circuitous route we now know what these curious watercolours in both collections represent. We can also speculate about how a picture of the tuna fish ended up in the *Libri Picturati*. The timing is interesting. Coenen's source, the Antwerp pamphlet, must have been printed soon after the tuna fish was discovered in May 1565. Both the Dutch version of the pamphlet printed in Antwerp and the German version printed in Augsburg probably circulated in various countries. Given the Southern Netherlandish origins of the *Libri Picturati*, it is possible that the *Libri Picturati* watercolour, like Coenen's, was made after the Antwerp version of the pamphlet. It is also conceivable that the very same copy of the pamphlet formed the basis for both, because the self-taught Adriaen Coenen and the aristocratic collector Charles de Saint Omer knew each other personally during the crucial years around 1565. Coenen even occasionally supplied Saint Omer with interesting naturalia for his collection. On 18 June 1565 Coenen spent the sum of six guilders

to buy a huge live sea-tortoise from a shrimp fisher in Scheveningen.⁷ He kept the tortoise at his home for a while, trying to keep it alive in a tub of water, but it refused to eat and eventually died after having been shown for money by others. Coenen thereupon disembowelled and dried the animal and presented it to Saint Omer, who was spending almost half a year in The Hague for a big court case.⁸ Can it be a coincidence that the president of the Court of Holland, which dealt with this case, was Coenen's patron and friend Cornelis Suys, the same man who had obtained the pamphlet with the tuna fish from Brabant and given it to Coenen?

Whereas Coenen's role and the provenance of *his* picture of the curious tuna fish are clear and well documented, we are left with some loose ends with respect to the *Libri Picturati* tuna fish. If the hypothesis sketched above is correct, this tuna too must have been based on the Antwerp or Augsburg pamphlet and must have been painted specifically for the Saint Omer collection around 1565–66 in the Southern Netherlands. But why does the *Libri Picturati* tuna face right? And why does it have a frayed tail and slightly less elaborate castle 'tattoo' – differing thus from both the Coenen and the pamphlet tuna? Could it be that the *Libri Picturati* tuna was the original model for the pamphlet picture, while Coenen's tuna is modelled upon the pamphlet? That would explain the right-left reversal, and it might indicate that the printer or designer of the pamphlet changed some details (such as the frayed tail). On the other hand, it would presuppose a complex and tight-fitting chronology, for if the *Libri Picturati* watercolour was the source for the pamphlet illustration, we could expect it to have been made in or around May 1565 near the Mediterranean and very soon thereafter sent to Northern Europe to be both copied for the pamphlet illustrations and included in the *Libri Picturati*. Perhaps a future identification of the watermark of the *Libri Picturati* sheet will be able to give us an answer. And the situation might actually be considerably more complicated: perhaps the *Libri Picturati* tuna fish itself was painted after yet another – lost – French or Spanish pamphlet. In that case we would

⁷ *Visboock* fol. 200v; identical text in *Walvisboock* II fol. 27r.

⁸ For this court case see Nationaal Archief The Hague, Court of Holland, *Civiele Sententies* 537, Book 68 register K, fol. 223r: Charles de Saint Omer versus the heirs of Vincent Cornelisz., 26 January 1563 (1 page); and the more important verdict in National Archive The Hague, Court of Holland, *Civiele Sententies* 538, Book 69 register L, fol. 232r: Anna van Praet, mother of Charles de Saint Omer (and widow of Joos de Saint Omer) versus the heirs of Vincent Cornelisz., 22 December 1564 (32 pp.).

end up with an even more dizzying series of left-right, copy-original and print-watercolour reversals.

A giant moonfish

A second example of related images concerns the beautiful watercolour of a huge moonfish on a double page of *Libri Picturati*. A. 16 (fol. 15r). It bears no annotation but has a watermark dating the paper to ‘not before 1554’ [Fig. 5].⁹ The moonfish is extremely rare in northern waters. It is an easy assumption, therefore, that this fish must have been observed in the Mediterranean. However, something completely different probably happened, and once more Coenen’s illustrated manuscripts provide interesting information. In both his *Visboock* and his *Walvisboock* Coenen depicts and describes moonfish [Figs. 6 and 7].¹⁰ He recalls that a local fisherman from Scheveningen caught a small moonfish in 1560, dried it aboard, and brought it back as a curiosity. A few years later, in December 1563, an enormous dead moonfish measuring 8 by 6 feet drifted ashore near the village of Scheveningen:

Another time, on 13 December 1563, a dead fish of the same type drifted on to the beach of Scheveningen, about half a mile from the village. It was 8 feet in length and 6 feet in height. Once the entrails had been removed I had it loaded onto a wagon – which took the joint forces of eight strong fishermen. I planned to dry the skin and head, but it was a very wet winter and they rotted away. I had the fish portrayed and gave its portrait to the lord of Oosterwijk and the president [of the Court of Holland] master Cornelis Suys, who regarded it as a marvel and wondered very much whether something miraculous would happen – as indeed it did.¹¹

There is no incontrovertible proof that the 1563 moonfish depicted by Coenen is the same exemplar as the one depicted in the *Libri Picturati* A. 16, since the fish in these pictures lack any individualizing characteristics. Yet, the extreme rarity with which such fish occur in northern seas combined with the dating of both pictures, makes it likely that they represent the same fish. As Coenen himself tells us, he ordered a painted portrait to be made of the huge moonfish and presented this

⁹ About the watermark, see Ramón-Laca L., “Charles de l’Ecluse”, appendix.

¹⁰ *Visboock* fol. 150r and *Walvisboock* I fol. 14r.

¹¹ *Walvisboock* I fol. 14r; cf. *Visboock* fol. 151v.

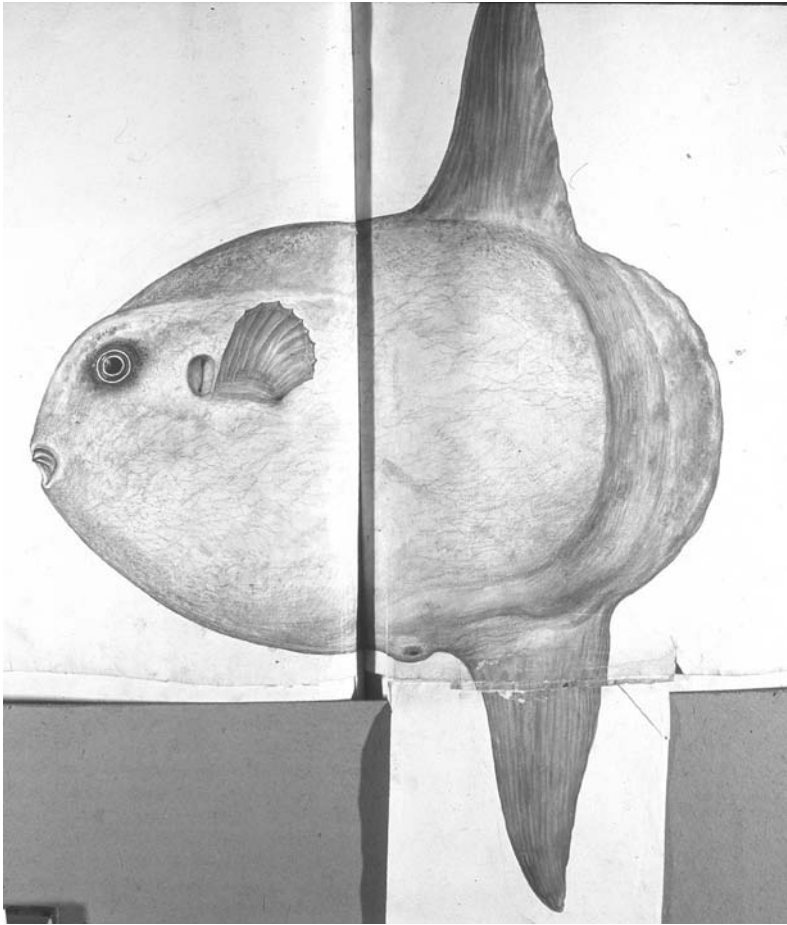


Fig. 5. Moonfish. From *Libri Picturati* A. 16, fol. 15r. Courtesy of Biblioteka Jagiellonska, Kraków.

to Cornelis Suys. Perhaps this portrait or a copy of it reached Saint Omer, who then had it copied by his own artists. The fish stranded in December 1563: it could have been depicted at the earliest in December 1563–January 1564, while Saint Omer’s court case in The Hague and the above-mentioned exchanges of naturalia between Coenen, Saint Omer and possibly Suys took place during 1564–65. Coenen’s information also demonstrates how the humble collector and practical expert Adriaen Coenen acted – sometimes unintentionally, sometimes self-consciously – as a key in the chain of transmission between aris-

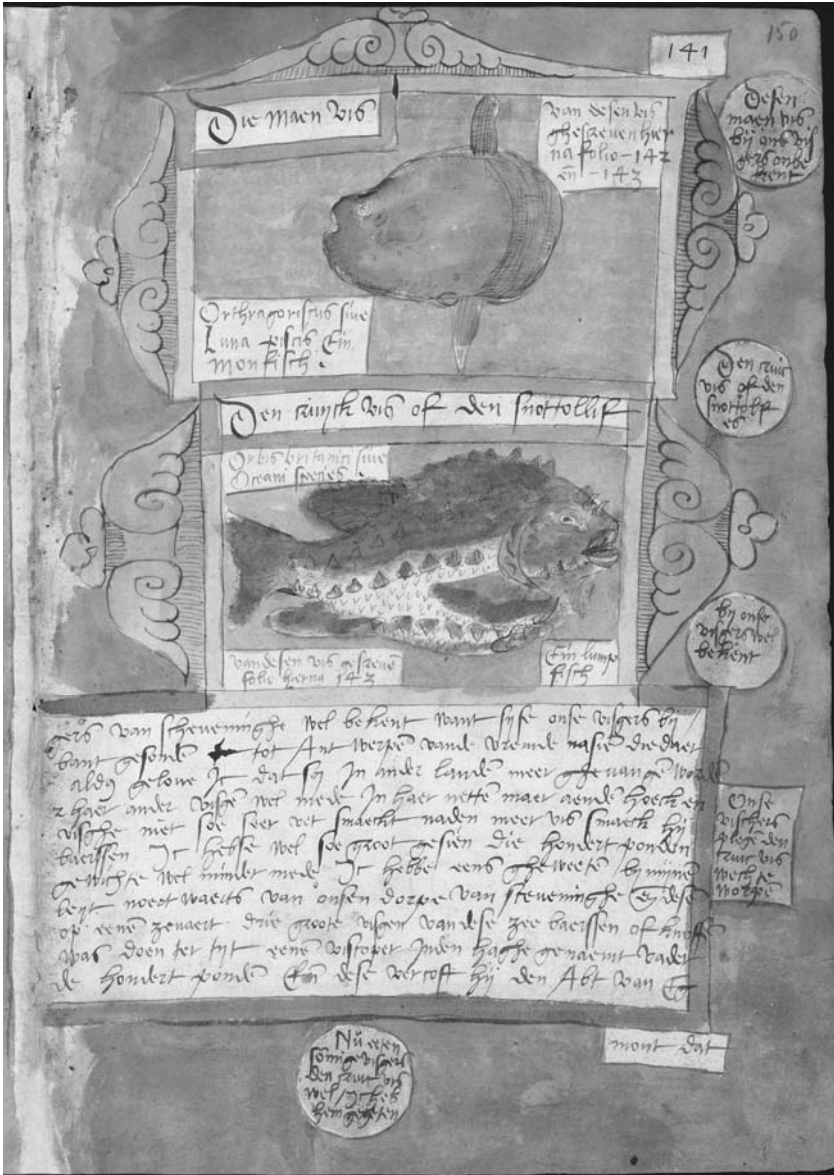


Fig. 6 [COL. PL. XI]. Moonfish. From Adriaen Coenen, *Visboeck* fol. 150r. Koninklijke Bibliotheek, HS. 78 E 54. Courtesy of the Koninklijke Bibliotheek, The Hague.

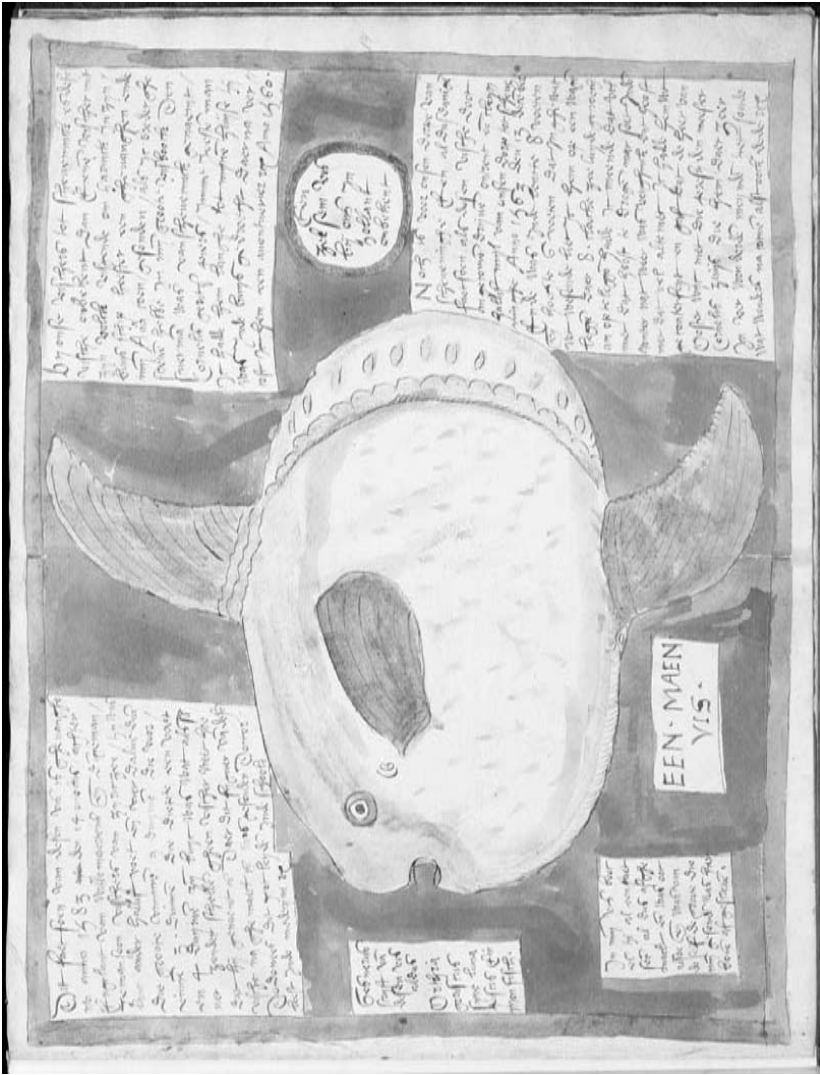


Fig. 7 [COL. PL. XII]. Moonfish. From Adriaen Coenen, *Walvisboek* I, fol. 14r. Courtesy of Koninklijke Maatschappij voor Dierkunde, Antwerp.

ocratic and princely collectors: Cornelis Suys, Charles de Saint Omer and William Prince of Orange.

While the small picture of the massive moonfish of 1563 in Coenen's *Visboock* looks rather lumpy and brown, lacking detail, the moonfish of the *Libri Picturati* is somewhat more professionally depicted, especially if we look at the details of the fins, the eye and the more scalloped rear. Intriguingly, the moonfish included in Coenen's (later) *Walvisboock* is much more colourful (see fig. 7 above). It has a more pronounced dark fin to the right of the eye, more shading and especially a much more detailed and scalloped rear. The accompanying text makes clear that Coenen is depicting and describing yet another moonfish here – a much smaller one than the one of 1563. This new moonfish was discovered in 1583 off the coast of England by fishermen from the Dutch province of Zeeland, several years after Coenen had finished his *Visboock* but just before he started working on his *Walvisboock*:

This is an illustration of a fish caught on 14 October 1583 behind England by Willemaertens and Dingeman Temanszoon, fishermen from Zierikzee. He was 1.5 feet 4.5 thumbs long, the large fins 9 thumbs, the frontal fins 3 thumbs. The depth 1 foot 4 thumbs. His belly was like silver without scales. I have drawn this portrait from an illustration which was sent to Doctor Dodoens who teaches medicine at the university of Leiden.¹²

As Coenen explains, he exchanged information on unusual fish with the renowned botanist Rembertus Dodonaeus (Dodoens), who had been the physician of the emperors Maximilian II and Rudolph II at Vienna from 1574 to 1578.¹³ Dodonaeus spent the last years of his life (1583–85) as a professor of medicine at the recently founded university of Leiden. Coenen too was by then living in Leiden, and both old men must have taken a real pleasure in exchanging information and discussing their lifelong interest in nature. Clearly, Coenen never saw the actual moonfish of 1583 himself, since it was discovered near England and brought to land in Zeeland, but he used the picture sent to Dodonaeus as a model for his own drawing.¹⁴

¹² *Walvisboock* I fol. 14r.

¹³ For Dodonaeus' life and work, see Meerbeeck P.J. van, *Recherches historiques et critiques sur la vie et les ouvrages de Rembert Dodoens* (Malines: 1841; reprint 1980).

¹⁴ For illustrations and a brief discussion of some drawings owned by Dodonaeus and probably made by Coenen, see the entries by Lodewijk Wagenaar in the exhibition catalogue: Bergvelt E. – Kistemaker R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rareitienverzamelingen, 1585–1735* (2 vols., Zwolle: 1992) 133–134. The exhibition presented drawings/watercolours of an octopus, a moonfish and bottlenose

Coenen must have been an extremely lucky man to encounter three exemplars of such a rare fish in the course of some twenty years. Coenen was also one of the first Europeans to depict them.¹⁵ We know of one, earlier illustration of the moonfish in a printed work by a well-known French expert, which Coenen certainly knew: Guillaume Rondelet's *Libri de Piscibus Marinis*, 1554.¹⁶ Yet, the fish in this printed work is 'anonymous', while each of the Coenen moonfish is a unique and identifiable exemplar thanks to his accompanying text. It is the intimate and indelible connection between text and illustration that turns Coenen's three moonfish into real *portraits* of individual fish – even though they lacked special identifying marks such as the tattooed tuna. The latter is unmistakable on account of its appearance alone.

Depicting animals

Having started with the connections between these pictures of the tattooed tuna and the moonfish, we should widen our inquiry to take a brief look at the immediate context of which they form part – and in particular at the character and making of the two collections.

Perhaps surprisingly, much more is known about the albums of the modest Dutch painter of marine life than about the zoological watercolours of the *Libri Picturati*. This is mainly because Coenen himself provides so much information about his life and manner of working in his texts that we can trace many of his (pictorial and textual) sources. The *zoological* volumes of the *Libri Picturati*, on the contrary, lack almost any annotation other than brief references to the name of the animal. In the volume concerning fish and beasts (A. 16) there are names in French for some of the fish (if any at all), and a few brief remarks concerning the beasts, one of which contains the date 1565 and a

whale on loose sheets. We suspect that the latter two and possibly all three were made by Coenen. Cf. Engel H., "Over enkele tekeningen, die eens Dodonaeus toebehoord hebben, waarbij de eerste koningsvisch (lampris luna) van de Europeesche kusten", *Zoölogische Mededelingen* 25 (1945) 9–22.

¹⁵ But not the very first, as has erroneously been claimed by Bergvelt – Kistemaker (eds.), *De wereld binnen handbereik*, II 133.

¹⁶ A second example may occur in François Bossuet, *De Natura Aquatilium Carmen*, 1558, but I have not been able to consult this work and the reference may not be reliable.

reference to André Thevet's *Les Singularitez de la France antarctique, autrement nommée Amerique*, Paris, 1557. The 'bird volume' (A. 17) similarly contains only one direct reference to a date: to Pierre Belon's *L'Histoire de la Nature des Oyseaux* which was first published in French in 1555.¹⁷ The *Libri Picturati* thus offer very few clues that can assist us in the attempt at attribution and identification. This may be one of the reasons why research concerning the zoological volumes of the *Libri Picturati* is far less advanced than that concerning the botanical ones. Both old and recent publications about the *Libri Picturati* almost exclusively concern the botanical volumes, and almost none of the fish and four-footed beasts in Vol. A. 16 or of the large number of beautifully depicted birds in Vol. A. 17 has ever been published.¹⁸ The study of animals and their pictorial representations in history has, in fact, generally attracted far less interest on the part of cultural historians, historians of science and art historians than that of plants. The latter have always been thought to be of greater use as *materia medica*, while the difficulties and costs involved in the preservation of (parts of) animals for purposes of study were much greater than for plants. Modern disciplinary boundaries have played their part as well: the divisions between the humanities, arts and sciences and within the sciences between botany and zoology – not to name their many subdivisions – have hardly helped to maintain the unity of Renaissance 'natural history'.

On the basis of research published more fully elsewhere we can nonetheless say a bit more about these animal volumes of the *Libri Picturati*, making clear why and where they originated, even if not yet by whom they were painted.¹⁹ Again the evidence provided by Coenen plays an important role. Since most of the zoological watercolours of the *Libri Picturati* collection are painted on paper with the same watermark (dateable to not earlier than 1554) as the majority of the botanical ones, it is clear that they originated as part of the same collection. That implies that this collection was conceived from the start as a collection of pictures of *naturalia*. Coenen tells us that he personally presented some (dried) seabirds or *procellaria* to Charles de Saint Omer in 1564 or

¹⁷ *Libri Picturati* A.17, fol. 64v. Comparison with other European 'bird' volumes could be interesting. See for instance Kinzelbach R.K. – Hölzinger J. (eds.), *Marcus zum Lamm (1544–1606). Die Vogelbücher aus dem Thesaurus Picturarum* (Stuttgart: 2000).

¹⁸ For an exception see Wille H., "Der Strauss von Joris Hoefnagel", *Scientiarum historia* 21 (1995) 35–41.

¹⁹ See Egmond, "Clusius, Cluyt, Saint Omer".

1565, when the latter spent some months in The Hague in connection with his court case. In this context he mentions that Saint Omer ‘was having a book made of all birds’.

I had these malefijters [procellaria] and sent them to the seigneur of Renouteren, lord of Moerkercke, who was having a book made of all birds, this lord lived in Flanders.²⁰

Saint Omer’s book comprised ‘all’ birds and was a typical sixteenth-century encyclopaedic manuscript of the kind that was also being illustrated in painting programmes such as that of the Villa Medici in Rome, thus showing some unexpected similarities with Coenen’s more modest encyclopaedic and illustrated albums.²¹

Jacques de Groote’s discovery (in 2003–04) of an extensive inventory detailing the possessions of Charles de Saint Omer upon his death in 1569 shows that he also had a menagerie and that he was an extremely important and rich collector.²² He owned extensive gardens and parks, besides the estate and castle of Moerkercke near Bruges, farms, mills, various feudal landholdings and rights, a town house in Bruges, et cetera. Around the castle of Moerkercke there were gardens, an orchard, and a menagerie with horses, a mule, sheep, goats, swans, pheasants, ‘african chickens’, an eagle, a stork, a bear, a parrot and some other animals. Indoors a rich wardrobe, jewellery, many tapestries (including verdures), silverware, and paintings testify to his wealth. Possessions specifically pointing to Saint Omer’s interests as a collector were his cabinet, containing *singularités*, his collection of weapons and books and the ‘cabinet’ that is listed explicitly as belonging to his wife Anne d’Ongnies. This cabinet included several (unnamed) paintings, and especially:

²⁰ *Visboock* fol. 113v.

²¹ On the painting programme of the Villa Medici see Morel Ph., “Jacopo Zucchi al servizio di Ferdinando de’ Medici”, in Hochmann M. (ed.), *Villa Medici. Il sogno di un cardinale. Collezioni e artisti di Ferdinando de’ Medici* (Rome: 1999) 115–122, especially 117.

²² De Groote has published major parts of this list (in French) on his website (www.tzwin.be). The original is in Rijksarchief Bruges, Belgium, Family Archive 367. This inventory was presented on 25 July 1569 by Saint Omer’s widow Anne d’Ongnies to the court of the Vrije of Bruges (the district surrounding Bruges).

ung couffre ou il y a dedens quatre livres dherbes peintes
 ung commencement dung livre de oyseaulx
 ung commencement dung livre des poissons et aultres animalx

as well as a large chest in which seeds were kept. This evidence clearly demonstrates that the fish/beasts volume and the bird volume as well as the botanical volumes of the *Libri Picturati* collection originated with Saint Omer and that the two volumes of zoological watercolours were separate from the botanical ones right from the start. Saint Omer's books remained unfinished on account of his untimely death and his plans for publication came to nothing.²³

Coenen's albums present us with a mixture of an 'encyclopaedic' attempt to describe, chart and (up to a point) classify marine nature, while they form at the same time a 'poor man's collection on paper'. Charles de Saint Omer was a very rich collector. A number of his watercolours may have served as 'documentation' of plants grown in Saint Omer's own garden and of birds and some 'curious' animals in his part of the world. As the evidence of the tuna fish and moonfish shows, however, by no means all watercolours depicted animals or plants that actually belonged to Saint Omer. The watercolours therefore did not simply constitute a catalogue of his own *naturalia*, but formed an integral part of Saint Omer's collection of *naturalia* and as a painted collection on paper complemented his live and dead animals and plants, on the one hand, and his printed works about natural history, on the other. The *Libri Picturati* watercolours may also have served as a kind of home encyclopaedia: a collection in which pictures, copies of pamphlets about curious animals and exotic plants sent to Saint Omer or his friends could be included. Given the fact that Saint Omer's collection comprised art, coins, weapons, and books as well as *naturalia* in many forms, it was a typical – albeit early – representative of the well known *Kunst- und Wunderkammer*.

Neither Saint Omer's collection of watercolours nor Coenen's collection on paper was created in a simple or single way. As Coenen tells us, several painters formed part of Saint Omer's household. On stylistic grounds the hands of at least five different artists have been distinguished in the *Libri Picturati* collection, but we cannot be certain that all of them were actually living at Saint Omer's court. Almost certainly one of the

²³ For a more extensive discussion of the history of this collection see Egmond, "Clusius, Cluyt, Saint Omer".

Libri Picturati painters was Jacques vanden Corenhuyse (born 1529/30), who had been admitted to the St. Lucas guild of Bruges in 1554 and is also mentioned in the register of deaths of Bruges after 1584. The text of Lobelius' famous *Kruydtboeck* (1581) even explicitly informs us that Corenhuyse painted a particular plant under commission to Saint Omer.²⁴ He must have been very close indeed to the Saint Omer family and may even have been related by kinship.²⁵ The inventory made up after Saint Omer's death states that Corenhuyse painted the blazons for the funeral. A less strong candidate is the Flemish painter and draughtsman Peter van der Borcht who was discovered in Malines by the botanist Dodonaeus; he worked for Plantin from 1564 and was paid by Plantin to produce more than 3,180 botanical watercolours. Woodcuts after some of these drawings were made by three of Plantin's regular woodcutters whom we know by name: Arnold Nicolai, and later Gerard van Kampen and Cornelis Muller.²⁶ These and others must have been instructed to depict many plants and animals in Saint Omer's collection. However, he clearly also included watercolours in his collection which came from elsewhere, but were curious or beautiful enough to fit in, and it is certain that after his early death more watercolours were being added to the core collection.

Coenen, on the other hand, made all of the pictures in his albums himself and he drew many of them after life – or, to be more exact, after dead but real fish and marine animals. But he also frequently made copies after (black and white) illustrations in printed works or pamphlets, usually adding details of his own and always embellishing the picture by adding colour and details. Thereby he turned it into something other than a simply copy. Why Coenen made copies after

²⁴ These findings are mainly the result of the research by Helena Wille. See especially Wille H., "Der Strauss von Joris Hoefnagel", *Scientiarum historia* 21 (1995) 35–41; eadem, "The discovery of the scientific heritage of Karel van Sint Omaars (1533–1569). Libri picturati A 16–30 in the Jagiellon library in Kraków", *Scientiarum historia* 22 (1996) (67–80) 75–78; and eadem, "The albums of Karel van Sint Omaars (1533–1569) (Libri Picturati A 16–31, in the Jagiellon library in Kraków)", *Archives of Natural History* 24 (1997) 423–437.

²⁵ Some sixty or seventy years before Charles de Saint Omer's death, a daughter of a certain Maillard van Corenhuyse (the local lord of that town) married the son of a certain Jeanne de Saint Omer, who must be related to Charles. See Gaillard J., *Bruges et le Franc ou leur magistrature et leur noblesse avec des données généalogiques sur chaque famille* (6 vols., Bruges: 1857–64), here II, 161.

²⁶ For quotations of the textual evidence see Ramón-Laca L., "Charles de l'Ecluse" 205–206.

printed illustrations by other authors even when he was perfectly familiar with the real fish and actually had no need to copy, is not always clear. It does tell us, however, that his pictorial sources were manifold.²⁷ As briefly indicated above, he occasionally hired a local painter to paint a portrait of a very rare but fast-rotting 'fish' in his possession, such as a moonfish and a seven-foot squid or *poelomp*. It is unusual to find information about such local painters, let alone about their being hired by a person who was himself neither a member of the elite nor a naturalist.²⁸ Coenen describes how he had the giant squid brought from Scheveningen to his house in The Hague in 1546:²⁹

And the same evening I made a painter by the name of Cornelis Claeszn Sceveninc come to my house in order to portray it. Because it had an exceedingly strange appearance, he desired to have it at his own house in order to portray it all the better and therefore I had it put into a large tub or milkpail and in this manner carried to the painter, who would portray it on canvas as well as he could, but it was stranger than he was able to represent it.

Original paintings of this kind were clearly too big to be included in Coenen's albums; he gave at least one of them away to an important patron. Yet, it is very likely that Coenen's own pictures of these animals were influenced by the portraits he commissioned.

If even a member of the middle class like Adriaen Coenen could commission painters to portray animals, this practice cannot have been an exceedingly uncommon one at the time. Examples usually come from aristocratic circles, however, rather than from middle-class ones. In fact, portraits of individual animals (such as stags, wild boars, bears, dogs or horses) can often still be found as part of the decoration of aristocratic country houses and palaces in Europe, such as Schloss Ambras near Innsbruck, or Schloss Gottorf in Schleswig-Holstein. The hunting lodge Hoflössnitz near Dresden, which was built between 1648 and 1650 on the orders of Johann Georg I Elector of Saxony, is decorated with many 'zoological' paintings. On the ceiling of the central hall 80 Brazilian birds can be seen, while the bedroom and living room of the

²⁷ For a more detailed discussion of Coenen's (visual) sources and manner of presentation see Egmond, *Het Visboek*.

²⁸ On the sixteenth-century naturalist from Bologna Ulisse Aldrovandi and the painters who worked for him see Olmi G., *L'Inventario del mondo. Catalogazione della natura e luoghi del sapere nella prima età moderna* (Bologna: 1992) especially 61–90.

²⁹ *Visboeck* fol. 46r.

elector of Saxony were decorated with sea-monsters and the portraits of especially impressive hunting trophies (wild boar, colossal beaver, stag, bear) which often detail the relevant date and location as well as further information concerning the animal in text that forms part of the painting.³⁰ Such zoological paintings are rarely of very high artistic quality, but as displays they can tell us much about the type of interest their owners took in these animals and they certainly should be studied together with other representations of animals in collections.

Contexts

Finally, we should raise the issues of the pertinent visual contexts in which zoological pictures such as the moonfish and tattooed tuna could or should be studied, and the possible relevance of such research. On the one hand, we may look for filiations: can we find more – earlier and later – pictures of these fishes, in order to trace influences in terms of pictorial traditions? On the other hand, we might look at differences and parallels between these pictures and others that belong to the same genre. The latter issue, however, immediately raises the question of genres and their characteristics: to what genre do these pictures actually belong?

A by no means exhaustive search for possible filiations among watercolours and printed illustrations of the sixteenth and seventeenth centuries has as yet yielded few results.³¹ The search for moonfishes had to be focused in a *generic* way: although Coenen's three moonfishes can be individually identified thanks to the accompanying text, they do not show any peculiar or unmistakable visual characteristics to distinguish them from other exemplars of their species. We have not found any pictures of or references to moonfishes at all before Coenen's own lifetime. The illustration of a moonfish in the printed work by Guillaume Rondelet (1554) appears to be the first European representation of a

³⁰ See Beschorner H., *Die Hoflössnitz bei Dresden* (Dresden: 1931). For further information about Ambras and Gottorf, and an analysis of the iconographical programme of the decoration of Hoflössnitz, see Mason P., "Eighty Brazilian birds for Johann Georg", *Folk. Journal of the Danish Ethnographic Society* 43 (2001) 103–121.

³¹ An excellent tool for such searches, in so far as published works are concerned, is Barbero Richart M., *Iconografía animal, La representación animal en libros Europeas de Historia Natural de los siglos XVI y XVII* (2 vols., Cuenca: 1999). His text is less reliable.

moonfish.³² Two more pictures of moonfish can be found in printed works of a later date: Ulisse Aldrovandi, *Serpentum et Draconum Historiae*, 1640 (which is based on his sixteenth-century collection) and Jan Jonston, *Historiae Naturalis de Piscibus* (1650). The latter based his moonfish in fact on Rondelet's picture. It may be a coincidence, but like so many other printed illustrations of animals and plants from the seventeenth century, these two moonfish look more awkward than their sixteenth-century predecessors. A search through the publications concerning collections of original sixteenth-century watercolours (by Albrecht Dürer, Georg Hoefnagel, Anselmus de Boodt and others) has not yet rendered any pictures of moonfish apart from the ones by Coenen and the *Libri Picturati* artist(s).³³ The search for filiations of the tattooed tuna had to be organized differently, precisely because of its non-generic, individual characteristics. Since the fish itself appeared in 1565, there is not much point in looking for illustrations before that year. The only picture we have found of it besides the Coenen and *Libri Picturati* watercolours and the Augsburg/Antwerp pamphlet discussed above, again belongs to the domain of printed illustration: Ulisse Aldrovandi included an identical tuna fish with tattoos of ships on its skin (facing right) in his *De Piscibus Libri V*, which was posthumously published in 1640. Its caption actually identifies it as the tuna of 1565.

The issue of pictorial sources and filiations in the early modern period is clearly a complicated and fascinating one, especially if we want to compare original watercolours or drawings rather than printed illustrations. However provisional, the present findings provide food for thought. By its sudden appearance in printed specialist works of the mid sixteenth-century, the moonfish seems to have jumped out of nothing straight into the domain of scientific illustration, to be 'individually' portrayed in colour only for the first time by Coenen and the *Libri Picturati* artists during the 1560s–1580s. It thus appears to have followed

³² See Guillaume Rondelet, *Libri de piscibus marinis* (Lyon: 1554). An abbreviated French edition appeared in Lyon in 1558 under the title *L'histoire entière des poissons*.

³³ On De Boodt see Maselis M.C. – Balis A. – Marijnissen R.H., *De Albums van Anselmus de Boodt (1550–1632). Geschilderde natuurobservatie aan het Hof van Rudolf II te Praag* (Tiel: 1989). On Hoefnagel see Vignau-Wilberg Th., *Archetypha Studiaque Patris Georgii Hoefnagel. Natur, Dichtung und Wissenschaft in der Kunst um 1600/Nature Poetry and Science in Art around 1600* (Munich: 1994). For Dürer see Koreny F., *Albrecht Dürer and the Animal and Plant Studies of the Renaissance* (New York–Boston: 1988). Often, by no means all of the works in collections of watercolours have been published, so this is no more than a provisional result.

an inverted version of the 'normal' process, in which representations of animals found their way from original drawings or watercolours into print. In fact, it is more than likely that the printed illustration in Rondelet was made after an original drawing which is no longer extant or may even still await rediscovery. The fact that our search has as yet only led to *printed* illustrations of the tuna and moonfish probably reflects no more than the simple reality that access to non-printed visual material is much more difficult. The watercolour of the tattooed tuna in Coenen's work also demonstrates that it is no longer self-evident (if it ever was) that watercolours are always 'original' models for mechanically reproduced representations of animals. Drawings or watercolours can be copies too, albeit unique ones.

The question of relevant contexts and the uses of studying and comparing representations of animals are closely linked. On a purely practical level the examples of the moonfish and tuna show that a comparison at the level of the individual sheets can help enormously with the dating and origins of the collection of *Libri Picturati*. Vice versa, the *Libri Picturati* watercolours may throw light on other sixteenth-century naturalia and their pictures as well. Given the size of the collection in Kraków and the fact that most of the zoological watercolours have never been published, a comparison with the botanical and zoological representation of the sixteenth century has been virtually impossible up to now. It promises to be extremely interesting. Besides the moonfish and tuna fish, some other striking but as yet unexplained similarities can be observed: for instance between some pictures of four-footed beasts in the *Libri Picturati* and the Anselmus de Boodt collection.³⁴ And the comparison should obviously be extended to the works of Jacques de Gheyn II and Hendrick Goltzius.³⁵ Such comparisons may, however, not only serve to resolve practical problems concerning specific collections, their origins, background and attribution; they can also help to throw light on more general issues such as the history of collecting, relations between and practices of artists, scholars and collectors or patrons, and the history of visual representation.

³⁴ This especially concerns the lama with a collar, which looks like an inverted image of the one depicted by De Boodt, while a giraffe and coati(?) likewise wear collars. There is also a hare reminiscent of Dürer. De Boodt came from an elite Bruges family and it is likely that he would have known (of) Saint Omer during his young years. See Maselis – Balis – Marijnissen, *De Albums van Anselmus de Boodt*.

³⁵ For examples of their work see *Dawn of the Golden Age: Northern Netherlandish Art 1580–1620* [Exhibition Catalogue Rijksmuseum Amsterdam] (Zwolle: 1993).

Finally, the particular type of picture that has been discussed in this essay – watercolours and other animal portraits which offer potential links with ‘paper collections’, printed illustrations and *Kunst und Wunderkammern* – are also eminently suited to investigate matters of categorization and genre. It seems to be generally accepted that scientific illustration of the natural world is (or has become) ‘scientific’ precisely because it attempts to depict the generic and not the individual, while ‘art’ is usually associated with individualizing representation and ‘portrait’.³⁶ Where plants and animals are concerned, scientific illustrations generally show the characteristics typical of that species (often presenting an ideal type) and deliberately attempt *not* to depict individual variation. In the process the link with ‘reality’ – in the sense of depicting a situation or state existing at a given moment in time – is often lost: plants can be depicted with flowers and fruits at the same time; the colour patterns of furs or feathers can be stylized and simplified. Many representations of animals and plants – such as the famous hare or ‘large piece of turf’ by Dürer – are classified as ‘art’ rather than scientific illustration on account of both their quality and the fact that they actually depict highly individual characteristics. Some of the sixteenth-century watercolours discussed in this essay are definitely individual portraits, while others from the same collections belong to the generalizing type. The artists (or the persons who instructed them) seem to alternate between generic and individualizing ways of depicting animals, and this should make us wonder about the categories of art and scientific illustration themselves. This is all the more relevant since the genre of scientific illustration only came into

³⁶ There is a considerable literature on this issue. To mention only a few stimulating publications: Ackerman J.S., “Early Renaissance ‘naturalism’ and scientific illustration”, in Ellenius A. (ed.), *The natural sciences and the arts. Aspects of interaction from the Renaissance to the 20th century* [...] (Uppsala: 1985) 1–17; idem, “The involvement of artists in Renaissance science”, in David Hoening F. – Shirley J.W. (eds.), *Science and the Arts in the Renaissance* (Cranbury – London: 1985) 94–129; Hall B.S., “The didactic and the elegant; some thoughts on scientific and technological illustrations in the Middle Ages and the Renaissance”, in Baigrie B.S. (ed.), *Picturing knowledge. Historical and philosophical problems concerning the use of art in science* (Toronto: 1996) 3–39, and several of the other essays in the same volume; Ashworth W.B. Jr., “Natural history and the emblematic worldview”, in Lindberg D.C. – Westman R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1990) 303–332; and Ashworth W.B. Jr., “Emblematic natural history of the Renaissance”, in Jardine N. – Secord J.A. – Spary E.C. (eds.), *Cultures of natural history* (Cambridge: 1996) 17–37. Two interesting books on natural history illustration (by Sachiko Kusukawa and Brian Ogilvie) had been announced but not yet published when this essay was written.

being during the sixteenth century while the notion itself of natural science as a scientific discipline was being constructed. The genre did not emerge all at once with all of its (later) characteristics present, and this is precisely why comparison of representations such as the Coenen watercolours, the *Libri Picturati* watercolours, animal portraits of the Hoflössnitz type, the Gessner watercolours, the Weiditz watercolours in the Platter herbarium³⁷ as well as the more famous ones by Dürer, De Boodt, Hoefnagel and others can turn out to be extremely revealing with regard to the emergence of a new genre.

³⁷ See the brilliant Rytz W., *Das Herbarium Felix Platters: ein Beitrag zur Geschichte der Botanik des 16. Jahrhunderts* (Basel: 1933). The Felix Platter herbarium is an exceptional case in which watercolours and (hand coloured) woodcuts are included in a late sixteenth-century set of herbarium volumes with dried plants. These watercolours are the work of Hans Weiditz and the original models of the printed illustrations in the famous *Herbarum vivae eicones* (Strasbourg: 1530) by Otto Brunfels. As Rytz has pointed out, many of these watercolours are highly individual portraits of plants.

Selective Bibliography

- ACKERMAN J.S., "Early Renaissance 'naturalism' and scientific illustration", in Ellenius A. (ed.), *The natural sciences and the arts. Aspects of interaction from the Renaissance to the 20th century*. [...] (Uppsala: 1985) 1–17, republished with an addendum in Ackerman J.S., *Distance Points: Essays in Theory and Renaissance Art and Architecture* (Cambridge Mass.: 1991).
- "The involvement of artists in Renaissance science", in David Hoening F. – Shirley J.W. (eds.), *Science and the Arts in the Renaissance* (Cranbury – London: 1985) 94–129, republished with an addendum in Ackerman J.S., *Distance Points: Essays in Theory and Renaissance Art and Architecture* (Cambridge Mass.: 1991).
- ALDROVANDI ULISSE, *Serpentum et draconum historiae* (Bologna: 1640).
- ASHWORTH W.B. Jr., "Natural history and the emblematic worldview", in Lindberg D.C. – Westman R.S. (eds.), *Reappraisals of the Scientific Revolution* (Cambridge: 1990) 303–332.
- , "Emblematic natural history of the Renaissance", in Jardine N. – Secord J.A. – Spary E.C. (eds.), *Cultures of natural history* (Cambridge: 1996) 17–37.
- BARBERO RICHART M., *Iconografía animal, La representación animal en libros Europeas de Historia Natural de los siglos XVI y XVII* (2 vols., Cuenca: 1999).
- BARTHELMESS K. – MÜNZING J., *Monstrum horrendum. Wale und Waldarstellungen in der Druckgraphik des 16. Jahrhunderts und ihr motiwkundlicher Einfluss* (3 vols., Hamburg: 1991).
- BELON PIERRE, *L'Histoire de la Nature des Oijseaux* (Paris: 1555; 1st Latin edition 1557).
- BERGVELT E. – KISTEMAKER R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735* (2 vols., Zwolle: 1992).
- BESCHORNER H., *Die Hoflösnitz bei Dresden* (Dresden: 1931).
- Dawn of the Golden Age: Northern Netherlandish Art 1580–1620* [Exhibition Catalogue Rijksmuseum Amsterdam] (Zwolle: 1993).
- EGMOND F., "Clusius, Cluyt, Saint Omer. The origins of the sixteenth-century botanical and zoological watercolours in *Libri Picturati* A. 16–30", *Nuncius* 20 (2005) 11–67.
- , *Het Visboek. De wereld volgens Adriaen Coenen 1514–1587* (Zutphen–The Hague: 2005).
- – MASON P., *The Whale Book. Whales and other marine animals as described by Adriaen Coenen in 1585* (London: 2003).
- ENGEL H., "Over enkele tekeningen, die eens Dodonaeus toebehoord hebben, waarbij de eerste koningsvisch (lampris luna) van de Europeesche kusten", *Zoölogische Mededelingen* 25 (1945) 9–22.
- GAILLARD J., *Bruges et le Franc ou leur magistrature et leur noblesse avec des données généalogiques sur chaque famille* (6 vols., Bruges: 1857–64).
- HALL B.S., "The didactic and the elegant; some thoughts on scientific and technological illustrations in the Middle Ages and the Renaissance", in BAIGRIE B.S. (ed.), *Picturing knowledge. Historical and philosophical problems concerning the use of art in science* (Toronto: 1996) 3–39.
- JONSTON JAN, *Historiae naturalis de piscibus* (Frankfurt a.M.: 1650).
- KINZELBACH R.K. – HÖLZINGER J. (eds.), *Marcus zum Lamm (1544–1606). Die Vogelbücher aus dem Thesaurus Picturarum* (Stuttgart: 2000).
- KONING J. de – ZEMANEK A. – ZEMANEK B. (eds.), *Botanical illustrations of the sixteenth century. An enquiry into the Libri Picturati A.18–30* (forthcoming, 2007–2008).
- KORENY F., *Albrecht Dürer and the Animal and Plant Studies of the Renaissance* (New York – Boston: 1988).
- MASELIS M.C. – BALIS A. – MARIJNISSEN R.H., *De Albums van Anselmus de Boodt (1550–1632). Geschilderde natuurobservatie aan het Hof van Rudolf II te Praag* (Tiel: 1989).
- MASON P., "Eighty Brazilian birds for Johann Georg", *Folk. Journal of the Danish Ethnographic Society* 43 (2001) 103–121.

- MEERBEECK P.J. van, *Recherches historiques et critiques sur la vie et les ouvrages de Rembert Dodoens* (Malines: 1841; reprint 1980).
- MOREL Ph., “Jacopo Zucchi al servizio di Ferdinando de’ Medici”, in Hochmann M. (ed.), *Villa Medici. Il sogno di un cardinale. Collezioni e artisti di Ferdinando de’ Medici* (Rome: 1999) 115–122.
- OLMI G., *L’Inventario del mondo. Catalogazione della natura e luoghi del sapere nella prima età moderna* (Bologna: 1992).
- RAMÓN-LACA L., “Charles de l’Ecluse and Libri Picturati A. 16–30”, *Archives of Natural History* 28 (2001) 195–243.
- RONDELET GUILLAUME, *Libri de piscibus marinis* (Lyon: 1554; abbreviated French edition *L’histoire entière des poissons* [Lyon: 1558]).
- RYTZ W., *Das Herbarium Felix Platters: ein Beitrag zur Geschichte der Botanik des 16. Jahrhunderts* (Basel: 1933).
- SCHNALKE T. (ed.), *Natur im Bild. Anatomie und Botanik in der Sammlung des Nürnberger Arztes Christoph Jacob Treu* [Exhibition catalogue] (Erlangen: 1995).
- STRAUSS W.L., *The German single-leaf woodcut 1500–1600. A pictorial catalogue* (3 vols., New York: 1975).
- TEVET AUGUSTE, *Les Singularitez de la France antarctique, autrement nommée Amerique* (Paris: 1557).
- VIGNAU-WILBERG Th., *Archetypha Studiaque Patris Georgii Hoefnagel. Natur, Dichtung und Wissenschaft in der Kunst um 1600/Nature Poetry and Science in Art around 1600* (Munich: 1994).
- WILLE H., “Der Strauss von Joris Hoefnagel”, *Scientiarum historia* 21 (1995) 35–41.
- , “The discovery of the scientific heritage of Karel van Sint Omaars (1533–1569). *Libri picturati* A 16–30 in the Jagiellon library in Kraków”, *Scientiarum historia* 22 (1996) 67–80.
- , “The albums of Karel van Sint Omaars (1533–1569) (*Libri Picturati* A 16–31, in the Jagiellon library in Kraków)”, *Archives of Natural History* 24 (1997) 423–437.

FROM BRAZIL TO EUROPE: THE ZOOLOGICAL
DRAWINGS OF ALBERT ECKHOUT AND
GEORG MARCGRAF

Rebecca Parker Brien

Discovered in 1500 by the Portuguese, Brazil was almost immediately christened the ‘land of parrots’, with early travellers claiming that blue skies would darken as if night had fallen when huge, raucous flocks of the birds flew overhead. But the Europeans who spent time in this Portuguese (and, for a short time, Dutch) colony were not satisfied with simply looking at the wondrous, colourful, and odd animals around them; they often brought specimens back with them, including parrots, armadillos, coati, lizards, and even small monkeys. The overseas journey, however, spelled certain death for most of the animals: even if they weren’t eaten by hungry sailors, several months of inadequate care, inappropriate food, and a radical change in climate meant that only the most robust and adaptable animals could survive.¹ Nonetheless, dried animal remains were highly sought after by many collectors of *naturalia* throughout Europe, and it was well-known that harbour cities such as Amsterdam were excellent places to obtain such materials.

In his overview of cabinets of curiosities assembled by Dutch burghers between 1585 and 1735, Roelof van Gelder describes the obvious enthusiasm for *naturalia*, the majority of it non-native, demonstrated by the contents of such collections, with most of the specimens coming from areas of VOC and WIC trade and colonization, including the East Indies, South Africa, Brazil, Surinam, and New Netherland.² Of

¹ Jean de Léry describes his arduous trip back to France from Brazil, during which monkeys and parrots, intended to be exotic pets, were instead consumed as food. See his 1578 *History of a Voyage to the Land of Brazil*, trans. J. Watson (Berkeley: 2000) 208–216. For other fascinating accounts of the difficulties encountered when importing exotic species into Europe, see Robbins L., *Elephant Slaves and Pampered Parrots: Exotic Animals in Eighteenth-Century Paris* (Baltimore: 2002) 9–37.

² Gelder R. van, “De wereld binnen handbereik: Nederlandse kunst- en rariteitverzameling, 1585–1735”, in Bergvelt E. and Kistemaker R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992). See also, Smit P. (ed.), *Hendrik Engel’s Alphabetical List of Dutch Zoological Cabinets and Menageries* (Amsterdam: 1986).

course, the Dutch were not the only collectors interested in flora and fauna from the Americas; as noted by Wilma George in her analysis of printed catalogues of European zoological cabinets from the second half of the seventeenth century, the armadillo—or rather its dried carapace—was the most common animal in such collections, and after Europe, the majority of the specimens came from South America.³ This does not mean, however, that everyone was satisfied with dried specimens from the New World. Living South American animals were highly desirable because of their unusual appearance, rarity, or beauty and, for obvious reasons related to wealth and position, they frequently ended up in the menageries of European nobility.

Collections of *naturalia* often also included albums of drawings or single images of flora and fauna that served to complement preserved remains, but only the highest ranking members of the European elite were able to commission artists to make images after the living, non-European animals in their own private zoos.⁴ Holy Roman Emperor Rudolf II's 'book of animals', or *Museum*, from the late sixteenth century, is a well-known example of this type of visual production. That this was not an isolated example is made clear by the images of South American animals belonging to the Grand Duke of Tuscany, including parrots and an agouti, which were created by Italian artist Jacopo Ligozzi in the 1580s, or the oils studies on canvas after the exotic animals in Louis XIV's menagerie at Versailles by Flemish artist Pieter Boel. Although such images were put to a variety of uses, their contemporary value seems clear: while stylistically divergent, these drawings and paintings preserved the exterior appearance, including the colour and form, of the exotic animal. As such, they functioned as a permanent visual record of both the animal and, with respect to the corpus of images, the menagerie as a whole. They furthermore highlighted the collector's ability to assemble and possess wondrous and exotic creatures from afar. But how are we to assess the value of images like these if the menagerie, the noble collector, and his artists, were not in Europe, but in the New World as part of a European colonial presence?

³ George W., "Alive or Dead: Zoological Collections in the Seventeenth Century", in Impey O. – MacGregor A. (eds.), *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: 1985) 179–187.

⁴ See, for example, discussion of William Courten's collection practices and his patronage of scientific illustration in England in the late seventeenth century in Gibson-Wood C., "Classification and value in a seventeenth-century museum: William Courten's collection", *Journal of the History of Collections* 9,1 (1997) 61–77.

This brings us to the case of the German count Johan Maurits van Nassau-Siegen, who was governor-general of Dutch Brazil from 1637–1644. As soon as he was appointed to this position by the directors of the WIC, Johan Maurits determined that the investigation, collection, and representation of Brazil would be a priority during his governorship. Before he left the Dutch Republic, he hired the painters Frans Post and Albert Eckhout and then brought them with him to Brazil to work as his court artists.⁵ By 1638, they had been joined by the scientists Willem Piso and Georg Marcgraf (who also had artistic training), both of whom worked as ‘nature describers’ for the count; their collaborative work would be published in 1647 as *Historia naturalis Brasiliae*, the first natural history of Brazil, a work that remained authoritative until the nineteenth century.⁶ Although scholarship on the works of art created at Johan Maurits’s court has tended to focus on the oil paintings on canvas by Post and Eckhout, the artists and naturalists at Johan Maurits’s Brazilian court also produced over 700 natural history drawings and oil studies on paper. These unique works, which were used for a variety of decorative and scientific purposes, were highly valued by contemporaries in Europe and became part of an elite gift exchange after Johan Maurits returned to the Dutch Republic in 1644.⁷

For the rest of this essay, I will focus on the zoological drawings created in Brazil by Dutch painter Albert Eckhout and the German naturalist-illustrator Georg Marcgraf, whose images make up the majority of this visual corpus. As will become clear, Eckhout’s oil studies and Marcgraf’s watercolours drawings belong to separate visual traditions

⁵ Literature on the work of these artists includes: Thomsen T., *Albert Eckhout, ein niederländischer Maler und sein Gönner Johan Maurits der Brasilianer* (Copenhagen: 1938); Larsen E., *Frans Post, interprète du Brésil* (Amsterdam: 1962); Boogaart E. van den (ed.), *Johan Maurits van Nassau-Siegen, 1604–1679. A Humanist Prince in Brazil and Europe* (The Hague: 1979); Whitehead P.J.P. – Boeseman M., *A portrait of Dutch 17th century Brazil: Animals, plants and people by the artists of Johan Maurits of Nassau* (Amsterdam: 1989); Brien R., *Visions of Savage Paradise: Albert Eckhout, Court Painter in Colonial Dutch Brazil* (Amsterdam: 2006). The exhibition catalogue, Buvelot Q. (ed.), *Albert Eckhout: A Dutch Artist in Brazil* (The Hague: 2004) contains excellent reproductions and a useful overview of the literature by Buvelot.

⁶ Regarding the importance of Marcgraf’s zoological descriptions in the *Historia*, see Ashworth W., “Remarkable Humans and Singular Beasts”, in Kenseth J. (ed.), *Age of the Marvelous* (Hanover: 1993) 113–144.

⁷ For those who cannot travel to Poland, study of the drawings has been made more accessible by their publication in Ferrao C. – Soares J.P.M. (eds.), *Brasil-Holandês/Dutch-Brazil*, 5 vols. (Rio de Janeiro: 1995), which includes all of the Brazilian images, although the quality of the reproduction is quite variable.

and demonstrate diverging priorities in their encounter with and reproduction of Brazilian nature. Marcgraf, who may have been trained as a miniature painter, followed the descriptive style of the nature study, while Eckhout employed the dynamic and naturalistic vocabulary of a seventeenth-century Netherlandish still-life painter.⁸ By addressing the conditions of production and the colonial function of their drawings, I hope to shed light on the continuities as well as the differences between Johan Maurits and his contemporaries in Europe with respect to their patronage of natural history illustration. This essay will close with a discussion regarding the use of the images by Marcgraf and Eckhout in Europe after 1644, when the Count returned from Brazil to the Dutch Republic.

The Brazilian Drawings: from Mauritsstad to Kraków

Created by Marcgraf and Eckhout in Brazil between 1637 and 1644, the images addressed in this essay formed part of a larger gift presented by Johan Maurits to his patron, Friedrich Wilhelm, the Elector of Brandenburg, in 1652, eight years after the Count's return from Brazil. The Brazilian drawings became part of the *Libri picturati* collection of natural history illustrations in the Elector's library, which later became the Royal Library in Berlin. During WWII, the *Libri picturati* collection and other important books and manuscripts were removed from Berlin, with the Brazilian volumes sent to Silesia and later Grüssau (Krzeszów) for safekeeping. They were transported to Kraków after the war and eventually found their way into the Jagiellon University Library. Outside of Poland, the Brazilian volumes of the *Libri picturati* and other important works from the Royal Library, including music manuscripts by Bach and Mozart, were thought to have been lost until the late 1970s, when they were incorporated into the Jagiellon library's general collection and made accessible to readers both from Poland and abroad.⁹

The first document to address these images is the anonymous 18 September 1652 contract for the transfer of Johan Maurits's gift to

⁸ It is not known who trained either one of these artists.

⁹ For a more complete discussion, see Whitehead – Boeseman, *A portrait of Dutch 17th century Brazil* 33–35 and Whitehead P.J.P., “The Treasures at Grüssau”, *New Scientist* 94 (1982) 226–231. The Brazilian drawings have never travelled outside of Poland and are in desperate need of conservation.

Friedrich Wilhelm, which includes a complete inventory. Items fourteen and fifteen are described as follows:

14. A large book in royal folio and another somewhat smaller (in folio), in which everything that can be seen and found in Brazil (people, quadrupeds, birds, worms, fish, trees, herbs, flowers) with miniatures is artfully represented after life [*nach dem Leben*] added to which are (descriptions, names, and characteristics) names, qualities, and characteristics.

15. Yet more than (several) hundred other (Indian paintings of animals and all sorts of other subjects with oil paints) paintings with oil paint on paper, unbound.¹⁰

Between 1660 and 1664, the German scientist Christian Mentzel (1622–1701) gathered most of the loose images, described in item 15 above as including several hundred ‘Indian’ [i.e., West Indian] paintings of animals and other subjects in oils, into four large folio volumes, to which he gave the collective title *Theatrum Rerum Naturalium Brasiliae* (Theater of the Natural Things of Brazil). Mentzel was a highly learned botanist as well as the personal physician to the Elector of Brandenburg.¹¹

Arranging the images into separate volumes by subject, Mentzel pasted the drawings onto new sheets of paper, sometimes cutting off parts of the original representations in his effort to fit them into the new format. Volume I (*Icones Aquatiliū*) includes images of fish; volume II (*Icones Volatiliū*) is limited to birds; volume III (*Icones Animalium*) includes images of people and quadrupeds; and volume IV (*Icones Vegetabiliū*) is devoted to images of plants. The vast majority of the studies and chalk drawings in these four volumes can be attributed to Albert Eckhout, although it is clear that other hands are also present.¹² Mentzel’s source

¹⁰ See the inventory of the items („Verzeichnis derer im vorgedachten Akkord Uns von Sr. Lbd. Ueberlassenen Stuecken“), No. 14. Ein gross Buch in Royal-Folio und eins etwas kleiner (in Folio), worin alles was in Brasilien (von Menschen, vierfuessigen Thieren, Gevoegel, Gewuermen, Fische, Baeume, Kraeuter, Blumen) zu sehen und zu finden ist, mit Miniaturen kuenstlich nach dem Leben abgebildet ist, mit beigefuegten (Beschreibung, Nahmen und Eigenschaften) Nahmen, Qualitaeten und Eigenschaften. No. 15. Noch ueber (etzliche) hundert andere (Indianische Schildereyen von Thieren und allerhand Sachen mit Oelfarben) Schildereyen mit Oelfarben auf Papier, so nicht zusammen gebunden. This inventory is reproduced by Larsen, *Frans Post, interprète du Brésil* 252–253, doc. No. 50, which is based on Driesen L., *Leben des Fürsten Johann Moritz von Nassau-Siegen* (Berlin: 1849), Beilage A 356. Cf. Driesen’s discussion, 107–109. There is another version of this inventory in the KHA in The Hague.

¹¹ For Mentzel, see Artelt W., *Christian Mentzel: Leibarzt des Grossen Kurfürsten* (Leipzig: 1940).

¹² For a history of the attribution of these images to Eckhout, see Brienens, *Visions of Savage Paradise*.

for the Brazilian names, which he wrote at the top of the page above many of the images, as well as his basic system of classification, was Marcgraf and Piso's *Historia*, both the 1648 and the 1658 editions, in which the natural world is separated into plants, quadrupeds, birds, insects, and fishes and sea animals, a fairly standard system of classification by the seventeenth century.

In the 1652 inventory reproduced above, item 14 lists two volumes of 'miniatures artfully represented after life'. These books are immediately recognizable as the *Libri Principis*, also called the *Handbooks*. Unlike the oil studies and drawings from Brazil, the watercolour and body colour images in the *Handbooks* had already been gathered into separate volumes before Johan Maurits presented them to the Elector. These images are also unsigned, but Marcgraf's authorship of them has become well-recognized in the literature.¹³ In 1652 these books included 'everything that can be seen and found in Brazil'. Today, however, they comprise a more limited selection of subjects, chiefly Brazilian birds, fishes, and other animals, and a handful of botanical images, which suggests that the images of people mentioned in the inventory were removed by Mentzel. It is nonetheless certain that no drawings from the *Handbooks* were incorporated into the *Theatrum*. As Mentzel stated with approval in his preface to *Theatrum* volume I, 'Very correctly, His Serene Highness the Elector forbade that such water colours were placed with our larger oil-painting collection, determining that some here and there would constitute their own "Theatre" separately'.¹⁴ Watercolour images could create their own 'Theater of Brazilian Nature', but it was considered unacceptable to mix them with the drawings in oil on paper for reasons that will be addressed in greater detail at the end of this essay.

¹³ See Brienen R.P., "Georg Marcgraf (1610–ca. 1644) A German Cartographer, Astronomer, and Naturalist-Illustrator in Colonial Dutch Brazil", *Itinerario* 20,1 (2001) 85–112.

¹⁴ 'Tandem accedebat et hoc, quod in Celsissimi Principis Iconibus aliae, et praecipue duorum Librorum, coloribus quidem aquariis, sed egregie per punctulorum minutissima distinctae essent, quas coniungi cum illis maioribus nostris, olearibus coloribus depictis, summo accuratoque indicio vetabat, Serenissimus ELECTOR: Illas ergo, quae colorum essent oleariorum, THEATRO suo non minus separatim atque illas aquariorum colorum mandaret', Mentzel C., preface to *Theatrum rerum Naturalium Brasiliae*, vol I., as reproduced both in translation and in the original Latin (in facsimile) in *Brasil-Holandês/Dutch-Brazil*, vol. IV 22–23.

Johan Maurits's Brazilian Menagerie and Cabinet of Curiosities

In order to fully understand the history of these drawings, it is necessary to examine the conditions of their creation in Dutch Brazil. Although Mentzel asserts in his introduction to the *Theatrum* that the Brazilian oil studies were 'pictures of the things that Nature hath produced, nourished and nurtured, formed in their own original habitat and painted in colours exactly *after life* [ad vivum] in order to reproduce nature itself as perfectly as possible', it is nonetheless clear that the representations by Marcgraf and Eckhout do not record encounters with wild animals in their natural environment.¹⁵ In fact, Johan Maurits's artists, like their European contemporaries, did not need to participate in dangerous expeditions into the interior to study Brazilian nature; they could instead examine plants and animals (certainly in greater numbers and varieties than could be found in Europe) at the governor's Brazilian residences Boa Vista and Vrijburg Palace, in his menagerie, cabinet of curiosities, and botanic gardens.

During the early modern period, menageries of exotic animals became an essential part of princely self-fashioning throughout western Europe. In the fifteenth century the powerful unofficial ruler of Florence, Lorenzo de' Medici, numbered parrots, apes, peacocks, and even a giraffe in his famous collection of animals.¹⁶ Collections like this one were not simply for pleasure, although that certainly played a part, they were also a physical manifestation of the reach of one's empire and a reminder of political affiliations. Generally speaking, only the very highest ranking members of the European elite, from the Medici and Emperor Rudolf II in the sixteenth century to Archdukes Albert and Isabella and Louis XIV in the seventeenth century, possessed menageries with large numbers of exotic animals.¹⁷

¹⁵ '[...] THEATRUM BRASILIENSIIUM scilicet RERUM, quas NATURA produxit, aluit atque enutrivit, ICONES ipsis in natalium suorum incunabulis ac patria sua BRASILIA nempe coloribus ad vivum exactissime depictas', Mentzel, preface to *Theatrum rerum naturalium Brasiliae*, part 1, *Icones Aqualium*, as reproduced in translation and the original Latin (in facsimile) in *Brasil-Holandês/Dutch-Brazil* vol. IV 18–19. In this translation, *ad vivum*, or after life, was translated into English as 'bright'. I have restored this important term to the sentence, which will be discussed in more detail later in this essay.

¹⁶ Comito T., *The Idea of the Garden in the Renaissance* (New Brunswick: 1978) 8.

¹⁷ As discussed by Smith and Findlen in a recent essay on commerce and images of nature, the Indian rhinoceros that arrived in Lisbon in 1515, most famously pictured by Albrecht Dürer, started its long journey to western Europe as a diplomatic

By building a zoo of South American and African animals during his governorship in Brazil, Johan Maurits demonstrated his desire for affiliation with other European noble collectors of exotic and native animals, whose ranks included members of his extended family, such as Landgrave Wilhelm IV and the Dutch stadhouders Prince Maurits and Prince Frederik Hendrik.¹⁸ As mentioned by Caspar Barlaeus, the Count's historian and principle apologist for Dutch Brazil, animals arrived in Recife via ships from Africa, the East Indies, and other areas for the Count, and the presence of these exotic imports, mixed in with indigenous Brazilian specimens, is documented in both the *Theatrum* and the *Handbooks*.¹⁹ Eyewitness accounts by the Portuguese friar Manuel Calado and the German WIC servant (later governor of the Cape colony) Zacharias Wagener suggest that many of the Brazilian animals in the Count's menagerie were gifts, given to curry favor with Johan Maurits.²⁰ According to Calado, a frequent visitor at the Vrijburg court, the Count 'brought thither every kind of bird and animal that he could find; and since the local *moradores* [colonists] knew his taste and inclination, each one brought him whatever rare bird or beast he could find in the back-lands'.²¹

Not all of the animals that made their way into the Count's possession were still alive. Many of these creatures were preserved (presumably dried and stuffed) and thereafter incorporated into Johan

gift from Sultan Muzafar II to Alfonso d'Albuquerque, the governor of Portuguese India. Alfonso shipped this exceptional creature to his king, Don Manuel, who in turn recycled the gift by sending it on to the Medici pope Leo X in Rome. Unfortunately, the rhinoceros did not make it to Rome alive, because its ship sank off the coast of Italy. See Smith P. – Findlen P., "Commerce and the Representation of Nature in Art and Science", in *Merchants and Marvels: Commerce, Science, and Art in the Early Modern Period* (London: 2002).

¹⁸ Although Maurits and Frederik Hendrik owned exotic animals, including Maurits's famous talking parrot, the later menagerie of Stadholder Willem V may be the best documented of these Dutch princely collections. See Slingers B.C. – Wertheim A.A. (eds.), *Een vorstelijke dierentuin: De menagerie van Willem V* (Zutphen: 1994).

¹⁹ Caspar Barlaeus, *Rerum per octennium in Brasilia et alibi nuper gestarum sub praefectura illustrissimi comitis I. Mauritii Nassoviae [...] historia* (Amsterdam: 1647). This work has been translated into Dutch as *Nederlandsch Brazilië onder het bewind van Johan Maurits Grave van Nassau 1637–1644*, ed. and trans. S.P. L'Honore (The Hague: 1923).

²⁰ Under his illustration of a Tayim bugh (taibia), Wagener states, 'in 1640, a Portuguese called Antonio Robero brought one alive for his excellency', as reproduced in translation in *The "Thierbuch" and "Autobiography" of Zacharias Wagener*, trans. A.A. Bragança Júnior, *Dutch Brazil* (Rio de Janeiro: 1997) 120. This is a facsimile of Wagener's *Thierbuch* and all subsequent references will be to this translation.

²¹ See *O valeroso lucideno e triunfo da liberdade* (1648), as quoted in translation by Boxer C.R., *The Dutch in Brazil, 1624–1654* (Oxford: 1957) 116.

Maurits's cabinet of curiosities. Artists, apothecaries, professors, and princes throughout western Europe demonstrated their keen interest in natural history and the accumulation of exotic and unusual objects by creating cabinets of curiosities or *Wunderkammern*, during the early modern period.²² In addition to his private zoo, Rudolf II had impressive *Kunst- und Wunderkammer*, which 'embraced all the human arts, all the branches of human knowledge, and all the different realms of nature'.²³ Although his collection was exceptional, the Emperor's natural history holdings paled in comparison to the thousands of specimens amassed by Ulisse Aldrovandi (1522–1605), an Italian professor of medicine and a key figure in early modern science.²⁴ As described by Barlaeus, the Count's Brazilian 'museum' included both *artificialia*, such as non-European ethnographic objects like clothing and weapons, in addition to *naturalia* in the form of shells and dried plants and animals.

Unlike the vast collections of objects, specimens, and finely-crafted items from around the world amassed by many of his elite contemporaries, Johan Maurits did not attempt encyclopedic coverage. Rather his menagerie and cabinet reflected, and I would argue, reinforced, his position as a governor-general for the Dutch West India Company by highlighting animals and specimens from Brazil and western Africa, the primary areas of WIC trade. Given the physical location of Dutch Brazil, far removed from 'civilization', Johan Maurits clearly felt the need to adopt European forms of princely authority in order to make visible his claims to power. These manifestations of princely authority included his new city Mauritsstad (Recife), his various architectural projects, including Vrijburg palace and the Boa Vista pleasure house, in addition to his gardens, menagerie, and cabinet of curiosities. The intended audience for these projects and collections was not limited to servants of the WIC, colonists, and native allies, but also included foreign interests, such as the Portuguese in nearby Olinda and the west

²² The literature on collecting is vast. A useful introduction to the materials can be found in Kenseth J. (ed.), *Age of the Marvelous* (Hanover: 1993). Other important works include Impey O. – MacGregor A. (eds.), *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: 1985); Bergvelt – Kistemaker (eds.), *De Wereld Binnen Handbereik* and Findlen P., *Possessing nature: museums, collecting, and scientific culture in early modern Italy* (Berkeley – Los Angeles: 1994).

²³ Kenseth J., "A World in One Closet Shut", in idem (ed.), *The Age of the Marvelous* 85.

²⁴ See Swan C., "From Blowfish to Flower Still Life Paintings: Classification and Its Images, circa 1600", in Kenseth (ed.), *Merchants and Marvels* 109–137.

African ambassadors who made Maurtisstad the goal of their diplomatic missions during this period.

Johan Maurits's Patronage of Natural History Illustration

But what of Johan Maurits's motivations with respect to his Brazilian patronage of natural history drawings? As argued by Lee Hendrix, Rudolf II's *Museum*, or *Thierbuch*, included images of the 'the natural world as it was embodied in and defined by his [Rudolf II's] own collections', which makes it an important precedent for the drawings by Eckhout and Marcgraf in the *Theatrum* and the *Handbooks*.²⁵ The images in the *Museum*, which include large-scale oil paintings on parchment, documented the living animals present in the Emperor's zoo as well as the curiosities and preserved specimens of *naturalia* from his *Wunderkammer*. In the same way, the animals represented in the *Theatrum* and the *Handbooks* mirrored the contents of Johan Maurits's personal collections. The *Museum* functioned as a record of Rudolf II's impressive ability to gather together the new and the unusual from all over the world, as emblems of influence and empire. In a similar fashion, the *Theatrum* and the *Handbooks* reproduced the contents of the Count's Brazilian menagerie and cabinet of curiosities; one may even argue that these images stood in for all of the animals and plants that fell within Johan Maurits's larger sphere of influence in South America and Africa.

Among the Brazilian drawings by Eckhout and Marcgraf we find images of young animals (which were easier to catch and train), chained monkeys, and parrots on perches, demonstrating captivity as well as domestication [Fig. 1]. Other animals, including a bird of paradise (here pictured with feet, but lying stiffly on its side), were clearly dead before being drawn [Fig. 2]. This suggests that Marcgraf, the drawing's author, had access to dried specimens in the Count's cabinet of curiosities; birds of paradise, imported from New Guinea, had figured prominently in such collections in Europe since the sixteenth century.²⁶ Often their feet were removed, which added credence to claims that

²⁵ Hendrix L., "Natural History Illustration at the Court of Rudolf II", in Fucíková E. et al. (eds.), *Rudolf II and Prague: the imperial court and the residential city as the cultural and spiritual heart of central Europe* (Prague: 1997) 162.

²⁶ Koreny F., *Albrecht Dürer and the animal and plant studies of the Renaissance* (Boston: 1985) 100–112.

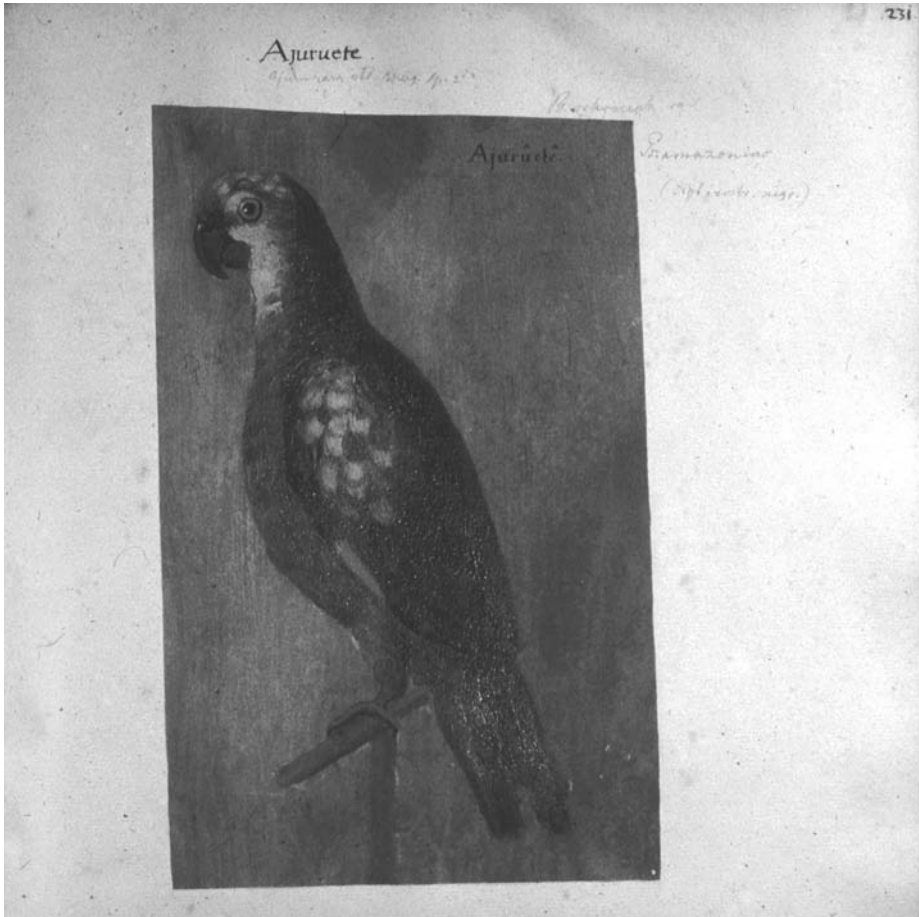


Fig. 1 [COL. PL. XIII]. Albert Eckhout, Amazonian parrot (*Amazona aestiva*). Oil on paper. *Theatrum* II fol. 231r, *Libri picturati* A33 (Jagiellon University Library, Kraków).



Fig. 2 [COL. PL. XIV (detail)]. Georg Marcgraf, Bird of paradise (*Paradisaea minor*), ca. 1640. Watercolour and body colour on paper, 31 × 20 cm. *Handbook I* fol. 180r; *Libri picturati* A36 (Jagiellon University Library, Kraków).

they lived their entire life in the air.²⁷ Of the native Brazilian species, it can be inferred that all of the representations of aquatic animals in these volumes were created after dried or recently caught specimens, with some coming from the ponds on the grounds of Vrijburg palace and others, such as this flying fish, obtained by fishermen and sailors off the coast of the colony [Fig. 3].

Beyond documenting the Count's Brazilian collection, it seems clear that Eckhout's role as Johan Maurits's court artist was also to create a comprehensive group of realistic, large-scale, and authoritative images of exotic flora and fauna, which could then be used as reference materials and models for decorative projects—from tapestries, to ceiling paintings, to paintings on canvas—both in Brazil and in Europe. Eckhout's works on paper, which generally lack annotation and remained unbound until the 1660s, were not originally intended for educational, interactive use. Unlike these loose oil studies on paper, Marcgraf's drawings were already bound into two volumes in Brazil with a specific, hands on, function in mind. While Marcgraf may have intended these drawings to serve as models for the illustrations to his treatise on zoology in the *Historia naturalis Brasiliae*, in Brazil the *Handbooks* appear to have functioned as Johan Maurits's personal natural history guides and notebooks. They include his handwritten descriptions and observations about various animals, providing evidence for the Count's personal engagement with the study of Brazilian nature and his deliberate use of animals as princely and diplomatic gifts.

By writing his own descriptions underneath many of the images, Johan Maurits became a 'princely practitioner' of New World natural history as well as the ruler of all he surveyed.²⁸ Under a simple black and white watercolour drawing of a jaguar cub (*Panthera onca*), the Count writes: 'a young tiger, reaching such a size, that, when full grown, its back is level with the height of a table; very fierce'.²⁹ Johan Maurits's annotations give a keen sense of the interest in and interaction with some of the more unusual Brazilian animals in the colony, which were clearly objects of fascination for the Europeans. In describing

²⁷ Ashworth W.B. jr., "Remarkable Humans and Singular Beasts", in Kenseth (ed.), *Age of of the Marvelous* 125–126.

²⁸ Moran B.T., "German Prince-Practitioners: Aspects in the Development of Courty Science, Technology, and Procedures in the Renaissance", *Technology and Culture* 22 (1981) 253–274.

²⁹ *Liber Principis*, vol. I, fol. 58, as reproduced in translation in *Brasil-Holandês/Dutch-Brasil* vol. II 21.

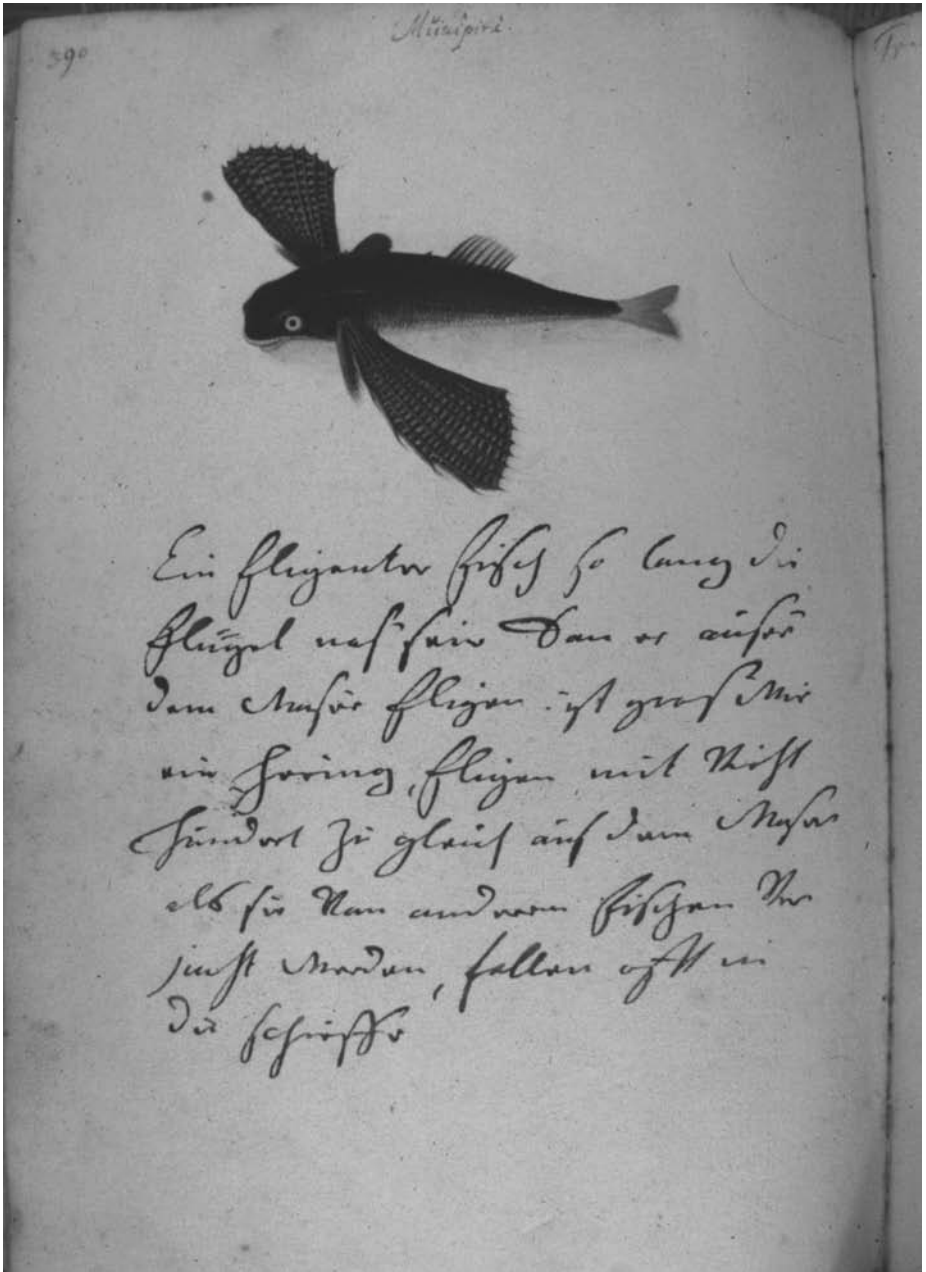


Fig. 3. Georg Marcgraf, Flying Fish (*Dactylopterus volitans*), ca. 1640. Watercolour and bodycolour on paper, 21 × 30 cm. *Handbook I fol. 390r, Libri picturati A36* (Jagiellon University Library, Kraków).

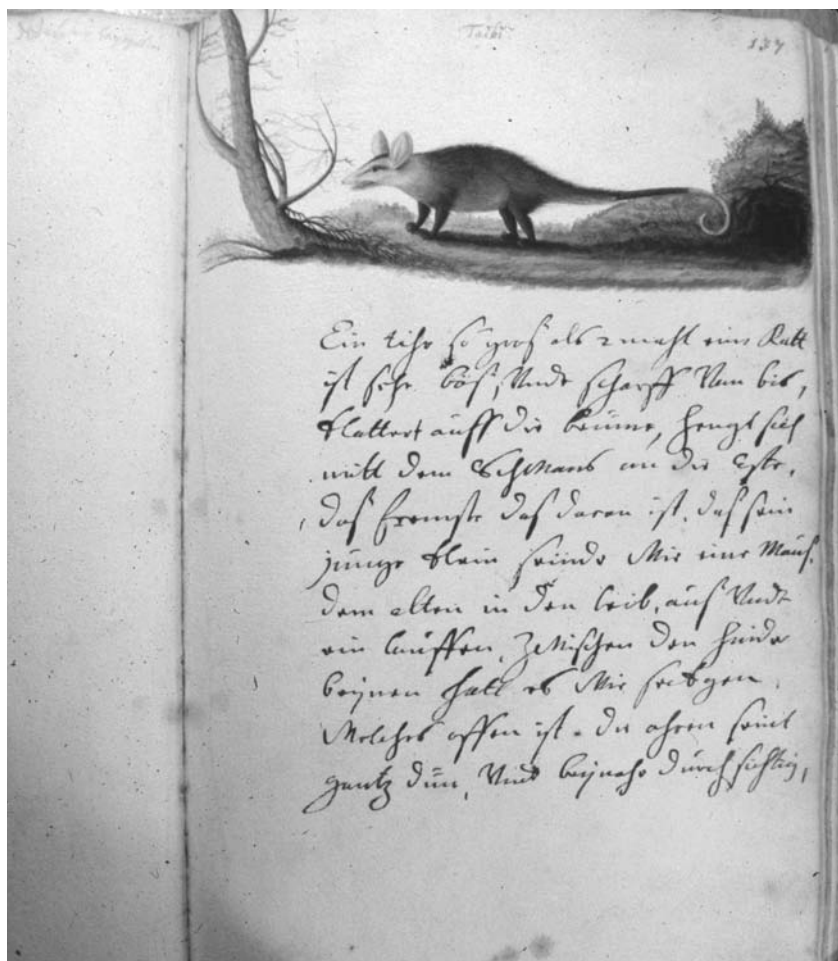


Fig. 4 [COL. PL. XV (detail)]. Georg Marcgraf, Taibi (*Didelphis marsupialis*), ca. 1640. Watercolour and body colour on paper, 31 × 20 cm. *Handbook* I fol. 30r; *Libri picturati* A36 (Jagiellon University Library, Krakow).

a taibi (*Didelphis marsupialis*), a sort of South American opossum, he writes: 'An animal, twice as large as a rat, very fierce and with a sharp bite. It climbs on trees, hanging by the tail from the branches [...] its young, as small as a mouse, get in and out of the adult's belly... the ears are thin and almost transparent' [Fig. 4].³⁰ Unlike the taibi, sloths

³⁰ *Liber Principis*, vol. I fol. 137, as reproduced in translation in *Brasil-Holandês/ Dutch-Brasil* vol. II 41 (with some adjustments to the English).

had been featured in a variety of European accounts of the Americas beginning in the sixteenth century. Under this drawing of three-toed sloths (*Bradypus tridactylus*), one climbing a tree and the other lying on the ground, he notes ‘The Germans call this animal a sloth since it walks no more than fifty steps a day. It feeds on old leaves. Its hair is thick, and it reaches about two feet long’ [Fig. 5].³¹

In addition to the ‘tiger’ mentioned above, the Count’s collection included other animals traditionally associated with royalty, such as game animals and horses. Under this image of a graceful, reddish brown deer drinking from a stream, Johan Maurits describes it as: ‘A game animal smaller than a roe. The stag has antlers like the European ones [...] I have sent live specimens to His Majesty (S. Hoog., probably referring to Frederik Hendrik) but they died of cold’ [Fig. 6]. The princely context of this volume is further reinforced by images of two Brazilian horses, including a dapple-gray horse of a type that also appears in Jan Brueghel the Elder’s paradise landscapes from the early seventeenth century. As noted by Arianne Faber Kolb, this type of horse was ‘the highest class of horse and [was] therefore associated with royalty’.³² This is also made clear by the fact that Johan Maurits specifically sent this animal and other fine riding horses to ‘S. Hoch. Prins. Henderig’ (Stadhouder Frederik Hendrik, Prince of Orange) and ‘S. Hoch. Prins Wilhem’ (Frederik Hendrik’s son, Prince William II of Orange). The fact that *Handbook II* originally included a treatise on horse medicine, perhaps handwritten by Johan Maurits, similarly betrays its practical as well as its princely function.

*Style and Pictorial Mode in Marcgraf’s
Brazilian Natural History Drawings*

In his preface to the *Theatrum*, Mentzel calls Marcgraf’s watercolours in *Handbook I* and *II* ‘meticulously painted’, and he notes that in each of the two volumes ‘the Prince described in his own hand, in our own German language, the true grandeur and dimensions of the creatures portrayed, so that these books must be admired and appreciated as

³¹ *Liber Principis*, vol 1, fol. 112, as reproduced in translation in *Brasil-Holandês/ Dutch-Brazil* vol. II 34. There are three different types of three-toed sloths; this appears to be the pale-throated variety.

³² Kolb A.F., *The Entry of the Animals into Noah’s Ark* (Los Angeles: 2005) 63.



Fig. 5 [COL. PL. XV (detail)]. Georg Marcgraf, Three-toed Sloths (*Bradypus tridactylus*), ca. 1640. Watercolour and body colour on paper, 31 × 20 cm. Handbook I fol. 30r, *Libri picturati* A36 (Jagiellon University Library, Kraków).



Fig. 6 [COL. PL. XVI (detail)]. Georg Marcgraf, Brazilian Deer (çuguaçû?), ca. 1640. Watercolour and body colour on paper, 31 × 20 cm, *Handbook I* fol. 108r, *Libri picturati* A36 (Jagiellon University Library, Krakow).

authentic and authorized records of the birds, and land and sea animals'.³³ It is clear that the scientific labels written by Marcgraf above each animal, the Count's witness to visual accuracy in his written descriptions, and Marcgraf's 'meticulous' style were understood by contemporaries, including Mentzel as well as *Historia* editor Johannes de Laet, to be evidence that these images were sources of visual knowledge.³⁴ It is also probable that the very small size of these works, which not only reinforce the viewer's sense of viewing something precious and unique, but also connect the images to an established pictorial tradition for model book drawings and images of nature, made such an interpretation possible.

Marcgraf's drawings demonstrate their relationship to this visual tradition not only by their small size, but also because of their lack of animation, consistent use of the profile pose, clear and careful manner of drawing, watercolour and gouache media, and use of a fixed position (often in profile) for the animal.³⁵ As argued by Otto Pächt in his seminal article on Italian nature studies, adoption of this artificial mode of representation, in which the subjects 'lack the full breath of life', does not, however, rule out the possibility that such images were produced during an encounter with the living animal.³⁶ Rather, he argues that this mode is actually necessary for a nature study. In Robert Scheller's work on model book drawings, he further suggests that artists may also have chosen to produce a stylized and less naturalistic image in order to ensure the long-term status of their drawing as an

³³ 'Ipse talium curiosissimus Princeps duobus istis quos dixi libris, qui figuras depictas coloribus ut plurimum punctim applicatis continent, veram molem ac dimensionem rei deliniatae manu sua nostra Teutonum lingua adscripserat, ut hos libros, tanquam authenticos, pro Canone diiudicandorum animalium tam aëreorum quam terrestrium et marinorum, inspicere ac venerari ubique possit', Mentzel, preface to *Theatrum rerum Naturalium Brasiliae*, vol I., in *Brasil-Holandês/Dutch-Brazil*, vol. IV 22–23.

³⁴ For discussion of the use of images to aid study and taxonomy, see Freedberg D., "Cassiano, Ferrari, and other Drawings of Citrus Fruits", in *Citrus Fruit*, vol. I, *The Paper Museum of Cassiano dal Pozzo. A Catalogue Raisonné. Drawings and Prints in the Royal Library at Windsor Castle, the British Museum, the Institut de France and other Collections* (London: 1997) 45–84 and Freedberg D., *Fossil Woods and other Geological Specimens*, vol. III, *The Paper Museum of Cassiano dal Pozzo. A Catalogue Raisonné. Drawings and Prints in the Royal Library at Windsor Castle, the British Museum, the Institut de France and other Collections* (London: 2000).

³⁵ See Scheller R.W., *Exemplum: Model-Book Drawings and the Practice of Artistic Transmission in the Middle Ages (ca. 900–ca. 1470)* (Amsterdam: 1995) 62.

³⁶ Pächt O., "Early Italian Nature Studies and the Early Calendar Landscape", *Journal of the Warburg and Courtauld Institutes* 13 (1950) 13–47.

exemplum.³⁷ Given the eventual use of Marcgraf's drawings as models for the illustrations in the *Historia*, the adoption of such a visual mode would have been highly desirable.

Marcgraf's watercolours belong to the same representational family as the well-known 'animal portrait' of a hoopoe, attributed to the fifteenth-century Flemish minaturist Simon Marmion [Fig. 8]. This finely rendered, completely static watercolour drawing was in the collection of Rudolf II as part of an album that included nature studies by a variety of artists.³⁸ The preference for watercolour and body colour for images of nature has been well documented: figures as different as the German naturalist Conrad Gesner and the Netherlandish artist Joris Hoefnagel favored the medium—the artist for its precision and delicacy and the scientist for its transportability, ease of use, and ability to dry quickly. Other early modern northern European masters of the nature study include Albrecht Dürer, Hans Hoffman, Hans Bol, and Jacob de Gheyn II. Dutch specialists in this genre from the seventeenth century also include Pieter Holsteyn II, whose largely unstudied work includes watercolour drawings of anteaters and other South American animals.

Marcgraf's highly contained watercolours remain within the bounds of the two-dimensional space of the paper, emphasizing exterior description over three-dimensional, realistic representation. Seventeenth-century botanical images often display images of fruit that is cut open to reveal the seeds within; zoological imagery did not yet favor this type of 'anatomical' representation, although dissection was standard practice among natural historians. The inventory cited above describes Marcgraf's style as 'artful', perhaps referring to the highlights of gold and silver paint around the eyes and on the scales of his fish and the inclusion of small landscapes for some of the birds and quadrupeds [Figs. 3–7]. Marcgraf's attention to detail in the *Handbooks* demonstrates that his images are not simple or schematic field studies, made to quickly capture the basic form and colours of an animal, but rather represent later, more finished versions of earlier images.

Marcgraf's study of a giant anteater (*Myrmecophaga tridactyla*) is a good example of one of his more fully worked up drawings in the *Handbooks* [Fig. 7]. Marcgraf began by making a simple pencil sketch

³⁷ Scheller, *Exemplum* 62.

³⁸ Koreny, *Albrecht Dürer* 28–29.



Fig. 7 [Col. pl. XVII]. Georg Marcgraf, Giant anteater (*Myrmecophaga tridactyla*). Watercolour and body colour on paper; 31 × 20 cm. *Handbook I* fol. 84r; *Libri picturati* A36 (Jagiellon University Library, Kraków).

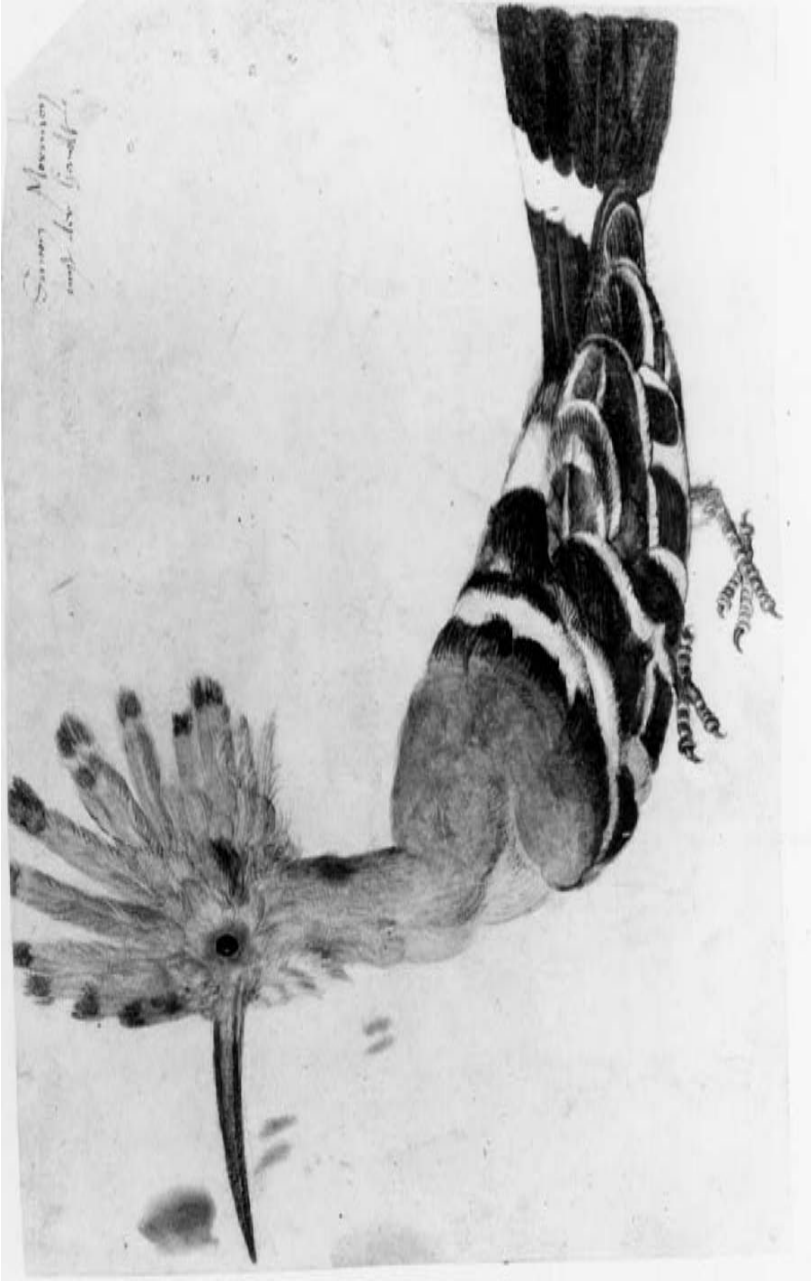


Fig. 8. Simon Marmion, Hoopoe. Watercolour and body colour on paper, 17 × 28.2 cm. Vienna, Österreichische Nationalbibliothek, Handschriften- und Inkunabelsammlung, Cod. min. 42, fol. 55r.

on paper, thereafter applying a gray watercolour wash, which allowed him to establish the forms and patterns for the subsequent application of details in body colour or gouache. Using very fine, highly linear brushstrokes, Marcgraf carefully recorded the anteater's colouring and the pattern of its fur, neatly representing the individual hairs of its tail.³⁹ As demonstrated by this example, Marcgraf's drawings are contained, relatively two-dimensional, and static; as an artist he rejected the sensuality possible with oils in favor of the clarity of line and form that characterize watercolour and body colour. This image conveys essential information (ie, that which enabled one to recognize an animal and distinguish it from similar species, such as its general form, colouring, type of feet, number of toes, length of tail, etc.), although Johan Maurits's annotations provide key information on sizes. In this image, the anteater stands in strict profile, which is characteristic of nature studies as well as illustrations of animals found in early modern natural history texts. Marcgraf's inclusion of additional information regarding food and habitat in his representations of quadrupeds would become standard in the eighteenth century with naturalist-illustrators like Mark Catesby. In Marcgraf's drawing, the anteater is posed before a tree, from which it has removed a round section of bark to expose an ant nest--its main food. Although Marcgraf's rendering is quite careful, the back feet are stiff and unconvincing, and demonstrate a poor understanding of perspective. Marcgraf's *tabia*, another delicately rendered work and perhaps his most animated animal, is pictured with teeth bared before its burrow [Fig. 4]. The *tabia*'s toothy grimace accords well with Johan Maurits's description of the animal as 'fierce'. In other images, brown capuchin monkeys (*Cebus apella*) and the three-toed sloths climb trees, demonstrating both habitat and characteristic behavior [Fig. 5]. Marcgraf's main concern in these images appears to have been the transmission of visual information about the animals, which could then be studied by his patron Johan Maurits in Brazil and later reproduced in printed form in the *Historia*.

By his use of the phrase 'nach dem Leben', the anonymous author of the 1652 inventory mentioned at the beginning of this essay gave recognition to the fact that Marcgraf's images fit the criteria for scientific

³⁹ For a similar approach to the rendering of hair, see the badger (ca. 1570) included in the Lambert Lombard Album (Rijksprentenkabinet, Amsterdam) and the watercolour and body colour drawing of a beech marten, attributed to Hans Verhagen den Stomme of Antwerp. Both images are reproduced in Koreny, *Albrecht Dürer* 130.

(especially botanical) illustrations as they began to develop in the sixteenth century. Images so intended had to downplay the presence of the artist and his inventive powers and instead demonstrate a direct, one-to-one, relationship with nature. As discussed in recent literature on Northern European art, during the sixteenth century it became increasingly common for images to be produced and labelled as sources of accurate visual information rather than examples of artistic invention.⁴⁰ In particular such representations included, but were not limited to, portraits, images of natural or preternatural phenomenon, natural history representations, and ethnographic illustrations in travel accounts.⁴¹ In his detailed analysis of the use of the term *contrafactum* on printed images in the sixteenth century, Peter Parshall has argued that such informational images (which ranged widely in quality, style, and degree of verisimilitude) were not distinguished by their use of ‘conventionally’ realistic representation, but rather by the vocabulary used to describe them. The designation of an image as a true ‘counterfeit’ vouched for its correspondence to the original. As he argues, ‘the type or class of portrayal designated by *contrafactum* came to be determined primarily by the intention to convey some particle of information deemed transmissible through a picture’.⁴² Especially in cases where the original was unavailable for purposes of verification, such a designation was deemed necessary to assure the viewing public of the representation’s accuracy. In this respect it is not insignificant that the nature study of the hoopoe addressed above includes the handwritten text, ‘Simon Mormion myt der handt’ (Simon Marmion [made this] with his hand), which makes the same kind of claim to eyewitness accuracy.⁴³

Focusing on the sixteenth and early seventeenth centuries, Claudia Swan has explored the implications of the term *ad vivum* and its vernacular cognates, such as the German *nach dem Leben* and the Dutch *naer het leven*, coming to many of the same conclusions as Parshall with respect to the designation *counterfactum*.⁴⁴ As she notes, ‘Like images iden-

⁴⁰ Parshall P., “Imago Contrafacta: Images and Facts in the Northern Renaissance”, *Art History* 16 (1993) 555 and Landau D. and Parshall P., *The Renaissance Print 1470–1550* (New Haven: 1994).

⁴¹ Parshall, “Imago Contrafacta” 556.

⁴² Parshall, “Imago Contrafacta” 555.

⁴³ Koreny, *Albrecht Dürer* 28–29. See also Swan C. *Art, Science and Witchcraft in Early Modern Holland: Jacques de Gheyn II (1565–1629)* (Cambridge: 2005) 37.

⁴⁴ See Swan C., “*Ad Vivum*, naer het leven, from the life: Defining a Mode of Representation”, *Word and Image* 11 (1995) 353–372 and Swan, *Art, Science and Witchcraft*.

tified as *ghecounterfeyt*, those said to have been done *naer het leven* promise a verifiable conformity with their subject, an iconic correspondence'.⁴⁵ When identified as having been made 'after life', the image took on the status of a document. As Swan argues, 'The specification of how the drawing (or portion of it) was made – *naer t'leven*—invests it with a functional value neither its style nor its subject could'.⁴⁶ Although Marcgraf does not write this type of description directly on his images in the *Handbooks*, he does specifically state in the preface to his section of the *Historia* that he produced images *ad vivum* of Brazilian nature.

Like Parshall, Swan focuses on images that were designated 'true counterfeits' or accurately produced 'after life' by the artists who created them or by those who commissioned or published them. Swan nonetheless also brings attention to the important artist and theorist Karel van Mander and his use of the phrase 'ghecounterfeyt nae t'leven' to describe portraits and natural history images in *Het Schilderboek* (1604). She argues that such an assessment required Van Mander to make a 'leap of faith', because he was neither familiar with the original nor had he witnessed the image's creation. Regarding the visual characteristics that allowed an observer like Van Mander to make such an assessment, Swan suggests that an image's 'lifelike effect' appears to have been understood by Van Mander as evidence of the image's production *naer het leven*.⁴⁷ Certainly this 'life-like' effect was created in part by Van Mander's favourable recognition of pictorial naturalism and the realistic use of colour.⁴⁸ Apart from all too brief discussions like this, there has been little investigation regarding how particular combinations of visual and physical characteristics (apart from linguistic evidence) may have made a viewer believe that the image was a trustworthy bearer of information.

⁴⁵ Swan, "'Ad vivum'" 356.

⁴⁶ *Ibidem* 358.

⁴⁷ For discussion of Van Mander and *naer het leven*, see Swan, "'Ad vivum'" and chapter one in Swan, *Art, Science and Witchcraft*, especially 36–39.

⁴⁸ Regarding Van Mander's use of *naer het leven*, Swan notes 'he often combines a description of the work done *nae t'leven* with its characterization as *natuerlijck* ('naturalistic'). For example, he commends Pieter Aertsen for having painted "kitchens with all sorts of goods and foods after the life, so accurately capturing all of the colors that it appeared to be natural.'" See Swan, *Art, Science and Witchcraft* 38.

*Artistic Authority and Oil Paint:
Eckhout's Zoological Images in the Theatrum*

Although Mentzel calls Marcgraf's gouache and watercolour drawings 'authentic and authorized records', he also forcefully asserts that 'no less authority must be given to the paintings [Eckhout's works on paper], fruits of the same land, made with the same care and accuracy by those who gazed upon them with their own eyes'.⁴⁹ In fact, he carefully draws attention to the status of these images, calling them 'pictures of the things that Nature hath produced, nourished and nurtured, formed in their own original habitat and painted in exact colours after life [*ad vivum*]'.⁵⁰ For the anonymous writer of the 1652 inventory, the label *nach dem Leben* verified the accurate content of Marcgraf's drawings, and established a functional distinction between the oil studies and the watercolour and gouache drawings. Given this assessment it is somewhat surprising that only eleven years later Mentzel, while recognizing the informational content of the watercolours, would nonetheless turn this hierarchy on its head by valuing Eckhout's oils on paper more highly as complete visual statements.⁵¹

Eckhout's oil studies are painted on paper, a practice common in the Southern Netherlands, but rather uncommon among Dutch artists in the seventeenth century and highly unusual for images of nature.⁵² Unlike watercolour, oil paint was employed exclusively by trained artists, not scientists. In her work on natural history illustration at Rudolf II's court, Lee Hendrix suggests that the use of oils for images of nature 'should also be seen as part of the larger dominance of oil painting as an artistic goal in Northern and Central Europe during the late sixteenth and early seventeenth centuries'.⁵³ That images of nature in oils on paper had a higher status than body colour on paper is sug-

⁴⁹ 'Quanquam caeterae oleaginae, ut ita dicam, picturae non minoris autoritatis censendae, quandoquidem eodem jussu curaque, imo eodem simul natali solo prodi-erunt, oculorum fide commendatissimae' Mentzel, preface to *Theatrum rerum Naturalium Brasiliae*, vol. IV 22–23.

⁵⁰ See note 15.

⁵¹ This interest suggests that Mentzel was the one responsible for having Eckhout's images varnished, giving them a glossier, more life-like effect.

⁵² The only other contemporary Dutch artist who also made oil studies on paper with any frequency was Dirk Hals, the brother of Frans Hals.

⁵³ Hendrix, "Natural History Illustration at the Court of Rudolf II" 165. It is possible that by the seventeenth century, some German princely collectors favored the use of oil for nature studies as a way of distinguishing between those images that were

gested by the Great Elector's response to the Brazilian drawings when they came into his possession in 1652, and his directions to Mentzel to separate the images by medium.

Careful examination of these images reveals Eckhout's working method. He first made a simple sketch in chalk on a prepared piece of paper, covered with what now appears to be a pinkish-brown ground layer of paint. Over his chalk sketch he painted in oils, for the most part following the technique of a painter on canvas. Like Marcgraf's watercolours, Eckhout's studies record accurate details of the specimens under consideration, but he does not represent habitat and only rarely food. For example, Eckhout's image of two batfish, 'Guacucua', (*Ogocephalus vespertilio*), seen from the bottom and the top, equals his extraordinary study of a lizard (a young iguana?) both in its drama as well as in its verisimilitude [Fig. 9]. Here an impressively life-like green lizard, painted quite thickly with prominent yellow highlights, presents a convincingly three-dimensional form, with dark shadows attesting to its physical presence. One has the sense that the reptile has paused for just a moment, but will soon skitter off the page. Other beautifully painted, realistic works, which demonstrate a similarly 'scientific' still-life aesthetic, include this representation of a green lizard and two lobsters, again represented from the bottom and the top [Fig. 10].

In contrast to Marcgraf's watercolours, which are intimate in size and carefully analytic, Eckhout's oil studies are large, robust, and project a three-dimensional presence. In his works it is not the detail of each brushstroke that attracts one's attention; rather it is the body of the living animal that draws the viewer in. Eckhout's images never hide his brushstrokes; he uses thick layers of paint to create texture and protruding drops of paint for the highlights. Eckhout also employs black outlines, which are usually fine and delicate. Twenty-five of the thirty largest images (all measuring around 50 by 20 cm) in volume III (*Icones Animalium*) can be attributed to Eckhout, a pattern also seen in other volumes of the *Theatrum*. Eckhout's skillful rendering of many of the animals in his oil studies, from crabs and lobsters to parrots and lizards, is similar to what we find in the work of his contemporaries in the northern and southern Netherlands. Eckhout's pair of red and glistening cooked lobsters addressed above would not be out of place in

intended to first have an aesthetic function (in a collector's cabinet) and only second to carry information necessary for scientific classification.



Fig. 9 [COL. PL. XVIII]. Albert Eckhout, Green Lizard (Young Iguana?). Oil on paper, 47 × 27 cm. *Theatrum rerum naturalium*, vol. III fol. 168r, *Libri picturati* A34 (Jagiellon University Library, Kraków).



Fig. 10 [COL. PL. XIX]. Albert Eckhout, Cooked lobsters and a lizard. Oil on paper, 38.5 × 17.9 cm. *Theatrum rerum naturalium*, vol. I fol. 323r, *Libri picturati* A32 (Jagiellon University Library, Kraków).

this ca. 1640 banquet piece by Jan Davidsz. De Heem [Fig 11]. Even Eckhout's parrots compare favorably in terms of skill and naturalism with the South American parrot pictured by De Heem in this elaborate 'pronk' still life.

Because of their large size, subject matter, naturalism, and dynamic, painterly technique Eckhout's works are also in keeping with the images produced at the court of Louis XIV by the Flemish painter Pieter Boel. Boel's lively oil studies on canvas of animals from the king's zoo at Versailles were specifically created as designs for the Gobelins tapestry works.⁵⁴ There are, nonetheless, some important differences, among them the fact that Eckhout always represents the entire animal, never the head alone. Eckhout also positions his animals in much more formal and static poses than Boel, in this way suggesting his closer affinity with contemporary botanical and zoological prints.

Nonetheless, a comparison of illustrations made by Eckhout and Marcgraf after the same specimen, in this case a yellow and green Amazonian parrot, demonstrates their fundamental representational differences [Figs. 1 and 12]. Although both images include the same basic information on color and form, Eckhout's painterly execution and life-size format produce a much more dynamic visual impact than Marcgraf's small, flat, and linear production. But even though the parrot in Eckhout's image is stiffly posed, it is much more physically present. The parrot even appears to turn towards the viewer, with the light reflecting off of its eye giving the feeling of movement. In contrast, the static quality of Marcgraf's drawing provides a curious contrast with Johan Maurits's lively description, in which he asserts that this parrot was able to answer and ask questions, making some believe it was a mouthpiece for the devil.⁵⁵ Similarly, while the olive-yellow and brown body of this ocelot (*Leopardus pardalis*) is painted in a fairly flat manner, Eckhout paints the head of the animal turned out, with the eyes gazing straight at the viewer [Fig. 13]. He achieves the greatest degree of animation in the face, which is dominated by large and liquid golden eyes. No such illusion of life is conveyed in Marcgraf's representation

⁵⁴ Pieter Boel's work for the king has been the subject of a recent exhibition at the Louvre in Paris. See Foucart-Walter E., *Pieter Boel: Painter of Louis XIV's Animals* (Paris: 2001).

⁵⁵ *Handbook I*, reproduced as *Libri Principis*, vol. I, in *Brasil-Holandês/Dutch-Brazil*, vol. II 69.



Fig. 11. Jan Davidsz. De Heem, Elaborate tabletop still life with foodstuffs, exotic animals, and precious objects. Oil on canvas, 150.49 × 117.74 cm. Ringling Museum of Art, Sarasota, Florida.

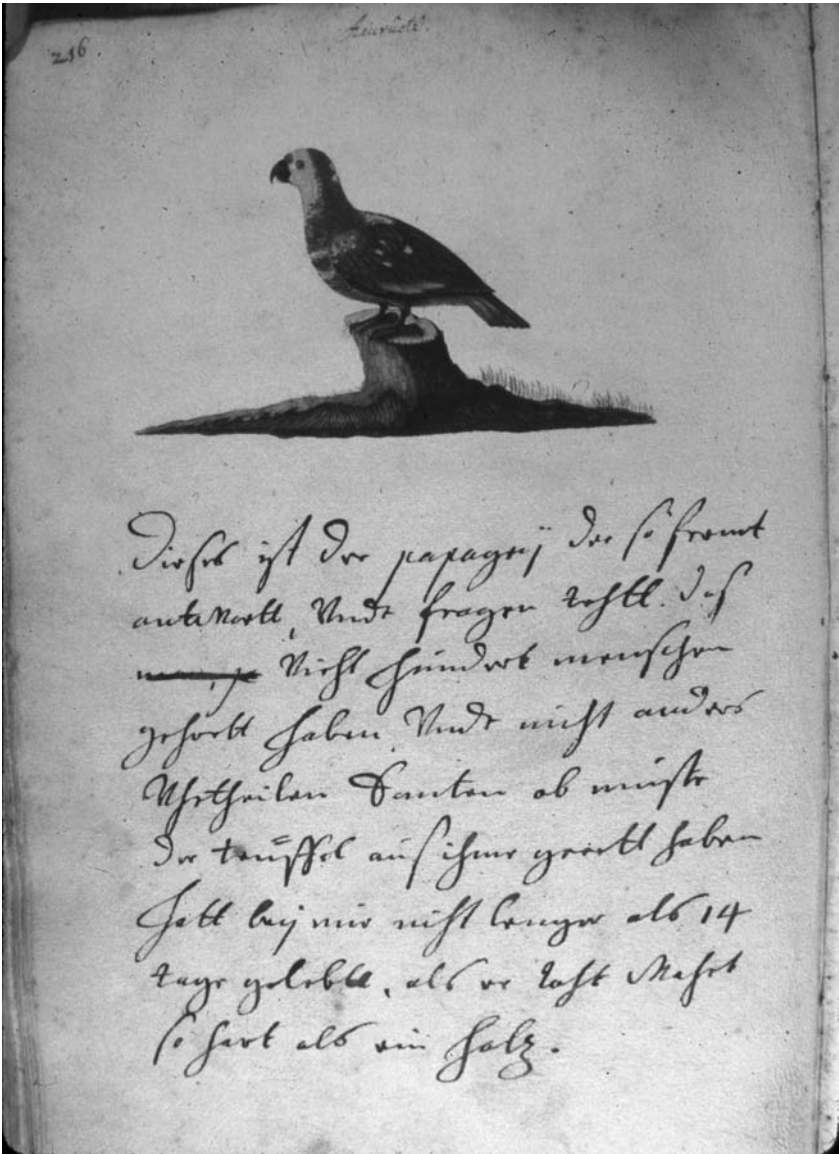


Fig. 12 [COL. PL. XIV (detail)]. Georg Marcgraf, Amazonian parrot (*Amazona aestiva*), ca. 1640. Watercolour and body colour on paper, 21 × 20 cm. *Handbook* I fol. 216r, *Libri picturati* A36 (Jagiellon University Library, Krakow).

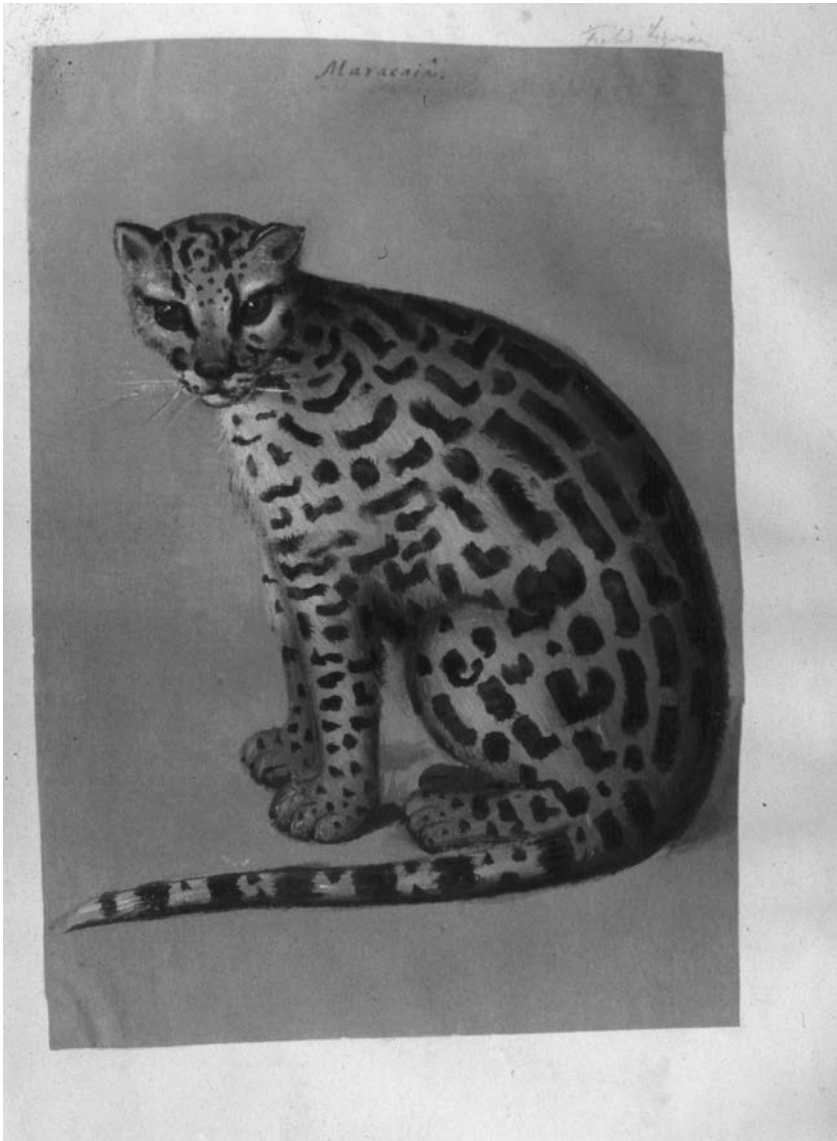


Fig. 13 [COL. PL. XX]. Albert Eckhout, Ocelot. Oil on paper, 28 × 18.1 cm. *Theatrum rerum naturalium*, vol. III fol. 55r, *Libri picturati* A34 (Jagiellon University Library, Krakow).

of young ‘tiger’—there the clear and silent recording of the animal’s exterior was his primary task.

The Brazilian Drawings in The Dutch Republic, 1644–1652

As mentioned above, even before Johan Maurits returned to the Dutch Republic in 1644, he had already started sending back horses, game animals, in addition to parrots and paintings (presumably by Eckhout, Post, or Marcgraf) as presents to individuals (such as the stadhouder) and institutions (such as the anatomy theatre in Leiden) interested in owning South America exotica.⁵⁶ While most of the Count’s Brazilian collection of drawings, paintings, and other types of exotic products would eventually be given away, he first made them available to WIC Director and amateur naturalist Johannes de Laet. De Laet had become the editor of the *Historia naturalis Brasiliae* (1647) following Marcgraf’s untimely death in Africa around 1644. Given the fact that many of the animals and especially plants reproduced by Eckhout were unknown in Europe and had never been illustrated, it is not surprising that de Laet used a large number of Eckhout’s oil studies (especially botanical images) to supplement the images by Marcgraf as models for the woodcut illustrations to this work [Fig. 14].⁵⁷ The frontispiece, illustrated here, borrows liberally from the works of both Marcgraf and Eckhout in its depiction of Brazil as a lush, tropical paradise filled with curious animals and friendly natives.

Although Eckhout’s paintings and drawings supplemented this scientific project, we find immediate and clear quotations from his images in a variety of ‘high art’, princely decorative projects. It is, for example, probable that the paintings of birds documented on the ceiling of a room in the Mauritshuis circa 1645 were based on his Brazilian drawings and may even have been painted by Eckhout himself. These images

⁵⁶ In his autobiography, Wagener discusses how he was charged with bringing writings (documents), paintings, and parrots to individuals in a number of different Dutch cities. See Whitehead – Boeseman, *A portrait of Dutch 17th century Brazil* 25.

⁵⁷ Given the count’s interest in natural history and his support for this project, Eckhout may even have been enlisted to create images, especially for Piso’s botanical portion of the *Historia*, while still in Brazil. The majority of the botanical images in the *Historia* are based on Eckhout’s oils studies in the *Theatrum*. With respect to the zoological images, Marcgraf’s drawings are nearly always preferred to Eckhout’s as models for the woodcuts in cases where an image by each artist of the same animal was available.

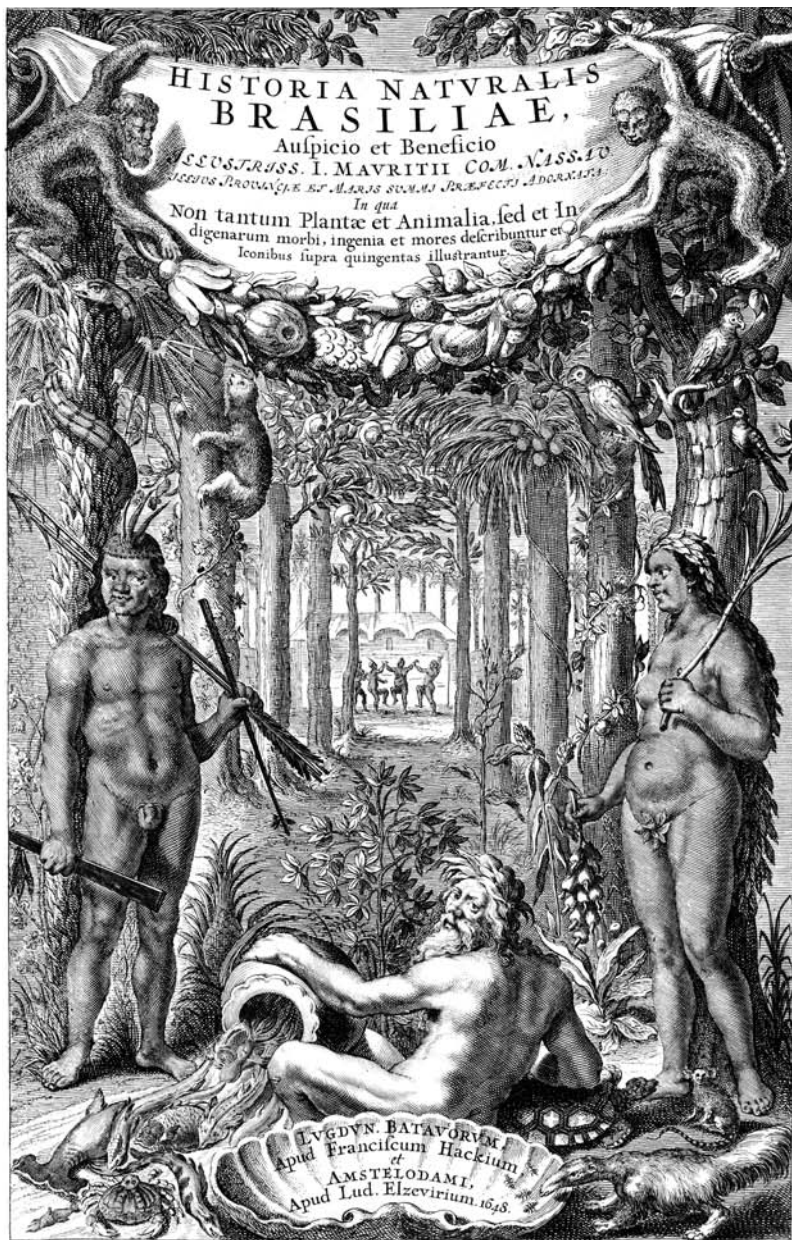


Fig. 14. Georg Marcgraf and Willem Piso, *Historia naturalis Brasiliae*, Frontispiece, 1648. Courtesy of the Linda Hall Library, Kansas City.

were undoubtedly similar in format to the ceiling paintings of Brazilian birds painted at Hoflössnitz lodge (Weingergschloss), Radebeul, near Dresden, Germany, during Eckhout's 10 years (1653–1663) there as court artist to Johan Gregor II, the future Elector of Saxony.⁵⁸

That Eckhout's drawings were also a source of inspiration to other painters in the Dutch Republic is demonstrated by Jacob van Campen's work from the 1650s, which borrows Brazilian motifs from Eckhout.⁵⁹ Van Campen, was one of the leading artists of Dutch classicism, and the architect (with Pieter Post) of Johan Maurits's Dutch palace, the Mauritshuis. Surely some of the Brazilian drawings mentioned as in the possession of Van Campen in 1646 were by Eckhout; the two artists also appear to have collaborated around 1650 on a series of still lifes at Het Hoogerhuis in Amersfoort, which included Brazilian motifs drawn directly from Eckhout's works on paper and his paintings.⁶⁰

*Conclusion: Christopher Mentzel,
Eckhout's Oil Studies, and the Theatrum*

By 1652, Johan Maurits's collection of Brazilian natural history drawings had already been put to a number of uses. They had served as models for zoological and botanical illustrations for the *Historia* and cartoons had been created after them for a tapestry series produced by Gücht in Delft (now lost). They had also served as inspiration for a series of ceiling paintings of birds at the Mauritshuis and they had been quoted in paintings by Dutch artists such as Jacob van Campen. Given the reality that the Dutch were in the process of losing hold of their Brazilian colony and the fact that the drawings by Eckhout and Marcgraf were no longer quite as novel as they had been in 1644, it is not surprising that Johan Maurits chose this moment to present them to his patron, Wilhelm Frederick, the Great Elector of Brandenburg. It is the Elector's physician Christian Mentzel who is responsible for the current division of the drawings into seven volumes comprising the *Handbooks* (2 vols.),

⁵⁸ In Johan Maurits's letter of recommendation for Eckhout, sent to Johann Georg in 1653, he specifically mentions (surely as a selling point) that the painter would bring Brazilian drawings with him.

⁵⁹ See Buvelot Q, "Jacob van Campen als schilder en tekenaar" in Huisken J. et al. (eds.), *Jacob van Campen: het klassieke ideaal in de Gouden Eeuw* (Amsterdam: 1995).

⁶⁰ Buvelot, "Albert Eckhout a Dutch artist in Brazil", in *Albert Eckhout* (2004) 35 and note 150.

the *Theatrum* (4 vols.) and the *Misc. Cleyeri* (1 vol.). As curator of the Elector's collection of Brazilian natural history illustrations, Mentzel was especially interested in Marcgraf and Eckhout's drawings because of their status as unique representations of exotic and largely unknown species of animals and plants that were made *in situ*.

As addressed above, there was a movement in the early modern period towards defining an appropriately 'scientific' style and manner of working with respect to images (especially botanical) intended to have informational value. The 'nature study mode', here exemplified by Marcgraf's work, with its small size, linearity, and lifelessness, had not been embraced by everyone as the ideal. Here exemplified by Marcgraf's work, were not yet embraced as essential criteria, and there was quite a bit of uncertainty regarding what was appropriate for zoological representation. For the famous botanist Carolus Clusius in the sixteenth century, an 'image "drawn after the plant itself" and "in natural colours" was deemed capable of supplying the necessary information' to classify the specimen—he does not mention style, format, or a preferred medium.⁶¹ Sixteenth-century German botanist Leonard Fuchs emphasized clarity of form and lack of artifice for scientific illustration; of Marcgraf and Eckhout, he clearly would have favoured the work of the former.⁶² Although a scientist by training, Mentzel by contrast appears to have responded to and judged images much in the same way that Van Mander did; Eckhout's paintings appeared more "lifelike" than Marcgraf's because of their naturalism and vivid, realistic use of color. Although Mentzel's eye was far from 'innocent', he did not know the artists and he had never been to Brazil. Unfamiliar with living examples of its indigenous flora and fauna, Mentzel could not judge the drawings with respect to their visual accuracy beyond what he could infer from the images themselves.

In his dedication to the *Theatrum*, Mentzel writes: 'When our Prince Maurice of Nassau, conqueror of Brazil, did bring with him a collection of paintings of Brazil's natural things, incomplete, however, and in detail lacking, Thou [Friedrich Wilhelm], not content with thy splendid feats, wished, as a complement to thy achievements, that all

⁶¹ Swan C., "Jacques de Gheyn and the Representation of the Natural World" (Dissertation, Columbia: 1997) 131.

⁶² See the preface to Leonhard Fuchs, *Historia stirpium* (Basel: 1542); Landau – Parshall, *Renaissance Print* 254.

be compiled and classified in those four volumes'.⁶³ The desire to sort, classify, apply scientific labels, and arrange the 'raw' nature of the unsorted images into neatly-bound and organized volumes was the essence of this enterprise. According to Mentzel, the Elector planned to make the collection available to 'students of Humanities and Arts in the sanctuary of his library'.⁶⁴ The acquisition of the South American natural history images and the creation of a 'theater' of Brazilian nature furthermore allowed the Elector to ally himself with a scientific and colonial enterprise at a time when he was contemplating the establishment of overseas trading companies for economic expansion into Africa and the New World.⁶⁵

Despite Mentzel's collation of Eckhout's oils into a set of study volumes on the natural history of Brazil, it is striking that his images lack anything more than a label giving the name of the plant or animal. Yet it is precisely this lack of written description that is essential for understanding Mentzel's view of scientific illustration. The naturalism possible with oils and the rich, realistic colours and textures of Eckhout's images made Mentzel believe that each oil study could stand alone as a complete description, making verbal annotations superfluous. He describes the oil studies as visual substitutes for the real object, conveying the information of a written and a visual description in one. Like many other early modern scientists, Mentzel believed in the power and importance of images in transferring vital information—information that could not be expressed by words alone.⁶⁶ Aldrovandi believed that images could replace words in their descriptive capabilities.⁶⁷ In a letter to Charles V (1500–1558), Holy Roman Emperor and King of

⁶³ 'Quidquid enim rerum naturalium Brasiliae primitus depictum, sed indigestum atque incompletum, princeps noster Nassavius Brasiliae domitor redux quondam attulerat, stupendis tuis factis non contentus concinne id ordinari ac perfici quatuor his tomis voluisti bonarum actionum complementum.' (Note: this part of the preface is written in all capital letters) Mentzel, preface to the *Theatrum Rerum Naturalium Brasiliae*, vol. I, as reproduced both in translation and in the original Latin (in facsimile) in *Brasil-Holandês/Dutch-Brazil* vol. IV 16.

⁶⁴ *Theatrum rerum naturalium Brasiliae*, vol. I, as reproduced both in translation and in the original Latin (in facsimile) in *Brasil-Holandês/Dutch-Brazil* vol. IV 18.

⁶⁵ A Brandenburg-African company was finally established in 1682, although the Elector had been interested in forming such a company as early as 1647. See Schmitt E., "The Brandenburg Overseas Trading Companies in the Seventeenth Century", in Blussé L. – Gaastra F. (eds.), *Companies and Trade* (Leiden: 1981) 159–176.

⁶⁶ Freedberg D., "The Failure of Colour," in *Sight and Insight: Essays on Art and Culture in Honour of E.H. Gombrich at 85* (London: 1994).

⁶⁷ Swan, "Ad Vivum" 359.

Spain, the famous anatomist Andreas Vesalius (1514–1564) expressed a similar sentiment when he wrote: ‘Pictures greatly aid the understanding of these anatomical matters, and how much more accurately they put things before the eyes than even the clearest language’.⁶⁸ In the following quote, Mentzel suggests a similar point of view, which also calls upon the paragone, or rivalry between the arts in their efforts to reproduce nature:

So behold the magnificence of this ‘Theatre’, its splendour, its recommendation: that the powers immediately perceive at a single glance the truth and authenticity of the things, without the need for long detailed descriptions, and that this subject leaves nothing to be desired. Indeed, even to the most demanding pen would it be impossible to describe with perfection the particularities of the colours and distinguish them, as well as the number and division of the parts, details that may be seen in the picture at a single glance. It would be in vain to strive to describe the things of natures since the Creator’s skill and art are far superior to the phantasy of any writer. In practice, such greater worth hath painting than eloquence, principally when the reproductions are authentic and created by skilled hands, which do not intend to surpass natural beauty.⁶⁹

It is ironic that Marcgraf’s images, which adopted the formal language of the model book drawing, were created by a naturalist-illustrator, and were specifically described by both the artist and at least one contemporary as having been produced ‘after life’, were judged by Mentzel (perhaps under the influence of Wilhelm Frederich) to be less effective or desirable natural history images because of their use of watercolour, which resulted in an image that was less ‘life-like’ than Eckhout’s oils on paper. Mentzel’s preference for Eckhout’s dynamic images would not, however, prove typical for naturalists of later generations. Colour would be rejected because of its mutability, and a painterly manner like Eckhout’s would be abandoned in favor of the linear style of

⁶⁸ As quoted in Whitehead P.J.P., “The original drawings for the *Historia naturalis Brasiliae* of Piso and Marcgrave (1648)”, *Journal of the Society of Bibliography of Natural History* 7 (1976) 409–422.

⁶⁹ ‘Isthaec enim THEATRI huius magnificencia, iste splendor, ista commendatio est, ut, quo nihil in historia divinius putatur, Veritatem ac Certitudinem Rerum, ipso statim aspectu, non longis atque ambitiosis descriptionibus assequare. Neque enim vel mimima ista colorum inter se discrimina aut partium membrorumque competentiae ac numeri, ullius vel disertissimi hominis eloquio exprimi sic possunt, quam solo obtutu et statim ac simul hauriuntur: frustra que in enumerandis rerum aspectabilium figuris desudatur, ubi pictoris ars atque industria omnem circumscribentis phantasiam prevenit ac superavit’, Mentzel, preface to *Theatrum rerum naturalium Brasiliae*, part I, as reproduced both in translation in Latin (facsimile) in *Brasil-Holandês/Dutch-Brazil*, vol. IV 22–23.

Marcgraf's representations. Indeed, natural historians such as Carolus Linneaus in the eighteenth century would favor the written word over representation. The Brazilian drawings and oil studies by Eckhout and Marcgraf were created during a period when artists and scientists alike were attempting to create an appropriate visual language for the representation of animals and nature more broadly. Produced in the same colonial environment for the same princely patron, and sometimes even making pictures after the same animal, the drawings of Marcgraf and Eckhout nonetheless present distinct visual responses to the challenge of naturalism in zoological representation.

Selective Bibliography

- ARTELT W., *Christian Mentzel: Leibarzt des Grossen Kurfürsten* (Leipzig: 1940).
- ASHWORTH W., "Remarkable Humans and Singular Beasts", in Kenseth J. (ed.), *Age of the Marvelous* (Hanover: 1993) 113–144.
- BERGVELT E. – KISTEMAKER R. (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rareitewerzamelingen, 1585–1735* (Zwolle – Amsterdam: 1992).
- BOOGAART E. VAN DEN (ed.), *Johan Maurits van Nassau-Siegen, 1604–1679. A Humanist Prince in Brazil and Europe* (The Hague: 1979).
- BOXER C.R., *The Dutch in Brazil, 1624–1654* (Oxford: 1957).
- BRIENEN R.P., *Visions of Savage Paradise: Albert Eckhout, Court Painter in Colonial Dutch Brazil* (Amsterdam: 2006).
- , "Georg Marcgraf (1610–ca. 1644) A German Cartographer, Astronomer, and Naturalist-Illustrator in Colonial Dutch Brazil", *Itinerario* 20,1 (2001) 85–112.
- BUVELOOT Q. (ed.), *Albert Eckhout: A Dutch Artist in Brazil* (The Hague: 2004).
- FERRAO C. – SOARES J.P.M. (eds.), *Brasil-Holandês/Dutch-Brasil*, 5 vols. (Rio de Janeiro: 1995).
- FINDLEN P., *Possessing nature: museums, collecting, and scientific culture in early modern Italy* (Berkeley – Los Angeles: 1994).
- FOUCART-WALTER E., *Pieter Boel: Painter of Louis XIV's Animals* (Paris: 2001).
- GELDER R. VAN, "De wereld binnen handbereik: Nederlandse kunst- en rareitewerzamelingen, 1585–1735", in Bergvelt – Kistemaker (eds.), *De wereld binnen handbereik*.
- GEORGE W., "Alive or Dead: Zoological Collections in the Seventeenth Century", in Impey O. – Macgregor A. (eds.), *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: 1985) 179–187.
- HENDRIX L., "Natural History Illustration at the Court of Rudolf II", in Fucikova E. et al. (eds.), *Rudolf II and Prague: the imperial court and the residential city as the cultural and spiritual heart of central Europe* (Prague: 1997).
- IMPEY O. – MACGREGOR A. (eds.), *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: 1985).
- KENSETH J. (ed.), *Age of the Marvelous* (Hanover: 1993).
- KOLB A.F., *The Entry of the Animals into Noah's Ark* (Los Angeles: 2005).
- KORENY F., *Albrecht Dürer and the Animal and Plant Studies of the Renaissance* (Boston: 1985).
- LARSEN E., *Frans Post, interprète du Brésil* (Amsterdam: 1962).
- MORAN B.T., "German Prince-Practitioners: Aspects in the Development of Courty Science, Technology, and Procedures in the Renaissance", *Technology and Culture* 22 (1981) 253–274.
- PÄCHT O., "Early Italian Nature Studies and the Early Calendar Landscape", *Journal of the Warburg and Courtauld Institutes* 13 (1950) 13–47.
- PARSHALL P., "Imago Contrafacta: Images and Facts in the Northern Renaissance", *Art History* 16,4 (1993) 554–579.
- ROBBINS L., *Elephant Slaves and Pampered Parrots: Exotic Animals in Eighteenth-Century Paris* (Baltimore: 2002).
- SLIGGERS B.C. – WERTHEIM A.A. (eds.), *Een vorstelijke dierentuin: De menagerie van Willem V* (Zutphen: 1994).
- SMIT P. (ed.), *Hendrik Engel's Alphabetical List of Dutch Zoological Cabinets and Menageries* (Amsterdam: 1986).
- SMITH P. – FINDLEN P. (eds.), *Merchants and Marvels: Commerce, Science, and Art in the Early Modern Period* (London: 2002).
- SWAN C., *Art, Science and Witchcraft in Early Modern Holland: Jacques de Gheyn II (1565–1629)* (Cambridge: 2005).

- , “*Ad Vivum*, naer het leven, from the life: Defining a Mode of Representation”, *Word and Image* 11 (1995) 353–372.
- , “From Blowfish to Flower Still Life Paintings: Classification and Its Images, circa 1600”, in Kenseth (ed.), *Merchants and Marvels* 109–137.
- , “Jacques de Gheyn and the Representation of the Natural World” (Diss., Columbia: 1997).
- THOMSEN T., *Albert Eckhout. Ein niederländischer Maler und sein Gönner Johan Maurits der Brasilianer* (Copenhagen: 1938).
- WAGENER ZACHARIAS, *The “Thierbuch and Autobiography” of Zacharias Wagener*, trans. Á.A. Bragança Júnior, *Dutch Brazil* (Rio de Janeiro: 1997).
- WHITEHEAD P.J.P. – BOESEMAN M., *A portrait of Dutch 17th century Brazil: Animals, plants and people by the artists of Johan Maurits of Nassau* (Amsterdam: 1989).
- WHITEHEAD P.J.P., “The original drawings for the *Historia naturalis Brasiliae* of Piso and Marcgrave (1648)”, *Journal of the Society of Bibliography of Natural History* 7 (1976) 409–422.

Early Modern Zoology

Intersections

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The Construction of Animals in Science,
Literature and the Visual Arts

Edited by

Karl A.E. Enenkel and Paul J. Smith



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THE CONSTRUCTION OF THE ANIMAL IN
ITS EARLY MODERN USE AND ABUSE

MAKING AND BREAKING THE STAG.
THE CONSTRUCTION OF THE ANIMAL IN THE EARLY
MODERN HUNTING TREATISE

Suzanne J. Walker

Chased relentlessly through woods and fields, harried by hounds, and ultimately slaughtered by arrow or sword, the hunted animal in early modern Europe exemplifies humanity's subjugation of the natural world. This is especially true of the aristocratic hunt, an expensive and time-consuming pastime which was by definition not motivated by the need for food or for protection from predators. But the prey, and above all the stag, the most desirable quarry, was more than merely a victim in the early modern period, and not only because the era was less sensitive to animal suffering than we are today. In the hunting treatises of the late sixteenth and early seventeenth centuries, the identity of the prey swings between passive object and active subject, just as in the course of the hunt the living animal is itself transformed into a collection of dead body parts. The stag first appears in fragments, diverse parts and traces that are gradually assembled, like a puzzle, to construct a living animal. Over the course of the hunt, bones and organs and antlers cohere into an individual, endowed with thoughts, feelings, and intentions. While unexpected in a genre of literature that is explicitly concerned with the destruction of the animal, the definition of the stag as singular personality is essential to the nobility of the hunt, which pits an aristocratic warrior against a dangerous enemy, whose conquest enhances the status of his slayer. Once dead, though, the quarry disintegrates back into pieces of meat, bereft of the individuality that the living animal briefly possessed, in a ceremonial dismemberment that is known as "breaking the stag". An illustration of the complexity of early modern definitions of the animal, the hunting treatise is also a meditation on the nature of the limits and dangers of subjectivity, an issue that has more frequently been discussed in terms of the human.

Hunting treatises are the richest source of information about the chase in early modern Europe. The most important and influential example of the genre is *La Venerie*, written by Jacques du Fouilloux, a minor member of the French nobility, and first published in Poitiers

in 1561. Its publication history demonstrates the range and depth of its influence: *La Vénerie* sped through more than a dozen editions in France before 1630 and was rapidly translated into English, German, and Italian.¹ Virtually every subsequent didactic text on the hunt – from ostensibly original guidebooks to the sport to shorter accounts inserted into books on rural life – is derived from the writings of the otherwise obscure Frenchman from Poitou. Consequently, a discussion of the early modern hunting treatise is essentially a discussion of *La Vénerie*, although its descendants often recontextualized its lessons and introduced other material. This essay will concentrate on *La Vénerie*, while also considering two subsequent manuals: Eugenio Raimondi's *Le Caccie delle Fiere Armate* (Brescia: 1621), a wide-ranging book on various types of sport, and George Gascoigne's *The Noble Art of Venerie or Hunting* (London: 1576), a close translation of du Fouilloux which also includes information about English practice as well as poetic interludes. As the stag hunt was particularly popular in England, other English manuals will be briefly mentioned as well. The influence of *La Vénerie* stopped at the Pyrenees, and therefore an anonymous late sixteenth-century Spanish treatise, *Diálogos de la montería*, which emerges from an independent Iberian tradition of hunting literature and also treats different types of sport, serves as a foil to the prevailing French model. These hunting treatises will not be considered here as literal accounts of the practice of the sport, or as descriptions of animals to be tested for their scientific accuracy. They are verbal articulations of an ideal, one that refers to the socially constructed ritual of hunting while exemplifying the purely textual construction of the animal.

The popularity of *La Vénerie* has less to do with its intrinsic literary merits than with its celebration of the uniquely aristocratic chase, in contrast to earlier manuals, which tended to deal more briefly with the noble hunt while also covering more plebeian forms of the sport. By concentrating on the aristocratic chase, of which the stag hunt was the preeminent example, *La Vénerie* successfully flattered its readers by allowing them to identify with the most prestigious form of the sport. In the noble hunt, sometimes called the parforce hunt, big game, usually deer or boar, was pursued by numerous hunters and hounds. Befitting its aristocratic status, the parforce chase consisted of a series of rituals, painstakingly described in treatises. On the morning of the hunt,

¹ Remigereau F., *Jacques Du Fouilloux et son traité de La Vénerie* (Paris: 1952) 88–89.

hunters individually set out to search for traces of the quarry, such as footprints and droppings. Then the whole hunting party gathered together at the assembly, an elaborate outdoor picnic. After the hunters reported their findings to the highest-ranking member of the party, the lord of the hunt, a single quarry was chosen. The probable route that the prey would take was mapped out and huntsmen with hounds were placed along the way, to provide reinforcements for the pursuing dogs. Then the hunters, on horseback and on foot, set out for the chase. The quarry, usually a male animal, was spotted or roused from his lair, and pursued until he became too exhausted to run any further. A hunter (ideally, the lord of the hunt) would then slay the animal, which would promptly be butchered on the spot according to a surprisingly elaborate set of rules; the meat was apportioned to the various participants, and bits of the carcass were fed to the dogs as their reward.²

The noble hunt was certainly not the only way to capture and kill a large mammal. Traps, pits and snares might do the job more efficiently, more safely and more economically. But efficiency, safety, and cost were not relevant criteria for the elaborately staged parforce hunt. In fact, the sheer expense of the sport, along with the valor demanded of the hunter who must confront the cornered animal directly, were essential characteristics of the noble hunt.³ By definition, it was not meant to provide food or protection from predators. Its participants pursued a less tangible but nevertheless powerful sense of elite identity, as aristocrat, landowner, and warrior.⁴ Requiring access to open land, specially trained servants, and a pack of expensively maintained dogs, the parforce hunt was beyond the reach of all but the wealthiest in early modern Europe. Legally, it was a special prerogative of the aristocracy.⁵ Frequently compared to warfare, hunting also was understood

² This account of the noble hunt has been compiled from the treatises themselves, with additional information from Thiébaux M., *The Stag of Love. The Chase in Medieval Literature* (Ithaca, NY: 1974) 34–36 and Salvadori P., *La chasse sous l'Ancien Régime* (Paris: 1996) 114–18.

³ Jablonski S., *Acts of Violence: Rubens and the Hunt* (Ph.D. dissertation, UC Berkeley: 2004) 144–48.

⁴ There is no synthetic treatment of hunting in early modern Europe, but various local and national studies confirm the connection between the sport and noble status. See, for example, on England, Manning R.B., *Hunters and Poachers: A Social and Cultural History of Unlawful Hunting in England, 1485–1640* (New York: 1993) 4–5 and on France, Salvadori, *La chasse sous l'Ancien Régime* 133–36.

⁵ Certain animals, notably deer and boar, could only be hunted by the nobility, and some types of hunting equipment were also forbidden to commoners. Basic summaries

as a courtly form of battle in which an aristocratic warrior defeated a dangerous enemy, thereby affirming his own valor and authority.⁶ As we shall see, the animal's trajectory in the hunting treatise, from parts to whole to parts, satisfies the human desire for intellectual, physical, and social dominance that come together in the early modern hunting treatise.

Constructing the stag

A deliberate effort to identify and characterize the quarry is typical of *La Vénerie* as well as the works of its many copiers and imitators. The treatise is organized by the different animals to be hunted, even though some – the stag and the boar, for example – were chased and caught according to the same methods; furthermore, information about the quarry not strictly relevant to the hunt is included in the introduction of each animal. So common as to seem natural, this approach, used in almost all manuals, was nevertheless a choice rather than a necessity. The *Diálogos de la montería*, an exception to this rule, is relatively uninterested in building a detailed portrait of the hunter's prey. While the Spanish treatise contains much of the same animal lore that is found in *La Vénerie*, that information is organized quite differently. The various characteristics that are grouped together in *La Vénerie* in a tightly focused discussion of the stag hunt are dispersed in the *Diálogos de la montería* throughout a broader discussion of sight, hearing, and smell in animals in general. Virtually all of the examples in the *Diálogos*' analysis of the senses cite the stag (there is one reference to the roebuck) but "stag" as such is not an important category for the Spanish writer. Instead, the *Diálogos de la montería* tend to treat animals as a class, in which the distinctions between deer and boar, for example, are relatively unimportant.⁷ The Spanish manual's distinctive approach is, in part, related to the independent local tradition of hunting literature, which generally gives more importance to location and weapons than to the

of hunting laws in different parts of Europe can be found in Faider A., *Histoire du droit de chasse et de la législation sur la chasse en Belgique, en France, en Angleterre, en Allemagne, en Italie et en Hollande* (Brussels: 1876).

⁶ Jablonski, *Acts of Violence* 100–107.

⁷ *Diálogos de la montería*, ed. A. de Mariátegui y Pérez de Barradas, Duque de Almazán (Madrid: 1935) 53–81.

quarry itself.⁸ Equally important, however, is the *Diálogos*' disparagement of the parforce chase, described as uncertain and expensive, and its concentration on the activities of the solitary hunter. The status of the parforce hunt, however, depended in part on the identity of its quarries; the stag, for example, was the most highly valued beast of venery, created, as a poem in *La Vénerie* asserts, 'pour les plaisirs des roys'.⁹ Built into the noble hunt, therefore, is a focus on particular species, which shaped the way that the animal is defined.

In *La Vénerie*, the qualities of the stag are subordinated to a long section titled "La chasse du cerf," so that the animal does not exist outside the context of the sport; indeed, the hunted animal is actually produced (rather than found) by the process of chase. The stag first appears as a disparate set of parts in a chapter titled "De la vertu et propriété du cerf".¹⁰ The structure of the chapter – a list of discrete paragraphs, all but the first appearing under the subheading "Autre vertu" – corresponds to the treatment of the body as a set of separate objects. Likewise, the substance of the chapter isolates individual body parts and defines their medicinal uses: the bone found in the stag's heart relieves heart palpitations, the antlers can be used to treat worms, and so on. The recipes for most of these cures take division to the point of destruction, by calling for the grinding of the stag's organs into powder, a process which reduces the body to the tiniest conceivable units. By concentrating on the medicines that can be extracted from the body, the division into parts emphasizes the animal's utility for humans. Although strikingly unrelated to the actual business of hunting, this chapter lays the foundation for apprehending the stag not as a whole individual but as separable, and therefore separate, parts. Furthermore, these parts are defined as cures for the human body, so that the fragmented animal functions to confirm the wholeness and vitality of the human subject. As an introduction to the stag, this chapter establishes that the fundamental nature of the animal is to be a set of utilitarian objects, a definition which has consequences for the evolution of the quarry into an active subject later in the treatise.

⁸ Jablonski, *Acts of Violence* 235–39.

⁹ Jacques du Fouilloux, *La Vénerie et L'Adolescence*, ed. G. Tilander (Stockholm: 1967) 43. All subsequent references to *La Vénerie* will refer to the Tilander edition, which reproduces the 1561 text. See also Salvadori, *La chasse sous l'Ancien Régime* 78.

¹⁰ Jacques du Fouilloux, *La Vénerie* 43–44.

Putting the pieces together

After the presentation of general information about the stag, *La Vénerie* proceeds to the sequence of events that make up the hunt. Turning against the initial construction of the animal as parts, the narrative of the chase now creates a complete, individual stag. The noble stag hunt begins with the tracking of the quarry, as hunters set out in the early morning in search of an animal for the whole party to pursue. Ultimately, the choice of quarry will depend on the various reports (or, rather, reconstructions) of a number of different animals found in the woods. Consequently, the individual hunter cannot just spot an appropriate stag and take off in pursuit. He must gather evidence, in the form of marks and traces left behind by the animal, from which a verbal representation of the quarry can be created and presented to the rest of the hunters at the assembly. These traces – hoof prints, for example – are ephemeral and external, whereas the enumeration of curative parts of the body in the first chapter defines the animal in terms of internal, concrete objects. But the construction of the quarry in the tracking of the animal is similar in structure to the introductory dissection of the stag; both define the animal in terms of isolated, fragmentary elements. In the early stages of the hunt, however, a complete animal gradually emerges from the partial traces that the stag leaves behind. Indeed, the capacity to create a whole stag out of bits of evidence that may be difficult to interpret is a mark of the hunter's skill. The generation of a complete animal is thus the result of human ingenuity, and is not inherent in the creature itself. Furthermore, the goal of the hunter's lonely quest for an animal is analogous to the objective of the treatise's writer: to construct a verbal account of an ideal stag that will persuade his audience.

The hoof print is the first indicator of the stag's presence discussed by du Fouilloux. The prints are, at the most basic level, indicators of the presence of a deer in a certain area. But for those who know how to read such marks, the tracks also contain information about the particular animal that made them. The size and shape of the print correspond to the animal's age, while the distance between tracks marks the length of stride, and thus suggests how swiftly the deer will flee.¹¹ Out of the tracks, empty spaces in the ground created by the pressure

¹¹ Jacques du Fouilloux, *La Vénerie* 58–60.

of the deer's now absent body, the hunter conjures up the whole, living animal. Du Fouilloux's chapter on deer tracks contains an illustration of this process [Fig. 1]: a hunter points at two hoof prints, in front of which the lower part of a deer's leg appears where the next hoof print should be. The image concisely captures the partial, gradual process of constructing an animal out of fragments that continues in the succeeding chapters.

The hunter continues to trace the ghostly silhouette of the animal through the inspection of trees and shrubs that mark the passage of the deer. As he proceeds through the forest, the stag bends and breaks the branches of shrubs and trees with his body and with his antlers. Like the hoof prints, a series of voids or empty spaces in the foliage are a record of the positive presence of the animal; these voids are then filled in by the hunter's knowledge in constructing a quarry. The finding of the animal is thus also the creation of the animal. The pattern of broken branches is also a clue to the specific identity of the deer, whose age can be judged by the height and breadth of the path cleared by his massive body and his crown of antlers. Following the deer's progress through the woods also helps the hunter identify his quarry's favorite paths and places. Mapping the stag's route is useful preparation for a later stage of the hunt, when teams of dogs would be set up along the likely course the stag would take when pursued. It also sharpens the image of the particular stag being tracked by the hunter, isolating one animal from the population of the forest. To age and size, qualities that a given animal could share with neighboring members of the same species, can now be added a particular habitat that was associated with one unique deer. In the tracking of the quarry, the animal is not the typical or generic deer first introduced to the reader; it is now one particular animal that can be differentiated from all the rest.¹²

The negative spaces in which the outline of the stag can be drawn by the hunter are generally accompanied by positive evidence of the animal's presence: dung. A privileged signifier of the animal because it is the only concrete evidence of his presence, excrement, in its messy physicality, also poses a challenge to the construction of the animal in necessarily dematerialized words within the hunting treatise. Consequently, the treatise labors to subordinate the droppings to an orderly verbal structure. In an illustration in *La Vénérerie* [Fig. 2], three different

¹² Jacques du Fouilloux, *La Vénérerie* 71–76.

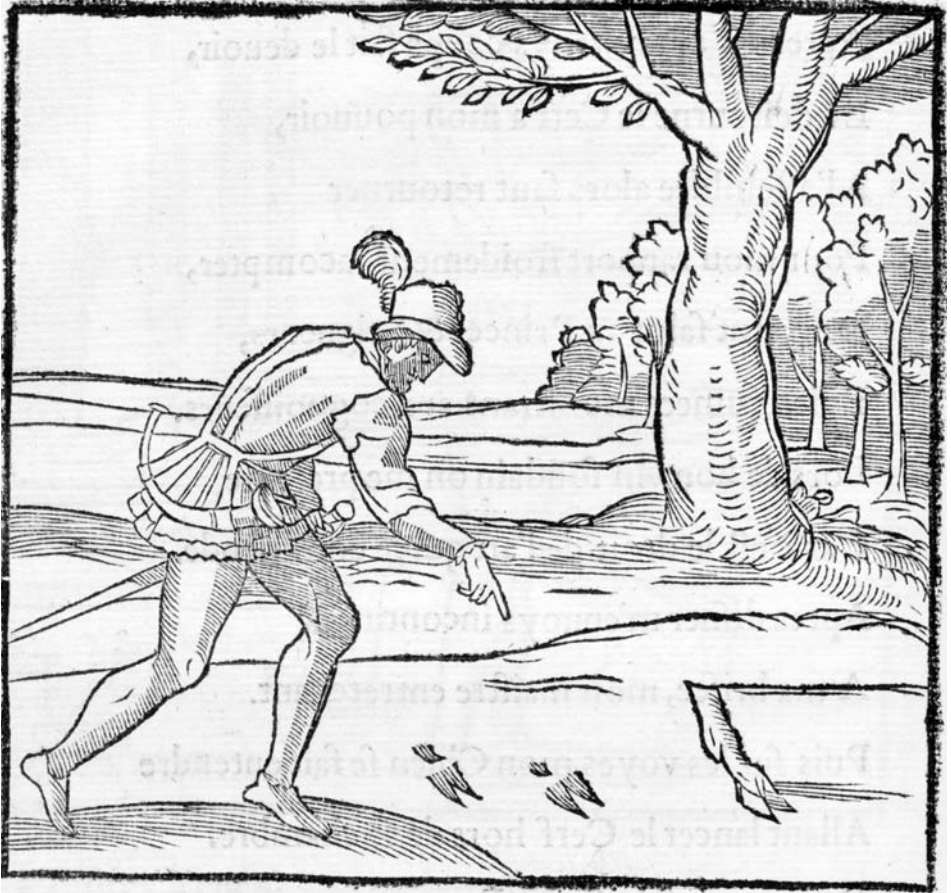


Fig. 1. Anonymous French, Tracking the Stag. From Jacques du Fouilloux, *La Vénérerie* (Poitiers: 1561) 56. Yale University, Beinecke Rare Book and Manuscript Library.

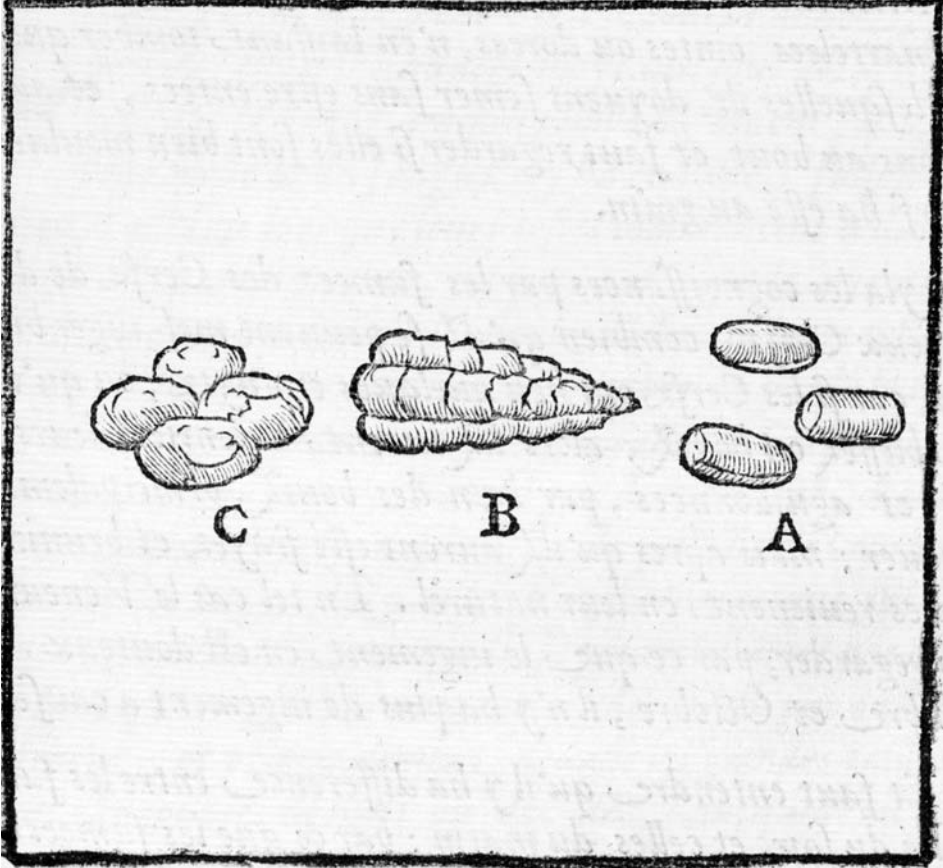


Fig. 2. Anonymous French, Stag Dung. From Jacques du Fouilloux, *La Venerie* (Poitiers: 1561) 59. Yale University, Beinecke Rare Book and Manuscript Library.

types of dung float in a clean, white, undefined background (in contrast to the populated landscapes in which other tracking practices are depicted), while the letters A, B, and C anchor the droppings to precise written descriptions.¹³ Subordinating the physical droppings to the mental activities of the hunter, *La Vénerie* insists on the importance of properly interpreting these signs by emphasizing that they may easily be misread by amateurs. Thus, the reading of the droppings, and their subsequent verbalization in the report, provide a cover of words for the physical objects themselves.

But the materiality of the droppings is also an asset, since, unlike broken branches and hoof prints, they are portable proof of the stag's existence. Collected, wrapped in leaves, and stowed in a hunting horn, dung plays a leading role in the hunters' presentation of reports on the stags they have tracked. Thus, the animal's excrement rises from its humble status as waste discarded on the ground to a place at the head table in the morning picnic known as the assembly. Central to this ceremony were the speeches made by the hunters to describe the stags they had identified in the forest, and, of course, the droppings they collected. *La Vénerie* testifies to the importance of this moment with a poem and an illustration (The *Diálogos de la montería*, on the other hand, make virtually no mention of excrement).¹⁴ In the poem, one of only three in *La Vénerie's* treatment of the stag hunt, du Fouilloux lays out the proper procedure for describing an animal, and the very first step is to present the dung to the lord of the hunt. The illustration shows a hunter kneeling and placing the droppings on a table, at which a richly dressed man is seated under a canopy [Fig. 3]. In the English translation of du Fouilloux's poem, the hunter's speech begins:

[...] my liege, behold and see
 An Hart of tenne, I hope he harbord bee.
 For if you marke his fewmets every poynt,
 You shall them finde, long, round, and well annoynt,
 Knottie and great, withouten prickes or cares,
 The moystnesse shewes, what venysone he beares.¹⁵

The droppings initially function as a synecdoche of the animal itself, although the hunter's report goes on to list the other traces of the stag

¹³ Jacques du Fouilloux, *La Vénerie* 60–62.

¹⁴ Jacques du Fouilloux, *La Vénerie* 78–80.

¹⁵ George Gascoigne, *The Noble Arte of Venerie or Hunting* (London: 1576) 96.



Fig. 3. Anonymous French, The Hunter's Report. From Jacques du Fouilloux, *La Venerie* (Poitiers: 1561) 84. Yale University, Beinecke Rare Book and Manuscript Library.

he has found. Dung takes priority in the report because it is a visible, tactile object that compellingly demonstrates the existence of the stag; on the other hand, it is incorporated into a verbal structure. Furthermore, du Fouilloux's poem is immediately followed by a chapter on the importance of using the correct vocabulary to describe animals, which signals the insistence on the capturing of the animal, even in its grossest physical manifestations, in words.

In du Fouilloux's verses, the hunter presents himself as having judiciously selected one particular stag to pursue,¹⁶ and indeed it is at the assembly that the unique identity of the quarry is established. The lord of the hunt, after hearing from all the hunters, chooses a specific animal to pursue.¹⁷ At this point stag has been substantially transformed: from a collection of parts and traces, the quarry has become an individual creature, as is suggested by Gascoigne's lines in which animal droppings become a ten-point stag. Whereas the first stage of the hunt required searching for a group of deer who might be candidates for the chase, the pursuit of the quarry by the whole party sets off in search of one specific animal. This is underscored in the treatises by an emphasis on the animal's unique qualities, as opposed to the general characteristics that were used to introduce the stag. In *Country Contentments*, for example, Gervase Markham advises the hunter to "take what especial notts or markes you can from him, so that as much as is possible you may know him from any other Deere".¹⁸ The importance of chasing one particular animal is further emphasized by lengthy discussions of ways to keep the hunting party from wandering off in pursuit of a different beast. This topic takes up one of the longest chapters in du Fouilloux's account of the stag hunt, and is also treated at length in Raimondi's treatise, which in general heavily abridges *La Vénerie* (as might be expected in a capacious volume that covers falconry and fishing, as well as the pursuit of elephants and tigers).¹⁹ The difficulty of pursuing the proper quarry is increased by the stag's own efforts to abandon the special identity assigned to him by the hunters. One of the most frequently mentioned obstacles in the hunt is the stag's taking refuge in the company of other deer.²⁰ As if aware of the unique

¹⁶ Jacques du Fouilloux, *La Vénerie* 80.

¹⁷ Jacques du Fouilloux, *La Vénerie* 76–78.

¹⁸ Gervase Markham, *Country Contentments* (London: 1649) 32.

¹⁹ Eugenio Raimondi, *Le Caccie delle Fiere Armate* (Brescia: 1621) 158–163.

²⁰ Jacques du Fouilloux, *La Vénerie* 90.

identity assigned him by his pursuers, the stag seems to try to abandon his special status and retreat into the generic class. If individual identity is a privilege of the subject, it is also, in the hunt, the hallmark of the victim. But in the hunting treatise's construction of the animal, it is impossible for the quarry to hide among the herd, for the very fact of being the object of the hunt has transformed him into an independent subject, inherently different from the others which remain generic collections of useful organs and bones.

Once an animal has been chosen for the hunt, he acquires the interiority of a subject, as well as external markings that are peculiar to a specific individual. The stag now thinks (about how to avoid capture) and feels (fear and hostility). His anatomy can now be examined for clues to his state of mind, and not only for physiological or medicinal information. For example, in his 1591 treatise, Thomas Cockaine describes a weary beast attempting to fool his pursuers into thinking that he is not their prey by closing his mouth, and not panting for breath as a chased animal might reasonably be expected to do. Then, Cockaine explains, the hunter should look closely at the animal's throat, which will swell up, and his coat, which will drip with sweat and shiver.²¹ This advance from physical evaluation to the exploration of deer psychology may be understood as another form of the increasingly invasive domination of the hunter, whose mastery of the animal now extends beyond the physical to the mental. But the acquisition of interiority also makes the stag a more dangerous enemy. As a subject, he has become a cunning strategist. Du Fouilloux devotes considerable attention to the stag's "malices" and "ruses," words that imply crafty plotting as opposed to a mere instinct for self-preservation.

The active subjectivity attributed to the deer in *La Vénerie* is thrown into relief by comparison, once again, with the *Diálogos de la montería*. With its emphasis on abstract categories rather than specific animals, the Spanish treatise treats the quarry's efforts to escape capture under the rubric of natural laws governing creation. All animals have been granted different sorts of powers to protect themselves; for some, this consists of teeth and claws, while others – such as the deer – use their speed and agility to help them avoid rather than attack their pursuers.²²

²¹ Thomas Cockaine, *A Short Treatise of Hunting*, Shakespeare Association Facsimiles 5 (London: 1932) unpag.

²² *Diálogos de la Montería* 58.

Furthermore, these abilities, particularly the animal's unusually sharp senses, are not described simply in terms of hunting, but also apply to the animal's ability to find a mate.²³ Thus, the efforts of the hunted animal to avoid capture are not conscious strategies, but are described rather as the effects of natural laws. In the *Diálogos de la montería*, the quarry is no more clearly or specifically individualized in the heat of the hunt than it was in the discussion of the general characteristics of animals.

The example of the *Diálogos de la montería* raises the question of why it was necessary for *La Venerie* and its brethren to endow the quarry with a dangerous degree of subjectivity. After all, the zoological literature of the sixteenth century suggests that the animal might be satisfactorily defined by division into parts. Conrad Gesner's *Historia animalium*, for example, creates a composite image of the animal out of distinct categories of information, ranging from medicinal properties of various parts of the body to the philological derivation of the name. Scientific dissection of various species, although in the service of deriving analogies for the functioning of the human body, nevertheless encouraged a view of the animal as thing to be taken apart and thereby mastered. The definition of the animal in pieces, whether of textual information or physically distinct organs, was therefore not alien to early modern culture.

Yet early modern hunting treatises describing the parforce hunt actively work to transform the disassembled animal body into a coherent individual in the course of the hunt. Practically, the hunt, as described in the treatises, is more likely to succeed if the hounds are trained to follow one particular animal, rather than running off to follow the scents of undesirable creatures. But the interiority associated with the subject was not necessary to the isolation of a specific animal to hunt; the quarry might have been defined, for example, in terms of his unique physical markings rather than his psychological state. Furthermore, the granting of individual selfhood to the deer creates the danger that this more fully realized quarry will provoke sympathy in the reader of the hunting treatise, who may wonder, like the princess in *Love's Labour's Lost*, why the hunter tries 'to spill/The poor deer's blood that my heart means no ill' (IV, i).

This dilemma is evident in Raimondi's *Le Caccie delle Fiore Armate*, where the section on the stag hunt opens with an account of the deer

²³ *Diálogos de la Montería* 62.

as a character rather than as a collection of parts.²⁴ Raimondi begins with a list of episodes from antique literature in which deer play key roles, such as the pet stag adored by Cyparissus in Ovid's *Metamorphoses*. The recurrent theme in these literary examples is the affection of deer for their human masters, a trait which suggests that the chasing and killing of the stag is a betrayal rather than an enjoyable sport. Raimondi's panegyric to the deer winds up with the admission that such a splendid animal deserves protection from man, rather than assault, which is a charming sentiment but one ill-suited to a didactic text on the killing of animals. The subsequent transition to instructions in hunting is consequently awkward. Raimondi explains that he cannot possibly list all the deer's virtues, since they are nearly infinite, and will instead turn, as he promised, to explain how to hunt the stag. His celebration of the stag thus doubly undercuts the goal of the hunting treatise. First, it presents the animal sympathetically, making the hunt itself less appealing. Second, it suggests the failure of writing to capture the stag, whose qualities exceed the human capacity to write them all down. This shortcoming is particularly noticeable because Raimondi's own introduction boasts of the completeness of his text, in which the reader is guaranteed to find everything he wants. The internal contradictions in Raimondi's description of the deer as a target that is beautiful and virtuous throw into relief the effectiveness of treating the animal as a collection of parts which can be neutrally cataloged and rendered useful to humans.

Potentially the most powerful threat that the subjective and sympathetic animal posed to the hunt, though, is epitomized by a poem, attached to nearly every edition of *La Vénerie* and translated by George Gascoigne for his own hunting book. The verses by Guillaume Bouchet, "Complainte du cerf," represent the most sustained effort in the hunting treatise to imagine the stag's point of view.²⁵ The object of the hunt becomes a thinking feeling subject who begs for relief from hunters and hounds. His objections are initially couched in an emotional plea begging the hunter to spare him. But the poem reverts to an account of the animal in pieces, even though the stag now ostensibly speaks for himself. If the human hunter is motivated by the desire to acquire the medicinal benefits (which include the supposedly life-prolonging effects

²⁴ Eugenio Raimondi, *Le Caccie delle Fiore Armate* 149–151.

²⁵ Jacques du Fouilloux, *La Vénerie* 180–182.

of consuming venison), then the stag questions whether the painful death of an animal is worth a few more years of human life. Considered abstractly, this line of reasoning may seem plausible, particularly to modern readers who are accustomed to the needs of animals being taken seriously. The context of the poem, however, seriously weakens it. The stag's insistence that his own pain is hardly worth the benefits that humans derive is undercut by the fact that the bulk of the poem is given over to describing the medicinal benefits yielded by the deer's body, which cure all manner of disorders, from gout to toothache. The sheer verbal weight of cures, listed over the course of forty-two lines (out of a total of ninety-eight) testifies to the numerous benefits provided by the deer's body that might indeed justify the suffering of the victim. The speaking stag opens up a space for presenting an alternative to the narrative of killing the prey,²⁶ but does not actually offer a counter-narrative; instead, he reiterates the dismantling of his own body by describing the properties of his various parts. The representation of his subjectivity thus becomes a way of bolstering the objectified, fragmented, utilitarian definition of the animal. The poetic imagination of the animal's individual plea results in a reinforcement of the fundamental construction of the quarry as an object to be disassembled for human use. The organizing principle of the animal as parts overcomes the empathy that might be inspired by a pitiful victim.

While these sympathetic characterizations of the stag exist at the margins, at the very beginning or very end of the account of the hunt, the stag at the center of the treatise's description of the chase is, rather, a clever and malicious individual. It was necessary for the quarry to become an active and indeed dangerous subject to ensure that the parforce hunt successfully confirmed the elite status of the hunter. Described by its critics as a wasteful and dangerous pastime, the noble hunt was justified as training in warfare for a hereditary class of aristocratic warriors.²⁷ For this analogy to function effectively, however, the quarry had to be a genuine enemy, not a relatively harmless and rather unintelligent beast. Transforming the stag into a crafty opponent, from a galloping sack of medicinally useful parts, made it a positively dangerous foe, one whose defeat would bring glory to the slayer. This is emphasized by the opening of du Fouilloux's chapter on

²⁶ Marin L., *Food for Thought*, trans. M. Hjort (Baltimore: 1989) 48–53.

²⁷ Manning, *Hunters and Poachers* 4–5.

the killing of the quarry, which recounts an anecdote about an emperor who won numerous victories in battle but was killed by a stag while hunting.²⁸ Invoking the conventional comparison between hunting and warfare, a commonplace that goes back to Xenophon, du Fouilloux implicitly elevates the threat posed by the stag to that of a human enemy. Although it represents a shift from the initial construction of the animal in pieces, the stag's status as subject is essential to confirm the glorious nobility of his killer.

But the definition of the quarry as an independent subject is also a threat, more generally, to the cultural construction of the animal. The animal as individual is precisely not a collection of parts to be isolated and analyzed; the animal as individual has an interior self that is not wholly accessible to the human, and much of the hunting treatise is devoted to methods for recognizing the stag's deceptive strategies. The necessity of transforming the quarry into a dangerous enemy in the context of the parforce hunt generates a broader challenge to the tidy subordination of the animal. The stag is thus deceitful and malicious not only because he can try to trick his pursuers; he also gives the lie to his proper place in the world.

Dismembering the Carcass

The successful conclusion to the hunt therefore requires the stag's return to the status of a docile object. This occurs in the ritual dismemberment of the carcass that immediately follows the kill, the moment when the animal's body returns to its proper state, as a collection of parts. While the death of the quarry might seem to be the dramatic climax of the chase, the butchering, or breaking of the stag, is the event that truly resolves and concludes the hunt. Where the assembly defines the quarry as an individual enemy, the breaking of the stag confirms the dissolution of that enemy into knowable, consumable, usable pieces. Like the assembly, which marked the identification of the animal as individual enemy, the butchering of the carcass is an elaborately structured ceremony, which allowed the display of the hunter's skill just as the presentation of reports did earlier. Gascoigne's account of the breaking of the stag, for example, dwells on the skill required to carve

²⁸ Jacques du Fouilloux, *La Vénérerie* 109.

up the deer properly, and the hunter who errs is deemed “no handsome woodsman”.²⁹ Taking the animal apart properly, a skill displayed by both the successful hunter and the writer of the hunting treatise, is a display of knowledge and mastery.

The butchering begins, according to du Fouilloux, with the removal of the right foot of the stag, to be presented to the lord of the hunt. It continues with different parts of the animal parceled out to various members of the hunting party. The lord of the hunt is given the tongue and testicles, among other things, while the hunter who found the deer is entitled to the right shoulder and the one who managed the dogs gets the neck. The dogs themselves receive the head and bread soaked in the animal’s blood.³⁰ The parts of the stag’s body carry different meanings at this point than they did at the start of the hunting treatise, where bones, organs, and tracks were defined in terms of medicinal use and then as marks of the animal’s location. The cutting up of the carcass results in cuts of meat, to be consumed by the hunting party; du Fouilloux suggests that the parts of the body that go to the lord of the hunt be presented on a long fork, so that they may be grilled and eaten immediately. The food provided by the animal’s body is not strictly for subsistence, though; the careful distribution according to each individual’s role ensures that it also becomes a sign of the status of the hunters. The fragmentation of the animal body thus confirms the places of human bodies in a social hierarchy.

The illustration to du Fouilloux’s chapter on dismemberment [Fig. 4] emphasizes that this ceremony both complements and completes the beginnings of the chase, when the quarry was first created and defined as an individual creature. While dogs gnaw at the carcass in the lower half of the image, which represents the convergence of pursuers and pursued, at the top a kneeling man presents the foreleg of the stag to the lord of the hunt. The two men reenact the moment in the assembly when the hunter offers the deer droppings as evidence of the stag he has found to the lord of the hunt. Once again, the hunter presents a part of the animal to the lord, and the symmetry of actions and images suggests that the circuit of the hunt is completed when the animal is reduced once again to his constituent parts. Looking back to an even

²⁹ George Gascoigne, *The Noble Arte of Venerie or Hunting* 135. Carving an animal at table as a gentlemanly skill is discussed in Elias N., *The History of Manners*, trans. E. Jephcott, (New York: 1982) 118–120.

³⁰ Jacques du Fouilloux, *La Vénerie* 112–114.



Fig. 4. Anonymous French, Breaking the Stag. From Jacques du Fouilloux, *La Venerie* (Poitiers: 1561) 124. Yale University, Beinecke Rare Book and Manuscript Library.

earlier moment in the hunt, the presentation of the stag's foot also recalls the image of the hunter's quest for hoof prints, in which he chased a fragmentary leg into the forest. Significantly, du Fouilloux, like virtually all hunting writers, devotes considerably more attention to the butchering of the body than to the killing of the live stag, a topic which is handled vaguely and briefly. The slaying of the animal does not in itself mark the successful end of the hunt; it is the return of that animal's body to a fragmentary state that truly concludes the chase.

Conclusion

The division of the body into parts was common in early modern culture, where the dismemberment of the animal that framed the hunt joins Petrarchan poetry's crystallization of the beloved into eyes, lips, and hands, and the anatomy theater's dissection of a criminal into scientific knowledge. Like the woman and the criminal, the animal body can be considered ambiguous and socially marginal, and therefore particularly eligible for the partitioning that counters a potentially unified subject. But what is unique about the animal example is that the beast did not, necessarily, need to be defined as a subject to begin with; this was a side-effect, essentially, of the place of the hunt in upholding an aristocratic order. By constructing the animal not merely as a subject, but also specifically as an enemy, the early modern hunting treatise suggests that the subjectivity of others was inherently a threatening possibility, one to be overcome by a Hegelian process of subduing the unruly other and reducing him/her/it to the status of an object. The case of the hunted animal, which fluctuates in status, also implies that subjectivity is not inherent in an individual, but can be given and, more frighteningly, taken away. It also demonstrates, through the play of the fragmented animal against the human hunter, that the spectacle of the fragmentation of the other positively reinforced the wholeness of the privileged subject. As is so often the case, therefore, the nature of the animal turns out to be inseparable from human demands. The rituals of the hunt affirm the identity of the human, as aristocrat, hunter, reader or writer, through participation, real or vicarious, in the destruction of the stag.

Selective Bibliography

- COCKAINE THOMAS, *A Short Treatise of Hunting*, Shakespeare Association 5 (London: 1932).
- Diálogos de la montería*, ed. A. de Mariátegui y Pérez de Barradas, Duque de Almazán (Madrid: 1935).
- FAIDER A., *Histoire du droit de chasse et de la législation sur la chasse en Belgique, en France, en Angleterre, en Allemagne, en Italie et en Hollande* (Brussels: 1876).
- FOUILLOUX JACQUES DU, *La Vénerie et L'Adolescence*, ed. G. Tilander (Stockholm: 1967).
- GASCOIGNE GEORGE, *The Noble Arte of Venerie or Hunting* (London: 1576).
- JABLONSKI S., *Acts of Violence: Rubens and the Hunt* (Ph.D. dissertation, UC Berkeley: 2004).
- MANNING R.B., *Hunters and Poachers: A Social and Cultural History of Unlawful Hunting in England, 1485–1640* (New York: 1993).
- MARKHAM GERVASE, *Country Contentments* (London: 1649).
- RAIMONDI EUGENIO, *Le Caccie delle Fiere Armate* (Brescia: 1621).
- REMIGEREAU F., *Jacques Du Fouilloux et son traité de La Vénerie* (Paris: 1952).
- SALVADORI P., *La chasse sous l'Ancien Régime* (Paris: 1996).
- THIÉBAUX M., *The Stag of Love. The Chase in Medieval Literature* (Ithaca, NY: 1974).

(UN)STABLE IDENTITIES: HIPPOLOGY AND THE
PROFESSIONALIZATION OF SCHOLARSHIP AND
HORSEMANSHIP IN EARLY MODERN GERMANY

Pia F. Cuneo

Introduction: The Issues and the Sources

Somewhere in Germany, some time in the sixteenth or seventeenth century, a scholar bends over his desk, consulting ancient Greek and Roman sources (or recent translations of the same) and weaving these strands of classical information into his own text. Outside, a horseman rides in a manege, training the animal to respond appropriately to various cues. What do these men have at least potentially in common? If one looked for the answer to this question in secondary scholarship on the early modern period, it would appear they lacked any connection whatsoever. One in fact would be hard-pressed to find sixteenth/seventeenth-century scholars and horsemen occupying the same space within the pages of literature on early modern social and cultural history. Nonetheless, primary sources from the sixteenth and seventeenth centuries clearly indicate that some of these men indeed had one very important thing in common, and that was the horse. Humanists and university-educated men wrote about them, and some horsemen not only trained them but authored manuals about how to do so.

In this article, I draw the hippological connections between scholars and horsemen. Furthermore, I argue that these men's work with the horse served to legitimate and validate their respective occupations. In the figurative sense, then, the horse functioned as a vehicle for the professionalization of various activities and groups, and, as such, provided a fundamental catalyst to the fashioning of professional identity.

An essential ingredient of professional identity is the assumption that a professional possesses advanced training and specialized knowledge. Such knowledge and training become mechanisms for separating the real professionals from the (real and perceived) dabblers, dilettantes, and want-to-be's, as well as from the less talented and less experienced. And it is this separating out that becomes so crucial for dealing with competition amongst professionals. Furthermore, to be a professional

often implies a self-conscious attitude about one's access to and exercise of such knowledge and training (as true today as it was in the sixteenth/seventeenth century).¹

These are exactly the qualities stressed, either explicitly or implicitly, in the texts produced by scholars and horsemen of the sixteenth and seventeenth centuries. These men all seek to demonstrate their control and mastery of specialized knowledge through training and experience that is presented as especially valuable and useful either to other fledgling professionals or to these professionals' patrons. The value and the use of the knowledge on offer in these texts and thus, by extension, the status of their authors are significantly enhanced by the object and subject of that knowledge, the horse, an animal so closely associated with nobility, wealth, and power.²

Our modern-day blindness to the historical importance of horses is no doubt grounded in the contemporary obsolescence of the animal, with the exception of its continued but narrowly limited use for recreation and sport. And this blindness in turn accounts for the fact that the majority of the sources that I use in this article have never been considered, much less consulted by historians. These sources include texts dealing with an array of hippological issues, from training horses to treating their illnesses, from equine anatomy to horse breeding, written by humanists and scholars. In some cases, this literary activity also included translating foreign hippological texts into German. In addition, texts often dealing with the same subject matter were written both by scholars and by horsemen, particularly riders ('Bereiter') and stable-masters ('Stallmeister').

These sources allow us to use the culture of the horse as a lens to focus on early modern German history. Through that lens, several points become clear, especially the indispensability of the horse to early

¹ For a discussion on the debate about professional identity in Italy, see McClure G.W., *The Culture of Profession in Late Renaissance Italy* (Toronto: 2004) especially 3–26.

² This association between the horse and European nobility stems from the medieval definition of the nobility as the warrior class, and significant medieval battles involved mounted knights. See Hyland A., *The Warhorse 1250–1600* (Thrupp: 1998) and Davis R.H.C., *The Medieval Warhorse* (London: 1989). Sixteenth- and seventeenth-century hippological texts give ample evidence of the continuation of that association in that riding horses is often specifically labeled a noble art, and the horse is often described as especially suited to serve the nobility. See for example the introduction to the anonymous *Ein neuwe und bewerte Roßartzney* (Strasbourg: 1583) unpaginated; and Hans Friedrich Hörwart von Hohenburg, *Von der hochbehrümpften/ adelichen und ritterlichen Kunst der Reyterey* (Tegernsee: 1577).

modern life. In addition, we are able to see the development of various professions, in this case through the articulation and implementation of rhetorical strategies serving to define and enhance those professions and the men who practice them. Even where, in some cases, the introductions and dedications to these hippological texts might be influenced by literary tropes and formulae, the goal of employing those tropes and formulae is ultimately to prove and promote the individual author's professional prowess. And we catch a glimpse of individuals who have until now occupied strata below the historian's radar: the local humanists who failed to achieve lasting fame and fortune, and the men who sweated and toiled in the saddle and in the stables of often local and less well-known courts. In short, taking the horse seriously as a subject of study, in this case by understanding its role in the construction of professional identities, allows for deeper insight into the history of the horse as well as the culture that both sustained and was defined by this wonderful animal.³

Scholarship

Obwohl [...] mir nicht zweifelt/das etliche [...] Kluglinge [...] mir diese zum ersten deuten [...] werden/das ich als ein Medicus Physicus, der billicher allen Fleis/Mühe/und Arbeit dahin wenden und richten soldt/auff das den krancken und brechenhafftigen Menschen [...] diese zwey Bücher von gebrechen und kranckheiten/damit die Roß und andere vierfüßige Thier geplaget/verdolmetschert/und in Deutsche Sprache vorendert hab. So tröst ich mich doch dargegen des/das auch die aller vornembsten Philosophi/Medici/und Oratores/als nemlich Aristoteles/Hippocrates/Galenus/Simon Atheniensis/Xenophon/und ander vortreffliche Leut sich nicht geschemt/von der Natur und Eigenschafft der Roße und anderer Their/und wie man dieselb aufferziehen/abrichten futterm/zeemen und warten/und auch ihre Kranckheiten und Gebrechen

³ For further examples of the investigation of hippology as an illumination of early modern German history and culture, see Cuneo P.F., "Beauty and the Beast: Art and Science in Early Modern European Equine Imagery", *Journal of Early Modern History* 4 (2000) 269–321; eadem, "Just a Bit of Control: The Historical Significance of Sixteenth- and Seventeenth-Century German Bit-Books", in Raber K. – Tucker T.J. (eds.), *The Culture of the Horse: Status, Discipline and Identity in the Early Modern World* (New York: 2005) 141–173 and eadem, "Mad Mares and Wilful Women: Ways of Knowing Nature – and Gender – in Early Modern Hippological Texts", in Lindemann M. (ed.), *Ways of Knowing: Ten Interdisciplinary Essays* (Boston-Leiden: 2004) 1–21.

erkennen vorhüten/und vortreiben möcht/in ihrer Sprach zuschreiben.
Warumb soldt ich mich den schemen [...]?⁴

In the above quote, found in the introduction to the first edition of his German translation of a book on the treatment of equine ailments and disease, the physician Gregor Zechendorf defends his intellectual labor against imagined (but, according to him, probable) critics. Both the charge that he surmises they will level at him, as well as his rhetorical strategy to meet that charge, are equally interesting. At stake is the appropriate subject and goal of a professional's skill and labor. Evidently Zechendorf could easily imagine that some might feel that the time and talents of a physician would be better directed towards the well-being of fellow humans, rather than towards that of four-legged animals. But, Zechendorf argues, there are good reasons for concerning oneself with animals such as horses. One of those reasons, and the first one he articulates, is not the great usefulness or noble nature of the horse, as one often finds described in contemporaneous hippological literature, but intellectual tradition. Some of the most famous philosophers and physicians of antiquity have written about the care of horses, and so, Zechendorf rhetorically queries, why should he be ashamed to join the ranks of great men such as these?

Furthermore, as Zechendorf argues, the book that he has translated from Latin was originally commissioned by none other than Francis I, king of France; and the man who had received the royal commission was the highly learned Johannes Ruellius, the King's own personal physician.⁵ But Ruellius was also 'just' a translator since it had been his task to translate the hippological texts of ancient Greece and late-antique Byzantium into Latin. And finally, according to Zechendorf, the nobleman to whom he has dedicated his German translation, Alexander Pflug auf Coelnbach, had assured Zechendorf that his German translation would be particularly useful to high potentates who often valued a good horse just as much as one of their human subjects.

In fundamental ways, the book in question bears the hallmarks of humanist scholarship typical of the early modern period. It involves the intellectual labor of professionally trained men, the considered

⁴ [Johannes Ruellius], *Zwey nußliche sehr gute Bücher von allerley gebrechen und kranckheiten/damit die Roße/Maulesel/und andere vierfüßige Thier [...] geplaget [...]*, transl. Gregor Zechendorf (Nuremberg: 1571) unpaginated dedication.

⁵ For Johannes Ruellius (1474/6–1537) see Smith F., *The Early History of Veterinary Literature*, vol. I (London: 1976) 43.

analysis and dissemination of sources from classical and late-antiquity, and an international scope of authors/translators, patrons, audiences, and dedicatees. Yet there are facets of this project that may strike a modern-day historian as atypical. The professionals in question are not humanist scholars but physicians, and the subject of their sources is not statecraft, history, philosophy, or even human medicine, but the ailments of horses. And in Zechendorf's case, his translation was not commissioned, but seems instead to have been undertaken on speculation in the certainly calculated hope that its topic would attract an audience. About Zechendorf himself we know only what is given on the title-page and in the introduction: that he resided in Eger, and that he was educated as a physician but also in the liberal arts. Evidently he did not rise to the status of his older colleague Ruellius, who enjoyed the employ and patronage of one of Europe's most powerful monarchs.

And yet, a glance at hippological literature from the sixteenth and seventeenth centuries reveals that the link between scholarship and the horse was repeatedly forged by a number of different professionals. In 1603, for example, the Frankfurt physician Peter Offenbach translated into German the Latin text on equine anatomy written in 1599 by the Bolognese senator Carlo Ruini.⁶ Offenbach dedicates his translation to Joachim Friedrich of Hohenzollern, electoral duke from 1598–1608. He liberally peppers his introductory text with fistfuls of references to ancient Greek and Roman, as well as medieval texts. These references all serve to signal three things: the learnedness of the author/translator; the usefulness of the horse in every facet of life throughout history; and the special connection between horses and noblemen. Offenbach can then maintain that it is a noble thing indeed not only to have horses but also to keep them in good health, thus justifying the need for this book. In particular, Offenbach mentions that he hopes his translation will be of use to electoral dukes, princes, dukes and the nobility in general. The book's title-page, however, extends the list of readers who would benefit from its contents from the highest echelons of the nobility down to burghers, merchants, horse-dealers, farriers, and also painters and sculptors.

⁶ Carlo Ruini, *Anatomia et medicina equorum nova. Das ist neues Roßbuch oder von der Pferden Anatomy* [...], transl. Peter Offenbach (Frankfurt: 1603). For Carlo Ruini (ca. 1539–1598) see von den Driesch A., *Geschichte der Tiermedizin: 5000 Jahre Tierheilkunde* (Munich: 1989) 74–75.

In their familiarity with ancient sources, and in their activities as translators of foreign-language texts, physicians such as Zechendorf and Offenbach are acting like humanist scholars. Conversely, some humanist scholars writing about horses act like physicians, or at least medically oriented professionals, in that they focused on equine disease and ailments. This is due in part to the fact that the antique sources they are translating frequently treated that subject in particular. This is the case, for example, with the Nuremberg humanist, Joachim Camerarius, who translated Xenophon's treatise on horsemanship from Greek into Latin, and wrote the *Hippocomicus*, a tract on different methods of curing equine ailments.⁷

One of Camerarius' proteges, Johann Fayser von Arnstain, followed his mentor's lead in training his scholarly sights upon the subject of hippology. Like Camerarius, Fayser consulted classical sources and acted as a translator, but Fayser was also concerned with contemporaneous Renaissance texts as well as their hippological predecessors. For example, Fayser's translation of Frederico Grisone's highly influential *Gli ordini da cavalcare* (1550)⁸ went through at least four editions between its first printing in 1570 and 1600.⁹ It was dedicated to the imperial councilor Georg Ludwig von Seinsheim. In addition, Fayser also wrote a book on diseases and ailments of horses (*Hippiatria [...] Roßarzney*, 1576) that was primarily a compilation of classical and late-antique sources on the subject, but that also included more modern sources such as Camerarius' *Hippocomicus*.¹⁰ Fayser's *Hippiatria [...] Roßarzney* was dedicated to Georg Friederich (Margrave of Brandenburg-Ansbach, 1539–1603).

Fayser's translation of Grisone as well as his own book are preceded by lengthy introductory texts that contain valuable information about the author/translator and his projects. Fayser's introduction to the Grisone translation was written in Augsburg and dated June 16th, 1570. He

⁷ Joachim Camerarius (1500–1574); Xenophon (ca. 430–ca. 354 B.C.); his *Peri hip-pikes* was written in ca. 369 B.C. Camerarius' translation of Xenophon *Xenophontis liber de re equestri Latinus factus* was published in 1539 and his own text *Hippocomicus, quae est disputatio de curandis equis* appeared in 1556.

⁸ For Frederico Grisone, see Otte M., *Geschichte des Reitens von der Antike bis zur Neuzeit* (Warendorf: 1994) 58–63.

⁹ Frederico Grisone, *Künstlicher Bericht und allerzierlichste beschreybung des edlen/vhesten/ unnd hochberümpften Herrn Friderici Grisonis Neapolitanischen hochlöblichen Adels: Wie die streitbarn Pferd [...] zum Ernst und ritterlicher Kurzweil/geschickt und volkommen zu machen*, transl. Johann Fayser [von Arnstain] (Augsburg: 1570). Further editions were published in 1573, 1580, and 1599.

¹⁰ Johann Fayser [von Arnstain], *Hippiatria: Grundlicher Bericht und aller ordenlichste Beschreibung der bewerten Roßarzney* (Augsburg: 1576).

identifies himself here as 'Johann Fesser der Jünger Der freyen Künst Professor'. From his introduction to the *Hippiatria...Roßarzney*, dated six years later, we learn that Fayser had studied for five years at the University of Frankfurt (Oder).¹¹ Following the introductory text, we are even treated to a woodcut portrait of Fayser at the age of forty-six.

But far more interesting than this basic information are the various strategies Fayser employs in these introductions that clearly position him within specific networks and contexts that are scholarly, professional, and elite. How much of Fayser's narrative is actually true is secondary to my argument. Instead, we need to attend to the fashioning of that narrative and how it functions for Fayser. In the Grisone translation, Fayser uses a strategy still employed by scholars today to justify their own productions: namely, he takes issue with the preceding scholarship. In 1566, two stable-masters, Veit Tufft and Johann Fröhlich produced the first German translation of Grisone. The problem with their translation, according to Fayser, is that the resulting German text is in-comprehensible, and the organization unfathomable. Indeed, he likens the experience of reading Tufft and Fröhlich's text to entering into an 'Aegyptischen Labyrintho' and into a 'wilden wüsten Wald'.¹² But Fayser is also at pains to make his criticism less personal, perhaps because the two stable-masters were in the employ of the wealthy and influential humanist and hippologist, Marx Fugger of Augsburg:¹³ Fayser maintains that the negative assessment of the 1566 translation is not only his but has been arrived at by general consensus; a subsequent translation was necessary anyway since Tufft and Fröhlich's edition, printed only in a very small run, had been completely sold out; and it had not been Fayser's own idea to undertake a new translation but rather the publisher had approached him with this request because the material was inherently so useful. Once he has explained the circumstances of his project, Fayser continues with some basic preliminary remarks. Like any good scholar, he methodically explains the organizing principle behind his work, carefully defines key technical vocabulary used in the

¹¹ Fayser [von Arnstain], *Roßarzney*, fol. a iii v. See also Krenig E.-G., "Johann Fayser aus Arnstein in Unterfranken", *Mainfränkisches Jahrbuch für Geschichte und Kunst* (1976) 48–54.

¹² The discussion about Tufft and Fröhlich's translation is found in Fayser [von Arnstain], "Vorrede an günstigen Leser" in Grisone, *Künstlicher Bericht*, fol. a v.

¹³ For Marx Fugger (1529–1597), see Krämer G., "Markus (Marx) Fugger", in *Welt im Umbruch* vol. II (Augsburg: 1980) 120–121. Fugger authored a book on breeding horses and maintaining a stud published in 1578, 1584, and 1611.

text, and clearly indicates other scholarship that inspires and informs his own, particularly the *Hippocomicus* by Joachim Camerarius, whom Fayser describes as ‘weiland und noch meinem festgeliebten Praeceptor’.¹⁴

The picture of Fayser that emerges thus from his 1570 introduction is of a learned, circumspect man who is eager to exercise his skills for the good of others. We are meant to know that he is educated (‘Der freyen Künst Professor’), and that he is part of an important humanist network centered around Camerarius. We are also to understand that Fayser is a modest man who does not rush in to trample upon the hard work of others for vain or selfish reasons. He indeed states that it was generally agreed that the ideal re-translation of Grisono (i.e. implicitly the very one that Fayser is offering) should display not only deeper understanding but ‘mehr [...] Beschaidenhait’.¹⁵ And finally we are to realize that Fayser, through his professional skill, will rescue this useful text from its present lingual obscurity, rendering the enlightenment it offers accessible to a German audience. That audience, however, was neither wide nor popular, but was aimed ‘in sondrem den Rittermessigen und Adelspersonen zu dienstlichen Wolgefallen’, as Fayser explicitly states in the text¹⁶ and as can be implicitly surmised by the book’s dedication to an imperial councilor from the nobility.

The impressions of Fayser that we can glimpse from the introduction to his translation of Grisono are rendered with an even firmer hand in the dedication and introduction to his *Hippiatria* [...] *Roßbarzney* from 1576. Fayser asserts his humility to the point of obsequiousness, and also uses these protestations of unworthiness as vehicles to convey additional information. For example, he writes that he had not even dared to dedicate the book to Margrave Georg Friedrich until his great friend, Joseph Hoechstetter, was finally able to persuade him that it was in fact Fayser’s duty to do so, as Fayser had evidently received support from the Margrave’s family for his studies in Frankfurt.¹⁷ Fayser pays back his debt of gratitude in spades. In the beginning of the dedication, he deftly flatters the Margrave by noting the differences between a stallion – an animal Fayser describes as powerful, beautiful, and as brave as a lion;

¹⁴ Fayser [von Arnstain], “Vorrede an günstigen Leser”, in Grisono, *Künstlicher Bericht*, fol. a vi r.

¹⁵ Fayser von [Arnstain], “Vorrede an günstigen Leser”, in Grisono, *Künstlicher Bericht*, fol. a v v.

¹⁶ Fayser [von Arnstain], “Vorrede an günstigen Leser”, in Grisono, *Künstlicher Bericht*, fol. a v v.

¹⁷ Fayser [von Arnstain], *Roßbarzney*, fol. a iii r–v.

and a gelding (a castrated male horse) – an animal that is, by contrast, timid and obstreperous. What a wonderful metaphor this is, exclaims Fayser, for the differences between a prince and his subjects.¹⁸ As one of those subjects, in perhaps the ultimate gesture of rhetorical humility, even self-debasement, Fayser metaphorically emasculates himself in this passage in order to highlight his lord's (political) potency.

As in his translation of Grisone, Fayser cites Camerarius' work as his intellectual model.¹⁹ In the introduction Fayser assures his readers that the contents of his book were not pulled out of thin air 'sondern/was von vilen weisen/verstendigen/hoch und weidt erfahrenen Mannen/von zweytausent Jarn her und lenger/mit grosser Mühe durch die Erfahrung ersucht/und in iren löblichen Schrifften an uns bracht'.²⁰ There are no spells or incantations here, no superstitious practices, just tried and true methods that have stood the test of time. However, Fayser would not be a real scholar without providing some sort of critique of these earlier sources, and, true to form, he does point out the shortcomings of some of them, mostly in terms of their lack of completeness and their awkward writing. Like any good scholar, Fayser insists that he has consulted 'ein zimliche Anzal' of these texts himself, and includes a list of sources (123; indicating only the authors' names). He also identifies the living experts who advised him, including two learned physicians and two excellent farriers employed by the house of Fugger.

Fayser methodically and clearly organizes his material. The first six books deal with diseases according to which part of the horse's body they effect (e.g. diseases of the gut, diseases of the heart and lung, etc.), the seventh book treats fevers in particular, and the final and eighth book lists natural equine by-products (e.g. sweat, manure, blood, etc.) that can be used for treating human ailments. And, like Gregor Zechendorf, Fayser implicitly defends his scholarly work by asserting the value of animal husbandry and the skill it requires. It is a good thing to keep animals that are healthy and flourishing, and it is bad when they are sickly and die. And to keep them healthy and flourishing is a 'Wissenschaft' unto itself, and one that requires particular skill, knowledge, and art. After all, a physician can simply ask his patient what ails him and he will get an answer; how much more difficult to treat a

¹⁸ Fayser [von Arnstain], *Roßarznei*, fol. a ii r–v.

¹⁹ Fayser [von Arnstain], "Beschluss", in *Roßarznei* (unpaginated).

²⁰ These and the following remarks are found in Fayser [von Arnstain], *Roßarznei*, fol. a vi r–b iv r.

mute animal. Fayser concludes: 'Folget das desselbigen Erkenntnis [der Vieharzney] löblich [ist]'.²¹

All of these scholarly texts discussed above were written by men professionally trained as either physicians or scholars. In hippological subjects, both groups found an arena to demonstrate their specialized knowledge and skill (for example, access to and translation of ancient sources). Applied to these subjects, that knowledge and skill were sure to draw the attention of elite audiences, men whose status involved owning horses, and thus also potential patrons of these professionals. The targeting of these groups is also indicated by the noble dedicatees and the claims articulated on many of the title-pages. Writing about horses thus served the scholars in at least two ways: their books could serve to advertise their abilities to potential patrons (and for a scholar who did not find employ at an ecclesiastical or secular court, or in a civic government, or by a very wealthy patron who could afford to support a scholar indefinitely, such a means of patronage procurement would be very necessary); and their familiarity with horses, even if only through the medium of earlier texts, may have served to enhance their own reputation and status as dealing with the horse was to deal with one of the fundamentals of nobility. Perhaps the broadening of the scholars' scope to include hippological topics indicates a highly competitive situation in which professionals vied with each other for respectability and remuneration, patronage and position. And perhaps, on the backs of horses, each hoped to win the race.

Horsemanship

Ist es denn auch schwer ein Roß abzurichten? Wann einer nicht recht darzu naturet und gleich von Gott darzu geschaffen von Leib und Gemüthe/so wird er schwerlich also beschaffen werden/einen grossen Herren darvor zu dienen/und Profession darvon zumachen/und solte einer eher studieren/und Doctorem promovieren können/denn er nicht so viel Eigenschafften haben muß [...].²²

Horsemanship, like scholarship, encompassed a range of activities as well as a variety of kinds of people therein engaged. Although modern-

²¹ Fayser [von Arnstain], *Roßarzney*, fol. b iv r.

²² Ernst Abraham von Dehnen Rothfelser, *Kürze doch eigentliche und gründliche Beschreibung von Abrichtung und Zäumung der Roße* [...] (Dresden: 1637) chapter 112.

day scholars of early modern Germany have not systematically studied the social and economic histories of the stable, the texts written about stable management and horse care considered in this article provide both explicit and implicit information that helps us to understand who worked with horses, in what capacity and context, and why. Horse ownership ranged from the laboring occupations, such as farmers, carters, etc. whose animals provided the physical foundation for that labor, to members of social and economic elites whose horses provided the physical manifestation of their status.²³ In this article, I am concerned only with the latter since it is this facet of horse ownership that is addressed by the primary sources in question.

The propagation, maintenance, and training of horses characteristic especially of the elite entailed a multitude of tasks and thus a multitude of people to perform them. These tasks were carried out by those ranging from the horse owners themselves; through the stable-masters, the riders/trainers, the farriers (who also functioned as modern-day veterinarians in that the farriers treated sick animals), the various craftsmen responsible for the manufacture of horse related equipment such as bit- and spur-makers, saddlers and harness makers; down to the stable hands who fed and groomed the horses and mucked out their stalls. People who dealt with horses thus came from a variety of social groups and occupational backgrounds, from the noble or wealthy owner, to men from craft backgrounds, to minimally skilled laborers.

In the second part of my article, I am primarily interested in the riders who trained the horses, especially because, like the humanists and scholars discussed in the first section, they seem to be another profession in transition. Scholars and riders were already carrying out their professions in the Middle Ages. But in the late medieval and early modern period, opportunities for both scholars and riders expanded. For scholars, new universities were founded and university curricula were expanded; the social and practical benefits of education were increasingly recognized and thus in demand.²⁴ For the rider, the number of

²³ For a rather general discussion of working horses, see Clutton-Brock J., *Horse Power: A History of the Horse and the Donkey in Human Society* (Cambridge: 1992). For the more representational functions of horses, and the articulation of that function in art, see Liedtke W., *The Royal Horse and Rider: Painting, Sculpture, and Horsemanship 1500–1800* (New York: 1989).

²⁴ As a general starting point to this vast topic, see Nauert Jr. C., *Humanism and the Culture of Renaissance Europe* (Cambridge: 1995), and Herding O. – Stupperich R. (eds.), *Die Humanisten in ihrer politischen und sozialen Umwelt* (Boppard: 1976).

people who owned and rode horses seems to have changed, and the functions that the animals served diversified. Once associated exclusively with the nobility and fundamental to its *raison d'être*, the waging of war, the riding horse in the early modern period took on the additional functions of providing recreational pleasure and the display of status for the non-nobility who had no role to play in warfare. Even the nobility, who continued to depend on horses for warfare to some extent, were also increasingly interested in the extra-belligerent opportunities horses offered them for the display of prowess and magnificence.²⁵ The wider and larger circles of people who owned horses, and the different kind of skills required in riding, together must have expanded the market for professional riders who could train the animals appropriately to their new owners and functions.

Who were these men who trained horses? The term that is used in late sixteenth- and seventeenth-century texts to designate such men is 'Bereiter' (or 'Bereuter'). Job descriptions found in some of these texts indicate, however, that the various horse-related occupations were not always clearly distinct from one another. This is especially true of both the 'Bereiter' and the 'Stallmeister' whose duties ideally often encompassed that of each other, namely the stable master (overseeing all facets of the horses' care) as well as that of the rider/trainer. Based on the information included on the title pages of their books, we know that many of these riders were members of the nobility, but certainly not all of them were; some were associated with various courts through employments, but some seem to have been more like free agents. In other words, like the scholars discussed in the first half of this article, we seem to be dealing with a diversified group of men who are all making claims in their books about their abilities to activate specialized knowledge and training for the benefit of those who also want to become professional riders and most likely to encourage business by impressing potential clients.

The inclusion of the non-nobility to the ranks of professional riders must be new. Information gleaned from their texts as well as from seventeenth-century sermons held at the funerals of horsemen indicate that riders were trained in a kind of apprenticeship system, whereby

²⁵ Watanabe-O'Kelly H., "New Horses and New Horsemanship in the Sixteenth Century", in *Triumphal Shews: Tournaments at German-speaking Courts in their European Context 1560–1730* (Berlin: 1992) 65–84; see also Tucker T.J., "Early Modern French Noble Identity and the Equestrian 'Airs above the Ground'", in Raber K. – Tucker T.J. (eds.), *The Culture of the Horse* 273–309.

they learned techniques and acquired practice under the tutelage of an established riding master.²⁶ This tutelage system seems to have been frequently carried out within the context of the court. Young members of the nobility learned to ride from older nobles who held official court positions that were also related to court and military ranks such as ‘Hofmarschall’ and ‘Rittmeister’. This system is certainly a living link to medieval hippology and the fusion between noble, horse and warfare in the Middle Ages that continued to possess relevance in the early modern period.

Nonetheless, many of the training texts address and describe riders whose social status remains unspecified or who are not of the nobility. The qualities they describe as desirable to a rider are in some cases clearly informed by the sorts of stipulations articulated for membership in the craft guilds, primarily the insistence on legitimate birth and respectable behavior.²⁷ The very fact that the distinction is blurred between noble and non-noble in terms of audience and authorship is significant because it indicates that the profession is in a state of flux. As such, the production of these training texts makes all the more sense as attempts to define who the real professionals are as the qualification is no longer simply that of noble lineage. If in fact the profession is, by necessity, opening up to non-noble riders, then one can understand the function of these texts as serving to maintain the dignity and special status of that profession, and the men who practice it, both if they are noble and if they are not. Competition then arises not only between men but also between definitions of nobility: as professionally understood, associated with expertise and ability; or, as traditionally understood, associated solely with blood and heritage.

The training texts use several strategies to underscore the great importance and nobility (in both senses) of the riding profession. First, the usefulness of the horse – and by extension, the ability to control it through appropriate training and handling – is often upheld as the very foundation of early modern life. A typical passage can be found in Ernst Abraham von Dehnen Rothfelser’s *Abrichtung und Zäumung*, dedicated to Christian IV (king of Denmark 1589–1648) and to Johann

²⁶ See for example Martin Vedemeier, *Christliche Leichtpredig Bey dem Begräbnis des [...] Georg Engelhart Löhneyß [...]* (Remlingen: 1623); Adam Streso, *Christen-Kampff Bey Bestattung der Adelichen Leich des [...] Carln von Wülcknitz [...]* (Köthen: 1624); Georg Koch, *Geistliches Cordial Vor deß weiland [...] Werner Hahns [...] nachgebliebene [...] Anworwandte [...]* (Hall: 1634). In the published sermon for Hahn, we learn that he also studied at the universities of Wittenberg and Leipzig.

²⁷ Farr J., *Artisans in Europe 1300–1914* (Cambridge: 2000) especially 20–32.

Georg the Elder (duke of Saxony 1585–1656), and published in 1637. Von Dehnen Rothfelser maintains that ‘kein edler Kleinod ist/als ein edles/gehorsames vermoegens/wohl abgerichtetes Roß/darauff Land und Leute erhalten/erwerben ritterlichen Thaten/Erhöhung seines Standes/Lob/Ehr/Rhum/Hab/Gutt erhalten werden [...]’.²⁸ In this case, the entire noble lifestyle, both its duties and its privileges, is carried out on the back of a horse. And in order for that to transpire successfully, the horse must be well trained.

But not only is training a horse absolutely crucial, it is also extremely demanding. To be a master rider/trainer requires many different skills and a wide range of knowledge, far beyond simply knowing how to ride a horse correctly. The training texts repeatedly draw similar parallels to other professions. Von Dehnen Rothfelser, who had been stable master to the ducal court of Saxony at Dresden, provides a twenty-four point list of the many different qualities and abilities that both a stable master and a rider should have.²⁹ These include possessing the knowledge of a physician (in order to cure ailing horses by accurate diagnosis and the administration of the correct remedies), a farrier (to insure that the horses are being shod properly), a saddler and a harness maker (to make sure that the horses’ tack is made and fit correctly), and even an artist (so that the rider can accurately render any type of bit that needs to be manufactured for an individual horse). Johann Misselhorn makes similar claims in his book *Bereit-Kunst*, dedicated to Georg Wilhelm (duke of Braunschweig-Lüneburg 1624–1705) in 1692 and published in that same year. As its title indicates, the book’s fourth chapter is entirely devoted to ‘Was der jenige/welcher von den Reiten Profession machen wil/wissen muß [...]’.³⁰ The rider must be like a physician in that he knows about anatomy, illnesses, herbal medicines (content, mixtures, dosages), the preparation of salves and ointments, surgical techniques, and cauterizing. He must be able to draw well, and he must also know about music in order to cue the horse appropriately while riding in ‘Roßballet’ or ‘Carouselles’ (i.e. riding particular patterns while accompanied by music).

As these texts portray it, riding is clearly far more than just sitting in the saddle and making the horse move. It requires not only physical

²⁸ Von Dehnen Rothfelser, *Abrichtung* 4.

²⁹ Von Dehnen Rothfelser, *Abrichtung* 1–3.

³⁰ Johann Misselhorn, *Die bey dem Hause Braunschweig-Lüneburg anjetzo übliche Bereit-Kunst* (Celle: 1692). Chapter 4 is 18–23.

expertise but also knowledge associated with university-trained professionals and an ability in the arts. In *Pferdt-Schatz* (Frankfurt, 1664), Pinter von der Au maintains that riding is a liberal art akin to those taught at the university by famous professors because it is grounded in fundamental theory. Riding is not just about the body and the senses but is also about the mind and the intellect.³¹ Supported by these assertions of specialized training and knowledge, many of the training texts in fact specifically refer to riding as both a science ('Wissenschaft') and as an art ('Kunst'). We have already encountered that verbiage in von Dehnen Rothfelser's fourth chapter title. Many other authors/sources make similar assertions, such as Hans Friedrich Hörwart von Hohenburg (1577), Christoph Lieb (1616), Pinter von der Au (1664), Johann Misselhorn (1692) and Georg Simon Winter (1678).³²

A particularly fascinating source in this regard is a pamphlet published in 1623 by Gabriel von Danup titled *Supplication der Pferde*.³³ The pamphlet describes a dialogue taking place on Mount Parnassus before the god Apollo. The horses have given a petition to William I Prince of Orange, described as a great friend to these animals, that he is to read to Apollo in which they beg to be treated more gently and to be ridden with more understanding and more skill. In this extraordinary passage, von Danup gives voice to the animals, presenting their perspective of current training practices in heart-breaking detail, and describing how they suffer having their mouths ripped by harsh bits, their flanks gashed by sharp spurs, and being screamed at, beaten, and worked until they can hardly stand.³⁴ The horses' petition sparks a discussion between Prince William and the famed Italian horseman, Pirr Antonio di Ferrara about the techniques and philosophy of riding.³⁵ It is decided that one way to end the horses' torture through brutal and/or incompetent riding would be for all riders to publish their own

³¹ Johann Pinter von der Au, *Vollkommener ergänzter Pferd-Schatz* (Frankfurt: 1664). The discussion about theory is found in the book's second part ("Das ander Haupt-Theil"), with the passages paraphrased here from 1–2.

³² Hans Friedrich Hörwart von Hohenburg, *Kunst der Reytrey*; Christoph Lieb, *Gebißbuch* [...] (Dresden: 1616); Pinter von der Au, *Pferdt-Schatz*; Misselhorn, *Bereit-Kunst*; and Georg Simon Winter, *Wolberittener Cavallier* [...] (Nuremberg: 1678).

³³ [Gabriel von Danup], *Ein sonderliches neues und lesewürdiges Gespräch welches gehalten ist worden* [...] wegen Übergebung einer kläglichen Supplication der Pferde [...] (Königsberg: 1623).

³⁴ Von Danup, *Supplication* 2–5.

³⁵ William I Prince of Orange (1533–1584); Pirr Antonio di Ferraro is the author of *Cavallo Frenato* (Naples: 1602).

definitions of a well trained horse and their own training methods. Everyone else would read these texts, make corrections or amendments, and slowly and collectively the correct method would emerge through consensus. Pirr Antonio, whose role in the text is clearly to play Prince William's antagonist, vehemently objects to this idea of openly sharing and publicizing such information 'weil hiedurch die Kunst und Wissenschaft zu gemein gemacht/und daher erfolgen müßte/daß die Bereitter nicht mehr so viel/wie ietzo/gelten würden'. Prince William chastises Pirr Antonio for his exclusionary and selfish reaction, saying that God punishes those who refuse to share their talents for the common good. He then makes a distinction between 'Wissenschaft' and 'Können' by drawing a parallel to the art of painting. Just because it is possible for someone to understand how a painting is made does not necessarily mean that he can actually produce one.³⁶ In fact, the 'Wissenschaft' and the 'Können' of riding are so difficult to master that out of ten people who want to become riders, only one person 'in dieser Profession passiren und bestehen wolle'.³⁷

Emphasizing the difficulty of riding is a rhetorical strategy repeatedly employed by the training texts. If von Danup reckons it was one in ten pupils who would actually make it to the level of master rider, von Dehnen Rothfelser estimates that it is more like one in forty and Misselhorn even one in a hundred!³⁸ Part of the difficulty, according to these texts, is that the rider must not only be able to activate physical and technical skills as well as have command over a large body of knowledge, he must also possess the requisite nature and character, and according to some sources, even the right physique. After all, the rider not only interacts with the horse, but also with the animal's owner. As he is to be hired to train other people's horses, he also needs to be a good employee. To these multifarious ends, the ideal rider should be friendly, moral, intelligent, virtuous, polite, patient, pious, chaste, sober, healthy, strong, jolly, fearless, merciful, quick, resolute, hard working, steady, not too tall, not too short, not too heavy, not too light. Undesirable would be someone who was reckless, vainglorious, hypocritical,

³⁶ This particular interchange between Prince William and Pirr Antonio occurs in von Danup, *Supplication* 24–26.

³⁷ Von Danup, *Supplication* 30.

³⁸ Von Dehnen Rothfelser, *Abrichtung* 100; Misselhorn, *Bereit-Kunst* 23.

moody, arrogant, proud, wilful, inexperienced, belligerent, or anyone involved with gambling and whoring.³⁹

These texts not only describe riding technique, they also define the riding profession. What is being fashioned here is a professional identity woven together from a number of different identities, including the nobility (men traditionally associated with horsemanship and members of courts), craftsmen (legitimate birth and general respectability), artists and musicians, and university-trained professionals such as physicians. Even humanist scholars provide professional models as some of these texts are quite literally at pains to toss in ancient references and foreign phrases.⁴⁰ However, according to von Dehnen Rothfelser in the opening quote of this section, it is easier to become a scholar than a horseman because, he maintains, it requires less of someone to study at the university towards a degree than to learn to be a good rider! No wonder then that in his reckoning of appropriate salaries for positions at court, the stable-master to Duke Heinrich Julius of Braunschweig-Lüneburg, Georg Engelhart von Loehneysen, recommends that the ‘Bereiter’ should receive 500 Thaler. This is five times as much as the painter, musician, and fencing and dancing masters should individually receive, and the same amount as the ‘Hoffmaister’, the court official in charge of overseeing everything.⁴¹ Because of the multifarious nature of his work and the wide range of the necessary abilities and knowledge, the rider deserves one of the top salaries. And yet, despite all the carefully articulated glamor of this profession as both implied and explicitly stated in these texts, to be a rider was, in a very real sense, to

³⁹ This list is compiled from von Dehnen Rothfelser, *Abrichtung* 1–3 and Winter, *Cavallier* 2–11.

⁴⁰ Lieb in fact pokes fun of the tendency to include antique references even when they are superfluous and exasperating: ‘mich bedüncket daß es nicht nothwendig sey zuerzehlen oder zu beschreiben/wer der Erst/oder Ander gewest/so die Pferd zu reiten und zu zeumen anfenglichen erfunden/oder was Aristoteles, Xenophon, Virgilius, Plinius and andere Scribenten davon schreiben und halten/dieweil es zu meinem Vorhaben nicht allein nicht dienlichen/sondern auch dem günstigen Leser mehr verdrießlichen als anmütig sein würde [...]’ *Gebißbuch* 1. Regarding the over zealous use of foreign phrases, Misselhorn’s text (1692), a discombobulating array of French words and expressions, is particularly egregious.

⁴¹ Heinrich Julius (1564–1613); Georg Engelhart von Loehneysen (1552–1622); see Otte M., *Geschichte des Reitens* 63–66 and Wade M.R., “Publication, Pageantry, Patronage: Georg Engelhard von Loehneys’s *Della Cavalleria* (1609; 1624) and his Hamburg Tournament Pageant for King Christian IV of Denmark (1603)”, *Daphnis* 32 (2003) 165–197; in the same volume, Bepler J., “Practical Perspectives on the Court and Role of Princes” (137–163). Georg Engelhart von Loehneysen, *Della Cavalleria* (Remlingen: 1609/1610) 10–11.

labor physically and to earn one's bread by the sweat of one's brow. In insisting that a nobleman pay his rider an excellent wage, von Dehnen Rothfeler points to the rider's work as both dangerous and difficult, concluding: 'Ein guter Reuter verdient seine Besoldung redlichen mit seinem sawren schweiß [...]'.⁴²

Conclusion

Hippological texts written in the sixteenth and seventeenth centuries offer evidence of the attempts to stabilize identity in the face of shifting professional parameters. By writing/translating texts about the care of horses, scholars and other university educated men such as physicians, demonstrated their linguistic abilities and their access (both physically and intellectually) to sources and kinds of information not immediately available to just anyone. The vehicle of this demonstration – the horse – locates the scholars' endeavors within the purview and the realm of interest of the social and economic elite. The status of the men to whom these books are dedicated, for the most part, indicate the very same thing, namely, that the authors conceived of their readership, and thus their audience for this display of professional prowess, as men of power, wealth, and influence, and perhaps also as potential patrons. A similar dynamic is at work in the case of the horsemen/authors, where the functions of horses were changing, and the kinds of people who owned and worked with them, especially well bred horses, increasingly included non-nobles. In these texts, we can see how a new professional identity is woven together out of several strands of more established ones.

In evidently responding to some anxiety or at least uncertainty about their professional identities, these scholars and horsemen also preserved (in a limited but definite way) their own personal identities. For the most part, to read these texts is to encounter men whom history has forgotten. And yet, their concerns about the proper goals and methods of their professional activities, about creating networks of clientele and patrons, about handling competition and defining appropriate behavior, all provide the historian with invaluable information about

⁴² Von Dehnen Rothfeler, *Abrihtung* 4.

mutually inflecting concepts of work and identity. The fact that these vitally important concepts are worked out in the textual fashioning of the relationship between man and horse only serves to underscore the animal's fundamental role in the history and culture of early modern Germany.

*Selective Bibliography**Sources*

- ANONYMOUS, *Ein neuwe und bewerte Roßartzney* (Strasbourg: 1583).
- CAMERARIUS JOACHIM, *Hippocomicus, quae est disputatio de curandis equis* (Leipzig: 1556).
- [VON DANUP, GABRIEL], *Ein sonderliches neues und lesewürdiges Gespräch welches gehalten ist worden für Königl. Mayt: Apolline in Parnasso Darinnen eingeführt werden: Graff Wilhelm von Nassau, Pater de Ney, und Pirr Antonio di Ferrara wegen Übergebung einer kläglichen Supplication der Pferde über ihre gar zu Tyrannische Bereiter/und einem Gerichtlichem Abschied in der Sache/daß/weil die bißhero begangene Fehler/nur allein aus mangel einer wahren definition eines wolabgerichteten Pferdes/entstanden/Ihre Königliche Mayt: allen Bereitern in Deutsch-Welsch-land und Franckreich/ernstlich aufferleget/sie sollen sich über der wahren definition und beschreibung einer recht wol abgerichteten Pferdes/und was desselbigen nothwendige requisita weren/einigen und vergleichen* (Königsberg: 1623).
- DEHNEN ROTHFELSER ERNST ABRAHAM VON, *Kurze doch eigentliche und gründliche Beschreibung von Abrichtung und Zäumung der Roße/Auch wie dieselbigen zu allerhand Schimppff und Ernst zu gebrauchen* (Dresden: 1637).
- FAYSER JOHANN [VON ARNSTAIN], *Hippiatria: Grundlicher Bericht und aller ordenlichste Beschreibung der bewerten Roßartzney* (Augsburg: 1576).
- FERRARO PIRR ANTONIO DI, *Cavallo Frenato* (Naples: 1602).
- GRISONE FREDERICO, *Künstlicher Bericht und allerzierlichste beschreibung des edlen/vhesten/umnd hochberümpften Herrn Friderici Grisonis Neapolitanischen hochlöblichen Adels: Wie die streitbarn Pferd (durch welche ritterliche Tugenden mehrersthails geübet) zum Ernst und ritterlicher Kurzweil/geschickt und vollkommen zu machen*, transl. Johann Faysler [von Arnstain] (Augsburg: 1570).
- HÖRWART VON HOHENBURG HANS FRIEDRICH, *Von der hochbehrümpften/adelichen und ritterlichen Kunst der Reyterey* (Tegernsee: 1577).
- KOCH, GEORG, *Geistliches Cordial Vor deß weiland WolEdlen/Gestrengen/Vesten und Mannhafften Herrn Werner Hahns/Auff Basedaw/Lippe und Seeburg Erb und Gesessen etc. Christlichen Andenckens nachgebliebene WolAdeliche Fraw Witbe/Kinder und Anvorwandte* (Hall: 1634).
- LIEB CHRISTOPH, *Gebißbuch oder kurzer und gründlicher Bericht/Von Gebiß und Zäumung der Pferd/sampt deroselben unterschiedlichen Würckung/auch wie dieselben nützlich und nach Gelegenheit der Pferd zu gebrauchen sein* (Dresden: 1616).
- LOEHNEUSEN GEORG ENGELHART VON, *Della Cavalleria* (Remlingen: 1609/1610).
- MISSELHORN, JOHANN, *Die bey dem Hause Braunschweig-Lüneburg anjetzo übliche Bereit-Kunst* (Celle: 1692).
- PINTER VON DER AU, JOHANN, *Vollkommener ergänzter Pferd-Schatz* (Frankfurt, a.M.: 1664).
- [RUELLIUS, JOHANNES], *Zwey nußliche sehr gute Bücher von allerley gebrechen und krankheiten/damit die Roße/Maulesel/und andere vierfüßige Thier/welche etwas schwer tragen/oder ziehen/geplaget/darinnen eigentlich beschrieben*, transl. Gregor Zechendorf (Nuremberg: 1571).
- RUINI CARLO, *Anatomia et medicina equorum nova. Das ist neuwes Roßbuch oder von der Pferden Anatomy/Natur/Cur/Pflegung umnd Heylung*, transl. Peter Offenbach (Frankfurt: 1603).
- STRESO ADAM, *Christen-Kampff Bey Bestattung der Adelichen Leich des Eledlen/Gestrengen und Ehrvesten Junckern/Carl von Wülcknitz/Fürstl. Anhalt. Stallmeisters zu Coethen* (Köthen: 1624).
- VEDEMEIER MARTIN, *Christliche Leichpredig Bey dem Begräbnis des weiland Woledlen/Gestrengen/Vesten und Mannhafften Georg Engelhart Löhneyß Fürstl. Braunsch. alten Stallmeisters und Bergkauptmanns* (Remlingen: 1623).
- WINTER, GEORG SIMON, *Wölberittener Cavallier: Oder gründliche Anweisung zu der Reit- und Zaum-Kunst/In zwey Theile abgefasst* (Nuremberg: 1678).
- XENOPHON, *Xenophontis liber de re equestri Latinus factus*, transl. Joachim Camerarius (Leipzig: 1539).

Scholarly Literature

- BEPLER J., "Practical Perspectives on the Court and Role of Princes: Georg Engelhard von Loehneys's *Aulico Politica* 1622–24 and Christian IV of Denmark's *Königlicher Wecker* 1620", *Daphnis* 32 (2003) 137–163.
- CLUTTON-BROCK J., *Horse Power: A History of the Horse and the Donkey in Human Society* (Cambridge: 1992).
- CUNEO P.F., "Beauty and the Beast: Art and Science in Early Modern European Equine Imagery", *Journal of Early Modern History* 4 (2000) 269–321.
- , "Just a Bit of Control: The Historical Significance of Sixteenth- and Seventeenth-Century German Bit-Books", in Raber K. – Tucker T.J. (eds.), *The Culture of the Horse* 141–173.
- , "Mad Mares and Wilful Women: Ways of Knowing Nature – and Gender – in Early Modern Hippological Texts", in Lindemann M. (ed.), *Ways of Knowing: Ten Interdisciplinary Essays* (Boston-Leiden: 2004) 1–21.
- DAVIS R.H.C., *The Medieval Warhorse* (London: 1989).
- VON DEN DRIESCH A., *Geschichte der Tiermedizin: 5000 Jahre Tierheilkunde* (Munich: 1989).
- FARR J., *Artisans in Europe 1300–1914* (Cambridge: 2000).
- HERDING O. – STUPPERICH R. (eds.), *Die Humanisten in ihrer politischen und sozialen Umwelt* (Boppard: 1976).
- HYLAND A., *The Warhorse 1250–1600* (Thrupp: 1998).
- KRÄMER G., „Markus (Marx) Fugger“, in *Welt im Umbruch* vol. 2 (Augsburg: 1980) 120–21.
- KRENIG E.-G., "Johann Fayser aus Arnstein in Unterfranken", *Mainfränkisches Jahrbuch für Geschichte und Kunst* 1976 48–54.
- LIEDTKE W., *The Royal Horse and Rider: Painting, Sculpture, and Horsemanship 1500–1800* (New York: 1989).
- MCCLURE G.W., *The Culture of Profession in Late Renaissance Italy* (Toronto: 2004).
- NAUERT C. JR., *Humanism and the Culture of Renaissance Europe* (Cambridge: 1995).
- OTTE M., *Geschichte des Reitens von der Antike bis zur Neuzeit* (Warendorf: 1994).
- RABER K. – TUCKER T.J. (eds.), *The Culture of the Horse: Status, Discipline and Identity in the Early Modern World* (New York: 2005).
- SMITH F., *The Early History of Veterinary Literature*, vol. 1 (London: 1976).
- TUCKER T.J., "Early Modern French Noble Identity and the Equestrian 'Airs above the Ground'", in Raber K. – Tucker T.J. (eds.), *The Culture of the Horse* 273–309.
- WADE M.R., "Publication, Pageantry, Patronage: Georg Engelhard von Loehneys's *Della Cavalleria* (1609; 1624) and his Hamburg Tournament Pageant for King Christian IV of Denmark (1603)", *Daphnis* 32 (2003) 165–197.
- WATANABE-O'KELLY H., "New Horses and New Horsemanship in the Sixteenth Century", in *Triumphal Shows: Tournaments at German-speaking Courts in their European Context 1560–1730* (Berlin: 1992) 65–84.

‘A REMEDY FOR HIS BEAST’: POPULAR VETERINARY TEXTS IN EARLY MODERN ENGLAND

Louise Hill Curth

When references are made to early modern veterinary care in England, they generally consist of commonplaces based on the portrayal of animals as being treated by ignorant, one-dimensional and even dangerous quacks.¹ According to a number of modern historians, before the foundation of the first English Veterinary College in 1792, the ‘most fortunate sick animals’ in early modern England were those ‘left untreated’.²

There are serious flaws in such thinking, the first being that simple common sense dictates that societies where animals play such a major role must have a system for protecting their health for economic reasons.³ Secondly, that they ignore the existence of moral arguments about the care of animals. It may be that the reason for such commonplaces is that many historians still apply out-dated research methods based on the ‘medical discoveries and elite practitioners’ approach of the early twentieth century. For human medicine, this resulted in a focus on the credulity and eccentric behaviour of early modern practitioners versus that of the educated, scientific ‘medical man’.⁴ Although historians of

¹ Dunlop R. – Williams D., *Veterinary Medicine: An Illustrated History* (London: 1996) 266; Karasszon D., *A Concise History of Veterinary Medicine*, trans. Farkas E. (Budapest: 1988) 270; Pattison J., *The British Veterinary Profession 1791–1948* (London: 1984) 2.

² Cotchin E., *The Royal Veterinary College: A Bicentenary History* (Buckingham: 1990) 13; Pattison, *The British Veterinary Profession* 1 and Pugh L., “From Farriery to Veterinary Medicine”, *Veterinary History* 75 (1975) 11.

³ Schwabe C.W., *Veterinary Medicine and Human Health* (Baltimore: 1984); Thomas K., *Man and the Natural World: Changing Attitudes in England 1500–1800* (London: 1983) and Fudge E., *Perceiving Animals: Humans and Beasts in Early Modern England* (Cambridge: 2000).

⁴ Wear A., “Religious Beliefs and Medicine in Early Modern England” in Marland H. – Pelling M. (eds.), *The Task of Healing: Medicine, Religion and Gender in England and the Netherlands 1450–1800* (Rotterdam: 1996) 145 and Pelling M., “Trade or Profession? Medical Practice in Early Modern England” in *The Common Lot: Sickness, Medical Occupations and the Urban Poor in Early Modern England* (London: 1998) 232.

human medicine have long since abandoned such ideas in favour of an exploration of socio-cultural dimensions, such themes are still evident in modern works on animal health care.⁵

The strongest evidence of the presence of a system of health care for early modern animals, however, lies in the wealth of contemporary, English language texts on the subject. There were two main categories of such publications, actual books and ephemeral literature such as almanacs. This essay will discuss the various types of popular veterinary literature available in order to illustrate the existence of an organized, easily accessible structure of animal health care in early modern England.

Popular veterinary literature

Medical advice, in the form of preventative and remedial health care, appeared in various types of publications in early modern England. They ranged from erudite volumes in Latin and Greek aimed at a professional readership through 'popular' (i.e. written in the vernacular) books and pamphlets written for a broader audience. Until the early seventeenth century, the majority of printed medical works were in Latin.⁶ This would have made them accessible to a small part of the population, mainly men who were university educated. The primary audience for Latin medical books were members of the College of Physicians whose classical education would have included Latin, and sometimes Greek. Their *Statuta Moralia* of 1647 stipulated that all admission exams were to remain in Latin, as was all bedside conversation between physicians.⁷ Presumably this was thought to be an important component of the consultation ritual, and contributed to the mystique of such an event.

⁵ Karasszon D., *A Concise History of Veterinary Medicine* 280 and Porter R., "Civilisation and Disease: Medical Ideology in the Enlightenment" in Black J. – Gregory J. (eds.), *Culture, Politics and Society in Britain 1660–1800* (Manchester: 1991) 155.

⁶ Henry J., "The Matter of Souls: Medical Theory and Theology in Seventeenth-Century England", in French R.K. – Wear A. (eds.), *The Medical Revolution of the Seventeenth-Century* (Cambridge: 1989) 93.

⁷ Axtell J.L., "Education and Status" 150.

Such works were joined by an increasing number of texts translated into English.⁸ These titles covered a broad range of topics, from treatises on health regimes to specialist discourses on 'new experiments' on the benefits of coffee and tobacco. Even larger numbers of general medical handbooks were produced for those of 'the meanest capacities' who wished to avoid paying a 'Doctor or Physitian'.⁹ Some of these books were 'all Translated out of the best Latin Editions, into English' while others were written in English so 'that every one may understand them'.¹⁰ William Rondelet explained that instead of paying a 'Doctor or Physitian', the reader could purchase his 'short Books [which] tells what other may be administered instead'.¹¹ When Nicholas Culpeper translated the pharmacopoeia into English in 1649, he wrote that he did this to enable the public to acquire commonly used medicines, without having to pay a physician.¹²

Although there was a hierarchy of medical practitioners who specialised in animals, their art did not require a university education or knowledge of Latin or Greek. While Lise Wilkinson has suggested that farriers and leeches 'were for the most part illiterate', Joan Lane has argued that prospective apprentices were required to be able to read and write.¹³ Although Lane was referring to the mid eighteenth century, there is no obvious reason for why this should not have also held true for the previous century. Furthermore, the presence of large numbers of veterinary texts, reproduced in many editions, suggests that they had a substantial audience.

⁸ Jones P.M., "Medicine and Science", in Hellinga L. – Trapp J.B. (eds.), *The Cambridge History of the Book in Britain*, vol. III (1450–1557) (Cambridge: 1999) 434.

⁹ William Rumsey, *Organic salutis: An instrument to cleanse the stomach* (London: 1659) fol. A1r; Thomas Tryon, *The Way to Health, Long Life and Happiness: or, A Discourse of Happiness* (London: 1697) fol. A1r and Guillaume Rondelet, *The Countrey-mans apothecary* (London: 1649) fol. A1v.

¹⁰ William Salmon, *Medicina Practica: or, Practical Physick* (London: 1692) fol. A1r and Massaria A., *De morbis foemineis, the womans counsellour* (London: 1657) fol. A2v.

¹¹ Guillaume Rondelet, *The Countrey-mans apothecary* fol. A1v.

¹² Nagy D.E., *Popular Medicine in Seventeenth-Century England* (Bowling Green: 1988) 25–26.

¹³ Wilkinson L., *Animals and Disease: An Introduction into the History of Comparative Medicine* (Cambridge: 1992) 10 and Lane J., "Farriers in Georgian England", in Mitchell A. (ed.), *History of the Healing Professions*, vol. III (Cambridge: 1993) (99–117) 100.

While Paul Slack once suggested that such works study of such works were ‘not a major factor in provision of medical knowledge and treatment’, few modern historians of popular or ‘vernacular’ medical books (i.e. those written in the native tongue) would agree with Professor Slack’s sentiments. Recent works, which focus mainly on printed books, suggest that the print culture had a major impact on contemporary medical beliefs and practices in every strata of early modern English society.¹⁴

Many early modern medical books carried information and advice on both human and animal medicine. There were many other types of less-obvious printed works which contained material on animal health care. These include a number of books with non-medical titles such as *The Widdowes Treasure* which included medical, cookery and veterinary information or *The Dukes Desk Newly Broken Up* which offered ‘rare receipts’ ‘good for all men, women and children together with several Medicines to prevent and cure most Pestilent Diseases in any Cattle’.¹⁵ Veterinary advice was frequently found in books which initially appear to focus exclusively on human medicine such as *The poor-mans physician and chyrgion* which provided advice such as how to ‘heal a broken bone in man or beast’.¹⁶

Although there has been a growing interest in early modern vernacular medical literature, little academic attention has been paid to

¹⁴ Slack P., “Mirrors of Health and Treasures of Poor Men: the Uses of the Vernacular Medical Literature in Tudor England”, in Webster C. (ed.), *Health, Medicine and Mortality in the 16th Century* (Cambridge: 1979) 237–274; Voigts L.E., “Scientific and Medical Books”, in Griffiths J. – Pearsall D.A. (eds.), *Book production and publishing in Britain 1375–1475* (Cambridge: 1989) 345–402; Fissell M., “Readers, Texts, and Contexts: Vernacular medical works in early Modern England”, in Porter R. (ed.), *The Popularization of Medicine 1650–1850* (London: 1992); Isaac P., “Pills and Print”, in Harris R. – Myers M. (eds.) *Medicine, Mortality and the Book Trade* (Folkestone, Kent: 1998) 25–49; Jones, “Medicine and science” 433–449; Wear A., *Knowledge and Practice in English Medicine, 1550–1680* (Cambridge: 2000) esp. 40–45; Furdell E.L., *Publishing and Medicine in Early Modern England* (Rochester: 2002); Johns A., “Science and the Book”, in Barnard J. – McKenzie D.F.M. (eds.), *The Cambridge History of the Book*, vol. IV (1557–1695) (Cambridge: 2002) 274–303 and Keiser G.R., “Two Medieval Plague Treatises and Their Afterlife in Early Modern England”, *Journal of the History of Medicine and Allied Sciences* 58 (2003) 292–324.

¹⁵ John Partridge, *The widdowes treasure* (London: 1631) and William Lovell, *The Dukes desk newly broken up* (London: 1661) 1. ‘Cattle’ was a generic term for what we would now refer to as working animals, broken down into ‘Greater cattle’ such as horses, oxen and cows or ‘lesser cattle’ including sheep, pigs, goats and fowl.

¹⁶ Lancelot Coelson, *The poor-mans physician and chyrgion* (London: 1656) 53.

sixteenth and seventeenth century English language texts either on veterinary medicine or with a broader coverage of animal husbandry. The most comprehensive study was carried out in the early part of the twentieth century by Sir Frederick Smith. Based on a series of articles published in the *Journal of Comparative Pathology and Therapeutics* between 1912 and 1918, Smith aimed to 'trace the history of veterinary literature from the earliest known times down to the middle of the nineteenth century'. In fact, Smith illustrated the keenest interest in early printed works, claiming that there were some fifty European authors producing such works at the beginning of the 16th century, with the greatest number writing about horses.¹⁷

Smith claims that the first veterinary title attributed to an English author was Walter de Henley's *The Boke of Husbandrie* which first appeared in print in 1503 and subsequently in a number of editions credited to John Fitzherbert. The first version, however, was a short, fairly generalized text on farm-related topics. What little advice it contained on animal care was quite elementary such as that 'plough bestes' should be given enough food to allow them to 'sustene theyr labour' or that 'theyr stable be made cleane every day'.¹⁸ Later, greatly expanded versions of *The Boke of Husbandry* attributed to John Fitzherbert contained a wide range of advice on health care. Although he apologises for not having the space 'to shew medicines & remedies' for all 'diseases and sorances', the text does address a number of illness in horses, sheep and other cattle.¹⁹

As with most other authors, Fitzherbert used the term 'cattle' in a generic sense to refer to most working animals. This term was thought to have originated from the Latin 'capitale', (i.e. capital in the sense of property) which evolved into the Middle English and Old Northern French 'catel'.²⁰ Working animals, however, were often further delineated into categories of 'greater' or 'lesser' cattle. The first type often included 'the horse, ox, cow, &c', while the latter referred to 'lesser sort of Beastes, as Sheepe, Swine, and Goates: and of Fowles, Geese,

¹⁷ Smith F, *The Early History of Veterinary Literature and its Development*, vol. I (London: 1919; reprint 1976) 1.

¹⁸ Walter de Henley, *The Boke of Husbandrie* (London: 1503) fol. 8v and 9r.

¹⁹ John Fitzherbert, *The Boke of Husbandry* (London: 1533) fol. F1r.

²⁰ William Poole, *The Country Farrier* (London: 1652) fol. A1r and Mason I.L., *Evolution of Domesticated Animals* (London: 1984) 6.

Peacocks, Duckes, Pigiens, Hennes, Chickins and other poultrie [...] deer, conies [i.e. rabbits]' and other 'smaller creatures'. One of the few working animals which were not regarded as cattle was the dog, regardless of the type of jobs it carried out. Animals regarded solely as pets, such as singing birds, were also excluded from the category of cattle.²¹

Horses, as the premier members of working animals, were the primary focus of most texts on animal health care. Even a superficial survey of early modern veterinary texts shows a predominance of medical advice for 'the most necessary and useful Creature to Man, in Peace and War'.²² A large proportion of such books focused exclusively on horses, the elite of working animals. In many cases, this is readily apparent from the use of 'farrier' in the title which originated from the Latin 'ferrarius' referring to 'ferrum' or horseshoe. This later became shortened in Old French, to 'ferrier' which originally referred to 'a trade conversant in the working of iron'. By the sixteenth century, however, blacksmiths worked with iron and made horseshoes, while it was farriers who fitted them and provided medical care.²³

In early modern England there were two main groups of men who referred to themselves as 'farriers'. The first were members of the Company of Farriers a guild begun in 1356 founded in response to the:

Many trespasses and grete damages were done to folk of court and to the commonalitie of the same Citie by folk unwyse which holde forges in the said Citie, and theym medill with Cures and marchaleyes (marshalls) which they cannot bring to good ende.²⁴

The Company of Farriers was an elite institution with relatively few members with the legal right to monopolize their trade in London and within a seven-mile radius.²⁵ In turn, they were subject to a number

²¹ C.H., B.C., C.M., *The Perfect Husbandman* (London: 1657) 211 and 293 and Lilly W., *Anglicus: Peace or no Peace* (London: 1645) 27.

²² A.S., *The Gentleman's Compleat Jockey* (London: 1697) fol. A2r.

²³ Bell F. R., "The Days of the Farriers", *Veterinary History* 9 (1977) 3–6; Anonymus, *A Brief Examination of the Views of the Veterinary College* (London: 1795) 3; Adams A., *The History of the Worshipful Company of Blacksmiths* (London: 1951) 34 and Prince L., *The Farrier and His Craft. The History of the Worshipful Company of Farriers* (London: 1980) 3.

²⁴ Guildhall Library, MS. 2890, Ordinance Book, seventeenth century 29.

²⁵ Guildhall Library, MS. 5534, 2–4 and Prince, *The Farrier and His Craft* 1–2.

of rules and regulations concerning their practice both as apprentices and as masters. As farriery tended to be a family based trade, many prospective members, particularly by the Georgian period, served their apprenticeship under the supervision of a relative.²⁶ Edward Snape, for example, was farrier to George III. His ancestor Andrew Snape was also a royal farrier for Charles II and claimed that his family had served the Crown in that capacity for some two hundred years. Robert, Richard and another Andrew Snape were also seventeenth-century members of the Farriers Company.²⁷

Although members of the Company of Farriers were at the top of the animal practitioner hierarchy, they were not the only men to treat horses. The second major category included 'horse-doctors' that often used the title of farrier or horseleech.²⁸ Such men far outnumbered the membership of the Company of Farriers, and were the dominant healers in the countryside. Although such practitioners were unregulated, it is likely that most learned their trade as apprentices, in the same way as did the members of the Company of Farriers. In addition, their continuing presence suggests that many were at least perceived to be satisfactory sources of health care.

Although this sort of prescriptive advice does not necessarily translate into action, this quote suggests that the treatments administered by horseleeches paralleled those offered by farriers. The same phenomenon was visible in human healthcare, whereby 'professional' practitioners offered the same types of services as the 'popular' healers. The difference, presumably, is that the former did not have either the prerequisites or the desire necessary to join the Company of Farriers. Even so, because of the similarities of their work, horseleeches were more than entitled to refer to themselves as 'common farriers'.²⁹

²⁶ Lane, "Farriers in Georgian England".

²⁷ Edward Snape, *Snape's Practical Treatise on Farriery* [...]. (London: 1791) fol. A4r; A. Snape, *The anatomy of a horse* (London: 1683) fol. A3r and Guildhall Library, MS. 5534, fol. 2.

²⁸ Merrick W., *The Classical Farrier* (London: 1788) iv.

²⁹ Nagy, *Popular Medicine in Seventeenth-Century England* 3 and Hall S.A., "The State of the Art of Farriery in 1791", *Veterinary History* 7 (1992) 10–11.

In England, the most prolific contemporary writer about health care for horses was Gervase Markham. *Markhams Methode, or Epitome*, for example, promised remedies for ‘all diseases whatsoever incident to Horses [...] almost 300. All cured with twelve medicines only’. It also contained advice on how to rid cattle of diseases with seven medicines, sheep with six medicines and dogs with only three medicines.³⁰

These works continued to sell long after his (unpublicised) death in 1637. In the 1676 version of one of his books, the introduction states that ‘[I] have now found out the infallible way of curing all diseases in Cattle’.³¹ In fact, it is highly unlikely whether Markham, dead or alive, had any specialist knowledge of animals whatsoever. Although he claimed to have been a veterinary practitioner for fifty years, there is no evidence to support this. The author of *The Treatise of Horses*, John Lawrence, wrote in 1810 that Markham was ‘nothing better than a mere vulgar and illiterate compiler’.³² Lawrence’s comment, however, says more about Victorian attitudes than about the period when produced his works. By contemporary standards, gathering material from other sources and reproducing them in a ‘new’ work was a common and accepted practice. In fact, there was a long tradition for this method as illustrated by the writer Vegetius, who lived in the fifth century AD. Sometimes called ‘the father of veterinary medicine’, he produced a treatise that was published well into the early modern period. However, even Vegetius drew heavily on contributions made by Apsyrtus and Pelagonius in the tenth-century *Hippiatrika*.³³ *Markham’s Master-piece Revived*, included a list of the authors ‘from whom any thing in this Work is Collected, being the best Farriers’:

Xenophon, Rusticus, Vegetius, Pelagoribus, Cameraius, Apollonius, Gresson, Grilli, Horatio, Gloria de Caballi, Stevens, Wickerus, La Brove, Martin senior, Albiterio, Vinet, Clifford, Mascall, Markham. These are Private. Martin junior, Webb, Dallidown senior, Dallidown junior, Ash

³⁰ Gervase Markham, *Markham’s Faithfull Farrier* (London: 1638) and idem, *Markhams Methode, or Epitome* (London: 1616) fol. A1r and pages 30, 39 and 57.

³¹ Gervase Markham, *A Way to Get Wealth* (London: 1661) fol. A1r.

³² Smithcors F., *Veterinary* 193.

³³ Wilkinson, *Animals and Disease* 10–14.

bourne, Stanley, Smith, Dowsing, Day, Barns, Mayfield, Lupan, Goodson, Parfray, White.³⁴

Markham was also known to have copied from the work of the broadly educated squire and writer Thomas Blundeville.³⁵ Blundeville's first, and probably best known book, *A new booke containing the arte of rydinge and breakinge greate horses* first appeared in 1560. In fact, it was not an original work, but simply a translation of a book written by his contemporary, the Italian gentleman, Frederick Grisone from the famous 'Naples School' of hippiatry, or 'marescalcia'.³⁶ This method of collecting information was rigorously denied by three other English seventeenth century 'pre-veterinary' writers. Thomas Grymes, for example, claimed that he only wrote about 'what is of my owne experience and practice, and whereof I have had good profile'.³⁷ Thomas De Grey portrayed himself as a knowledgeable gentleman farmer who was interested in breeding horses. His book *The Compleat Horse-man and Expert Ferrier* claimed to offer 'a formall Examen of the office of the Ferrier'.³⁸ A third writer condemned many popular books as being 'meere Collections out of others, and not their owne practice'.³⁹ Ironically, all of these writers offered little more than a reworking of the material in Markham's books.⁴⁰

Markham also wrote a number of books on health care for other 'beasts of burden' which were called *veterena* in Latin, which became the root of *Veterinär* in German, or veterinary in English.⁴¹ These included *Cheape and Good Husbandry* 'for the well-ordering of all Beasts and Fowles and for the generall Cure of their Diseases'.⁴² Other titles,

³⁴ Gervase Markham, *Markham's Master-piece Revived* (London: 1681) fol. A3r.

³⁵ Dunlop R. – Williams D., *Veterinary History. An Illustrated History* (London: 1996) 266.

³⁶ Smith, *The Early History of Veterinary Literature*, vol. I 138–140 and Karasszon, *A Concise History of Veterinary Medicine* 221–226.

³⁷ Thomas Grymes, *The Honest and Plaine-dealing Farrier or a Present Remedy for curing Diseases and Hurts in Horses* (London: 1636) fol. A2r.

³⁸ Thomas de Grey, *The Compleat Horse-man and Expert Farrier* (London: 1651) 61.

³⁹ Barrett R., *The Perfect and Experienced Farrier* (London: 1660) fol. A2r.

⁴⁰ Smith, *The Early History of Veterinary Literature*, vol. I 299, 303 and 321.

⁴¹ Baranski A., *Geschichte der Thierzucht und Thermedizin* (Vienna: 1886) 17.

⁴² Gervase Markham, *Cheape and Good Husbandry* (London: 1616) fol. A1r.

which often appeared to be simply a reworking of the same material, promised to contain advice on health care for all animals 'fit to the service of man'.⁴³

Such books appear to have been written to appeal to both professional and lay-healers. Although there were no professional organizations for healers specializing in 'cattle', there appear to have been a large number of 'leeches', such as 'ox-leeches', 'cattle-leeches' or the very lowliest 'cow-leeches'. Depending on their speciality, they might treat the 'oxe, bull, cowe, or calfe' who were 'beasts naturally of a slow and heavie disposition, yet fit for draught'. Other leeches might treat sheep which were 'weak and tender' animals.⁴⁴ The term 'leech' was also used by practitioners who treated other types of animals. These included 'ox-leeches', 'cattle-leeches' or the very lowliest 'cow-leeches' who might also refer to themselves as a 'cow-doctor'. According to contemporary authors, such men were in high demand, and were often asked to travel great distances to see patients.⁴⁵ Unfortunately, little direct evidence of their daily practices has survived. Gregory King estimated that in 1696 there were four and a half million oxen of all ages living in England and Wales.⁴⁶ It is not known how accurate this figure was, but it does illustrate the fact that there were vast amounts of animals requiring medical care in both town and country.

Animal healers often combined medicine with other farming tasks. The 'cowleech' John Clark of Terling, for example, also worked as an agricultural labourer.⁴⁷ The accounts of the Reverend John Crankthorp include a number of payments to another cowleech Marmaduke Feaks for treating both his red and his black cows.⁴⁸ While many of

⁴³ Gervase Markham, *A Way to Get Wealth* (London: 1648) fol. A1r.

⁴⁴ Swabe, *The Burden of Beasts* 71 and Gervase Markham, *Markhams Methode* 1-2; 50; 30.

⁴⁵ Swabe, *The Burden of Beasts* 71; Gervase Markham, *Markhams Methode* 1-2; 50; 30 and Swaine J., *Every Farmer his own Cattle-Doctor* (London: 1786) 1.

⁴⁶ Whitworth C. (ed.), *The political and commercial works of Charles D'Avenant*, vol. II (London: 1771) 219.

⁴⁷ Wrightson K. - Levine D., *Poverty and Piety in an English Village, Terling 1525-1700* (London: 1979) 23.

⁴⁸ Brassley P. - Lambert A. - Saunders P. (eds.), *Accounts of the Reverend John Crankthorp of Fowlmere 1682-1710* (Cambridge: 1988) 178-179 and 214.

these practitioners were likely to have been illiterate, there were a large number of texts addressed to such an audience.⁴⁹

As one eighteenth century writer aptly noted, 'Experience is the only probable means of success in any individual'.⁵⁰ Experience was not, of course, the sole preserve of professional animal healers. In many cases, the first or only administrator of medical assistance would be laypeople such as husbandmen, small farmers, shepherds or herdsmen.⁵¹ As one contemporary author pointed out, it was important to know how to 'apply [medicines] to himselfe, whereas neither Physician nor Apothecarie can bee had'.⁵² The same considerations often held true in the case of sick animals, as well, particularly for those 'that doth live farre remote from Farriers help'.⁵³ Even if a farrier or leech was available, many people choose to forego their assistance.

While men generally tended to the health of larger cattle, women were often in charge of taking care of fowl and other small animals. It seems likely that many of the raw ingredients for preventative and remedial treatments were either grown or produced within the home.⁵⁴ Preventative medicine lay at the core of early modern medicine with contemporary writers regularly reminding reader that it was important 'to keep illness at bay rather than to drive it out'. The recommended way to do this was to have a healthy daily regime based on the Galenic non-naturals of air, motion and rest, sleep and waking, diet, evacuation and retention and the passions. However, although the way in which these factors could be manipulated in terms of human health has been widely addressed, there are no comparable discussions of their relationship with animals.

⁴⁹ See, for example, William Poole, *The Country Farrier* (London: 1652) fol. A1r; Leonard Mascall, *The Government of Cattell* (London: 1662) 97 and Harvard M., *The Herds-man's Mate: or a guide for Herds-men* (Dublin: 1673) fol. A1v.

⁵⁰ Edward Snape, *Snape's Practical Treatise* 1.

⁵¹ Trow-Smith R., *A History of British Livestock Husbandry to 1700* (London: 1957) 240.

⁵² Wood O., *An Alphabetical Book of Physicall Secrets* (London: 1639) fol. A2v.

⁵³ William Poole, *Country Farrier*, introduction.

⁵⁴ Simonton D., *A History of European Womens Work 1700 to the Present* (London: 1998) 20.

Animals were greatly affected by the first non-natural of 'air' or the state of the weather. Excessively wet years were especially feared because of the resulting spread of sheep rot, a devastating illness in sheep believed to have affected eleven million animals in England in 1695.⁵⁵ Unusually hot years could result in droughts which thought to lead to 'many vulgar diseases' and 'destruction of lesser Cattel', as well as food shortages.⁵⁶ The non-naturals of motion and rest, sleep and waking and diet were also important features of a preventative health regime for animals. For example, readers were regularly advised not to over-work their animals and to provide them with a dry, secure place to sleep which acted as 'a medicine to that weariness, as a repairer of that decay' that resulted from hard labour.⁵⁷ The consequences of over-work with insufficient time to rest would cause a 'weakness or poorness of body' which would eventually result in 'some disease or the other'.⁵⁸

As with human health care, 'moderation' was always the keynote, as illness was thought to directly follow excessive consumption of any form of nourishment. Gervase Markham declared that 'diet is as important for animals as humans for prevention of illness'.⁵⁹ Many texts discussed the correct diet for different animals in great detail at different times of the year. Winter-feeding was a much more expensive proposition that required clean, dry storage for large quantities of feed. One husbandman calculated that his 240 sheep would require at least twelve loads of straw and twelve of hay to survive until the springtime.⁶⁰ Owners were advised to use caution when re-introducing their animals to fresh grass after a winter of such 'hard and dry meat'.⁶¹

The fifth non-natural of evacuation was based on periodical treatments to purge the body whether by bleeding or other types of evacua-

⁵⁵ Chartres J.A., *Internal Trade in England 1500–1700* (London: 1977) 22.

⁵⁶ W. Lilly, *Merlini Anglici Ephemeris* (London: 1667) fol. A7v.

⁵⁷ R. Allestree, *The Whole Duty of Man Necessary for all Families* (London: 1690) 203.

⁵⁸ W. Dade, *The Country-man's Kalender* (London: 1684) fol. B3r.

⁵⁹ Gervase Markham, *A Way to Get Wealth* 41.

⁶⁰ Loder R., *Robert Loder's Farm Accounts* (London: 1936) xxii.

⁶¹ Dade, *The Country-man's Kalender* fol. B4v.

tion 'to preserve and keep their health'.⁶² There was some disagreement amongst writers, however, as to how often blood should be let or at what times of year.⁶³ Many texts simply recommended herbal purges, such as senna in white wine, which could be safely used at any time of the year.⁶⁴ Another form of 'evacuations' could be said to fall within the fifth and sixth non-naturals. While there was little that could be done about unhappy or animals that were emotionally out of sorts, it was possible to meddle with their sexual activities. Several almanacs included information on how to manipulate or encourage the mating of sheep to produce either 'she lambs' or 'he lambs'. If the ram could be made to 'coverth ye Ew [when] the wind blow out of the south', it would result in female offspring and male offspring if intercourse took place when 'it blow out of the north'.⁶⁵ It was suggested that ewes that could be urged to 'drink [water] more freely' would conceive sooner than those who did not. Dove repeatedly suggested that the best way to do this was to 'give them salt to eat'.⁶⁶ In one sense, the most dramatic and permanent way of controlling this activity was also a form of preventative health care. This refers to castration, which many believed made for a healthier animal with more nutritious and tasty meat as well as making the creatures easier to handle, and prevented them from pursuing sexual activity.⁶⁷ A gelded calf, for example, would grow to 'be the higher, and the longer of body, and the longer horned' than an untreated one.⁶⁸

Despite the presence of advice on preventative measures, and owners attempt to protect the health of their charges, most animals eventually

⁶² Anonymus, *A Treatise of Oxen, Sheep, Hogs and Dogs* (London: 1683) 7 and Crowl T.E., "Bloodletting in Veterinary Medicine", *Veterinary Heritage* 1 (1996) 15.

⁶³ L.W.C., *The English Farrier, or, Country-mans treasure* (London: 1639) fol. A4v; Thomas de Grey, *The Compleat Horse-man and Expert Farrier* (London: 1651) 61 and Anonymus, *The Experienced Jockey, Compleat Horseman or Gentlemans Delight* (London: 1684) 142.

⁶⁴ J. Halfpenny, *The Gentleman's jockey and approved farrier* (London: 1683) 92.

⁶⁵ Gervase Markham, *Almanac*, 1657, fol. B3r.

⁶⁶ Dove, 1654, 1663, 1669, fol. C4r and 1657, 1659, 1666, 1667 fol. C6r.

⁶⁷ Thomas, *Man and the Natural World* 93.

⁶⁸ J.B., *The Epitome of the Art of Husbandry* (London: 1670) 87.

succumbed to illness. Many popular veterinary texts provided recipes for two main types of remedial medicines, those consisting of ‘simples’ and more complex remedies that contained a number of different ingredients.⁶⁹ As the name suggests, the former were composed of one, single ingredient suitable for treating a range of related illnesses. In most cases these were herbs whose leaves, stalk, fruits or roots could be used in a variety of ways, although the term could also refer to other ingredients.

There were a number of extremely popular ‘herbals’ or books on the nature and virtues of plants available in the sixteenth and seventeenth centuries. Although John Gerard’s *The herbal or Generall historie of plants* was first printed in Latin in 1596, it appeared a year later in English. As a ‘Master in Chirurgerie’, Gerard stressed the importance of plants as providing both food and medicine to mankind. In the 1633 version, which was enlarged by the apothecary Thomas Johnson, the preface expanded on this by adding that plants ‘bestowed almost all food, clothing and medicine upon man’.⁷⁰ John Parkinson’s herbal, the *Theatrum Botanicum* first appeared in print in 1640. Parkinson promised readers that his work not only contained traditional herbs, but was ‘increased by the successe of many hundreds of new, rare and strange Plants from all parts of the world’.⁷¹ Parkinson’s work was considered to be the most complete classification until Tay’s herbal of 1686, although it was the almanac writer Nicholas Culpeper, who produced the most famous herbal, one that is still being reprinted in the twenty-first century. As with all early modern herbals, these books not only contained descriptions of the various plants, but also provided advice on how to

⁶⁹ Dobson M.J., *Contours of Death and Disease in Early Modern England* (Cambridge: 1997) 265.

⁷⁰ J. Gerard, *The herbal or Generall historie of plants* (London: 1597) fol. A2r and J. Gerard, *The herbal or Generall historie of plants*, ed. Thomas Johnson (London: 1633) fol. A2v.

⁷¹ J. Parkinson, *Theatrum Botanicum: the Theatre of Plants or, an Herball of Large Extent* (London: 1640).

cultivate them, when to pick the plants and their medicinal uses.⁷²

The large number of recipes found in early modern veterinary texts encompassed most common types of English garden herbs. Arsmart, or water pepper, for example, was said to have cooling and drying properties.⁷³ This was considered to be a good restorative for horses; it was rubbed on their skin and with 'a good handful or two' of the herb also laid under the saddle.⁷⁴ Savin was recommended for a variety of illnesses from killing worms in oxen, cows or calves to treating horses and sheep with unspecified complaints.⁷⁵

Other afflictions required more drastic measures. 'Murrain' was one such frightening disease which was highly contagious and resulted in almost certain death for infected animals. Also known as 'cattle plague', and later called rinderpest, this was a disease that failed to respond to early modern remedies such as hens' dung soaked in old, human urine.⁷⁶ That said, it is now thought that many of the herbs recommended for treating stricken animals helped to alleviate some symptoms. For example, angelica would have helped to soothe intestinal peristalsis while hyssop would have eased digestive and respiratory tracts.⁷⁷

In fact, those who administered the potion were likely to become ill themselves, not with rinderpest but the related, human form of the disease of measles which resulted in some towns cutting off the head of a dead animal in order to:

⁷² Atkinson C.B. and J.B., "Anne Wheathill's A Handfull of Holesome (though Homelie) Hearbs (1584): The First English Gentlewoman's Prayer Book", *Sixteenth Century Journal* 27 (1996) 659–672.

⁷³ Nicholas Culpeper, *Culpeper's Complete Herbal* (London: 1653, reprint Ware: 1995) 16–17.

⁷⁴ Swan, 1657, 1659, 1661, 1663 and 1667, sig. C6r.

⁷⁵ Dade, *The Country-man's Kalender* fol. B3r.

⁷⁶ Dade, *The Country-man's Kalender* fol. B3r; Pond, 1692 fol. C4r and Swallow, 1695, fol. B6r.

⁷⁷ Spinage C.A., *Cattle Plague* (Dordrecht: 2003) 98 and 360.

Put it upon a long Pole, and set it on a Hedge fast bound to a stake by the high-way side, that every man that rideth or goeth by that way, may see and know by that sign, that there is sickness of Cattel in that Township.⁷⁸

'Blain in the tongue' was another illness that was peculiar to horses and 'other cattle'. It was said to be a swelling of 'a certain Bladder growing above the root of the Tongue' which could be diagnosed by foaming at the mouth and the animal 'Gaping and holding forth of his Tongue'.⁷⁹ Many writers thought that the bladder was actually a swollen sac holding a worm. This concept of the 'worm under the tongue' dates back to some Anglo-Saxon texts which claimed that it led to canine madness.⁸⁰ Interestingly, although people could get bitten by an animal with this disease and contract many of the symptoms, they would not acquire this swelling. Instead:

They shall have in their sleep fearful dreams & sights, & anger without cause [...] it is the venomous spittle of the dogs heat that doth infect; and if the venom of him that doth bite, is drawn to the like place wherewith he biteth, which is the brain & there it worketh.⁸¹

The symptoms of the disease suggest that it was related, along with that of the 'mad dog', to what is now called rabies. The signs of this second illness also included gaping and dribbling, resulting not from worm infestation, but from an excess of black choler in the dog's body, whose 'vehement heat overcometh the senses, and maketh him mad'.⁸² Unlike the animal suffering from the blain under the tongue, there were no known remedies for mad dogs. Gervase Markham recommended separating the dog from other animals, and then killing it.⁸³

⁷⁸ McNeill W.H., *Plagues and Peoples* (London: 1976) 54–55 and J.B., *The Epitome of the Art of Husbandry* (London: 1670) 93.

⁷⁹ Dade, *The Country-man's Kalender* fol. B2r.

⁸⁰ Carter H., "The History of Rabies", *Veterinary History* 9 (1996) 23.

⁸¹ Leonard Mascall, *Government* 292.

⁸² M. Harward, *The Herds-man's Mate* 112 and T. Spackman, *A Declaration of Such Greivous accidents as commonly follow the biting of mad Dogges* (London: 1613).

⁸³ Gervase Markham, *Country Contentments* (London: 1615) 21.

Conclusion

The Righteous Man (saith the inspired Prophet) is Merciful to his Beast: Which Mercy, Compassion or Pitifulness consists not only in his not abusing them with excessive Labour, and unreasonable Stripes and Hardships, but in providing for them convenient Food, and helping to free them of Diseases or Infirmities.⁸⁴

Although moral or emotional factors may have played a role in the desire to help sick animals, economic motivations undoubtedly took precedence. Livestock were only a valuable commodity when fit and healthy, and non-productive animals would quickly lose value. For example, twenty 'scotch runts' (i.e. small cattle) cost forty-five pounds at a local fair in 1681. To feed these animals, a husbandman would need at least 50 acres of pasture for up to four years before they were large enough to be sold for slaughter.⁸⁵ Losing such beasts to ill health was a luxury that few owners could afford. According to some modern historians, however, a lack of appropriate medical care meant that this was generally the fate for these poor creatures.

As this essay has shown, this was simply not true. Large numbers of English language medical texts were produced in the sixteenth and seventeenth centuries aimed at both professional and lay-healers which allowed them to follow Gervase Markham's advice to:

Take my opinion, and thou shall finde in this [book] my Faithful Farrier, a Shoppe of Skil for thee to view. Let this bee thy Doctor, and they Druggist. Let this be thy Instructor and Director.⁸⁶

⁸⁴ T. Tryon, *The country-man's companion* (London: 1688) fol. A2r.

⁸⁵ Thomson G.S., *Life in a Noble Household 1641-1700* (London: 1937) 156; Thirsk, *Agrarian History* 118 and Overton M., *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850* (Cambridge: 1996) 20.

⁸⁶ Gervase Markham, *Markhams Faithfull Farrier* (London: 1638) fol. A3v-A4r.

*Selective Bibliography**Sources*

- CRAWSEY JOHN, *The Countrymans Instructor* (London: 1636).
 FITZHERBERT JOHN, *The Booke of Husbandry* (London: 1533).
 GREY THOMAS DE, *The Compleat Horse-man and Expert Ferrier* (London: 1661).
 MARKHAM GERVASE, *Cavelrice, Or The English Horseman: Contayning all the Arte of Horse-manship* (London: 1607).
 —, *Country Contentments* (London: 1615).
 —, *The English Housewife*, ed. Michael Best (London: 1615; reprint London: 1986).
 —, *Cheape and Good Husbandry* (London: 1616).
 —, *Markham's Faithfull Farrier* (London: 1638).
 —, *A Way to Get Wealth* (London: 1661).
 —, *Markham's Master-piece Revived* (London: 1681).
 MASCAL LEONHARD, *The Government of Cattell* (London: 1662).

Studies

- ATKINSON C.B. and J.B., "Anne Wheathill's A Handfull of Holesome (though Homelie) Hearbs (1584): The First English Gentlewoman's Prayer Book", *Sixteenth Century Journal* 27 (1996) 659–672.
 BARANSKI A., *Geschichte der Thierzucht und Thiermedizin* (Vienna: 1886).
 BLACK J. – GREGORY J. (eds.), *Culture, Politics and Society in Britain 1660–1800* (Manchester: 1991).
 GOTCHIN E., *The Royal Veterinary College: A Bicentary History* (Buckingham: 1990).
 CURTH L. HILL, *English Almanacs, Astrology and Popular Medicine 1550–1700* (MUP: 2007).
 —, "English Almanacs: Transmitters of Advice for Sick Animals", in Osborne C. – Blecourt W. de (eds.), *Cultural Approaches to the History of Medicine: Mediating Medicine in Early Modern and Modern Europe* (Palgrave: 2004) 56–70.
 —, "Animals, Almanacs and Astrology: Seventeenth Century Animal Health Care in England", *Veterinary History* 12 (2003) 33–54.
 —, "The Care of the Brute Beast: Animals and the Seventeenth-Century Medical Marketplace", *Social History of Medicine* 15 (2002) 375–392.
 —, "English Almanacs and Animal Health Care in the Seventeenth Century", *Society and Animals* 8 (2000) 71–86.
 DUNLOP R. – WILLIAMS D., *Veterinary Medicine: An Illustrated History* (London: 1996).
 FRENCH R.K. – WEAR A. (eds.), *The Medical Revolution of the Seventeenth-Century* (Cambridge: 1989).
 FUDGE E., *Perceiving Animals: Humans and Beasts in Early Modern England* (Cambridge: 2000).
 FURDELL E.L., *Publishing and Medicine in Early Modern England* (Rochester: 2002).
 ISAAC P., "Pills and Print", in Harris R. – Myers M. (eds.), *Medicine, Mortality and the Book Trade* (Folkestone, Kent: 1998) 25–49.
 JOHNS A., "Science and the Book", in Barnard J. – McKenzie D.F.M. (eds.), *The Cambridge History of the Book*, vol. IV (1557–1695) (Cambridge: 2002) 274–303.
 KARASSZON D., *A Concise History of Veterinary Medicine*, trans. Farkas E. (Budapest: 1988).
 LANE J., "Farriers in Georgian England", in Mitchell A. (ed.), *History of the Healing Professions*, vol. III (Cambridge: 1993) 99–117.

- MARLAND H. – PELLING M. (eds.), *The Task of Healing: Medicine, Religion and Gender in England and the Netherlands 1450–1800* (Rotterdam: 1996).
- MASON I.L., *Evolution of Domesticated Animals* (London: 1984).
- NAGY D.E., *Popular Medicine in Seventeenth-Century England* (Bowling Green: 1988).
- PATTISON J., *The British Veterinary Profession 1791–1948* (London: 1984).
- PORTER R., “Man, Animals and Medicine at the Time of the Founding of the Royal Veterinary College”, in Mitchell A.R. (ed.), *History of the Healing Professions III* (London: 1993).
- PRINCE L., *The Farrier and His Craft. The History of the Worshipful Company of Farriers* (London: 1980).
- SLACK P., “Mirrors of Health and Treasures of Poor Men: the Uses of the Vernacular Medical Literature in Tudor England”, in Webster C. (ed.), *Health, Medicine and Mortality in the 16th Century* (Cambridge: 1979) 237–274.
- SMITH F., *The Early History of Veterinary Literature*, 4 vols. (London: 1919–1921; reprint 1976).
- SCHWABE C.W., *Veterinary Medicine and Human Health* (Baltimore: 1984).
- SPINAGE C.A., *Cattle Plague* (Dordrecht: 2003).
- SWABE J., *The Burden of Beasts: A Historical Sociological Study of Changing Human-Animal Relations and the Rise of the Veterinary Regime* (Amsterdam: 1997).
- THOMAS K., *Man and the Natural World: Changing Attitudes in England 1500–1800* (London: 1983).
- VOIGTS L.E., “Scientific and Medical Books”, in Griffiths J. – Pearsall D.A. (eds.), *Book production and publishing in Britain 1375–1475* (Cambridge: 1989) 345–402.
- WEAR A., *Knowledge and Practice in English Medicine, 1550–1680* (Cambridge: 2000).
- WILKINSON L., *Animals and Disease: An Introduction into the History of Comparative Medicine* (Cambridge: 1992).

DEHUMANISED SINNERS AND THEIR INSTRUMENTS
OF SIN. MEN AND ANIMALS IN EARLY MODERN
BESTIALTY CASES, AUSTRIA 1500–1800

Susanne Hehenberger

Introduction: humans and animals

What constitutes the difference between humans and animals? Medieval and early modern philosophers, theologians and natural scientists have all agreed that rationality and language elevated humankind above all other creatures. Christian theologians emphasized faith and religion as further characteristics of human superiority, whereas philosophers and scientists cited technical abilities such as the effective use of tools. Some natural scientists believed to have found the missing link between humans and animals in monkeys, especially apes, which had been shipped to Europe in the 17th and 18th centuries.¹ Others thought that besides chimpanzees, hermaphrodites and the so-called savages were also in-between the human and animal realms.²

To stress the different natures of humans and animals, medieval theologians and early modern scientists referred to the explanations of antique philosophers. They frequently quoted Aristotle's hierarchy of souls. The soul of a plant, *anima vegetativa*, was responsible for flourishing and growing. The soul of an animal, *anima sensitiva*, was of a higher quality: it not only allowed the animal to grow and flourish, but also to feel and perceive. The human soul, *anima rationalis*, enabled the human, in addition to its vegetative and sensitive qualities, to think and act rationally. This human status was not granted at the outset. According to Aristotle a foetus possessed a vegetative soul first, which turned into

¹ Orang-Utan, the Malayan term for savage, was used for all apes without any distinctions throughout the 18th century. Schiebinger L., *Am Busen der Natur: Erkenntnis und Geschlecht in den Anfängen der Wissenschaft* (Stuttgart: 1995) 114–167; 210–229.

² Gilbert R., "Seeing and Knowing: Science, Pornography and Early Modern Hermaphrodites", in Fudge E. – Gilbert R. – Wiseman S. (eds.), *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period* (New York: 2002) 150–170.

a sensitive soul later and finally became a rational, human soul.³ The foetus would take different lengths of time to become a human being, depending on its sex: 40 days for a male, 90 days for a female foetus.⁴ Aristotle's model of the distinct quality of souls established hierarchies between men and women, and between humans and animals.⁵ The determining connection of certain bodies with certain souls was opposed to the view of Aristotle's teacher Plato, who supposed that psychological qualities entered a body only after birth. Derived from a cosmos full of souls, human rationality and beastly irrationality would struggle persistently inside every individual.⁶

However, Aristotle's view turned out to be the more successful one. Christian theologians referred to his model and adapted it to fit their needs and intentions. In one interpretation of Genesis, animals were divine and innocent creatures, living free from original sin. Before the fall Adam and Eve had been vegetarians (*Genesis* 1,29). After the fall, God ordered men to dominate nature and rule over animals.⁷ St. Augustine justified the domination of animals, saying that God made humans in his image, possessing rationality and immortal souls, whereas animal souls were mortal.⁸ Therefore, the Church Father argued, animals were to be useful servants of humans.

Despite its uses as a justification of animal exploitation, the substantial, material quality of animal souls was controversial. Some theologians believed them to be immaterial like human souls, others thought they were formed from mud and water.⁹ Several hundred years after August-

³ Münch P., "Freunde und Feinde. Tiere und Menschen in der Geschichte" in: ZDF-nachtstudio (ed.), *Mensch und Tier: Geschichte einer heiklen Beziehung* (Frankfurt a.M.: 2001) (19–36) 28.

⁴ Thomas Aquinas adopted Aristotle's concept, but shortened the process of humanization for a female foetus to 80 days. Tuana N., "Der schwächere Samen. Androzentrismus in der Aristotelischen Zeugungstheorie und der Galenschen Anatomie", in Orland B. – Scheich E. (eds.), *Das Geschlecht der Natur. Feministische Beiträge zur Geschichte und Theorie der Naturwissenschaften* (Frankfurt a.M.: 1995) (203–223) 211.

⁵ Guerrini A., *Experimenting with Humans and Animals. From Galen to Animal Rights*. (Baltimore – London: 2003) 10–11.

⁶ Walz R., "Die Verwandtschaft von Mensch und Tier in der frühnezeitlichen Wissenschaft" in: Münch P. – Walz R. (eds.), *Tiere und Menschen. Geschichte und Aktualität eines prekären Verhältnisses* (Paderborn – Munich – Vienna – Zurich: 1998) (295–321) 297; Münch, "Freunde und Feinde" 27.

⁷ Brunner K., "Pferde und Pfauen. Tiere im Weltbild mittelalterlicher Menschen", *Beiträge zur Mittelalterarchäologie in Österreich* 15 (1999) (9–25) 9.

⁸ Guerrini, *Experimenting* 20.

⁹ Münch, "Freunde und Feinde" 29; Walz, "Die Verwandtschaft von Mensch und Tier" 299–301.

tine, St. Thomas Aquinas connected reason with immortality of the soul. Since animals lack reason, he concluded, they cannot participate in the afterlife. As they are irrational creatures, they also lack free will. For Thomas Aquinas, animals were comparable to mechanical clocks. If humans were able to craft such devices, he argued, how much more sophisticated were animals as ‘machines’ made by God for the use of humankind.¹⁰ Reformation did not challenge the Church Fathers’ assessment of animals. In fact, the protestant view of animals was as utilitarian as the catholic view had been.

Scientists also benefitted from the Christian dogma of human superiority. William Harvey performed countless vivisections on dogs, cats and rabbits for the sake of humankind.¹¹ When Andreas Vesalius extended his research and performed public dissections of dead human bodies at the university of Padua, he definitely offended Christian values, ‘blurring the boundary between the animal and the human body’.¹² Nevertheless, Vesalius’ revolutionary approach gained recognition. He became personal physician to emperor Charles V. and, after Charles’ resignation, to Philipp II.

Only a few scholars dared to question the Christian dogma of the uniqueness and immortality of human souls. Michel de Montaigne attacked the interpretation of a human superiority willed by God, stating that ‘mother earth’ had created equal creatures.¹³ He interpreted human dominion over animals as the result of the human vanity evoked by Christian theology.¹⁴ When the German physician Daniel Sennert doubted the substantial difference between humans and animals in the 1630s, he provoked not only debates, but also an indictment for heresy.¹⁵ Even more discussion was inflamed by his prominent contemporary René Descartes, whose view that animals were pure matter and did not possess a soul was widely contradicted.¹⁶ Though arguing from a more secular point of view, Descartes was close to Thomas Aquinas’ interpretation inasmuch as he compared animals with machines created by God. He saw them as perfect creatures, unable to sense and

¹⁰ Guerrini, *Experimenting with Humans and Animals* 22.

¹¹ Guerrini, *Experimenting with Humans and Animals* 31.

¹² Guerrini, *Experimenting with Humans and Animals* 28.

¹³ Guerrini, *Experimenting with Humans and Animals* 36.

¹⁴ Staghun G., *Tierliebe. Eine einseitige Beziehung* (Munich – Vienna: 1996) 73–89.

¹⁵ Walz, “Die Verwandtschaft von Mensch und Tier” 306.

¹⁶ Walz, “Die Verwandtschaft von Mensch und Tier” 306–310.

suffer.¹⁷ The cartesian theory of soulless animal-machines provided a further comfortable justification for the exploitation and abuse of animals, and it emphasized the exclusive human claim to possessing immortal souls.¹⁸ It also solved a theological problem: the question of why animals, being unable to commit a sin, had to suffer pain and death, became redundant.

Contemporaries criticized Descartes's animal-machine. How can a community's stock bull be compared to a church clock, sceptical farmers asked. Alongside such fundamental criticisms, a pro-animal discourse developed in the course of the 17th century.¹⁹ The idea that vegetarianism facilitated a peaceful coexistence of humans and animals was taken up by Jean-Jacques Rousseau in the 18th century. He presented a secularized version of the fall, in which the original state of nature was lost when humans started to subordinate all other creatures to their needs. Rousseau blamed the human use of reason and the expression of free will for the loss of paradise.²⁰

With the exception of some critics, the early modern intellectual elite agreed upon human superiority. Animals were perceived as creatures in the service and for the use of humans.

Dehumanisation

Several individuals and groups ran the risk of dehumanisation on a judicial and social level. Not fitting the normative image of 'the human' created by ecclesiastical and secular authorities, some persons were compared with animals. Ethnic or religious difference, mental or physical illness, an itinerant lifestyle or criminal behaviour marked difference – a circumstance used to deny somebody's human status. From a hegemonic perspective these individuals were not fully developed humans. Therefore, the hegemonic groups concluded, as they did not possess the predefined human qualities, then they did not have to be granted the same rights.

¹⁷ Meyer H., "Frühe Neuzeit", in Dinzelbacher P. (ed.), *Mensch und Tier in der Geschichte Europas* (Stuttgart: 2000) (293–403) 344.

¹⁸ Walz, "Die Verwandtschaft von Mensch und Tier" 311; Münch P., "Die Differenz zwischen Mensch und Tier. Ein Grundlagenproblem frühneuzeitlicher Anthropologie und Zoologie" in: Münch P. – Walz R. (eds.), *Tiere und Menschen* (323–347) 328–333.

¹⁹ Münch, "Die Differenz zwischen Mensch und Tier" 334–335.

²⁰ Meyer, "Frühe Neuzeit" 347–353.

Certain learned writers of the 16th and 17th centuries, presuming themselves to be prime examples of the human species, were tempted to describe women collectively as less developed humans. Consequently, men and women would occupy different moral planes. However, the argumentation for a gendered hierarchy was weak. Authors referred to the more prominent story of the Creation which tells that Eve was formed from Adam's rib (*Genesis* 2,18–25), concealing the other version, in which Adam and Eve were created at the same time as equals (*Genesis* 1,27). Others argued that women did not possess the same rationality. Two German authors, Franciscus Henricus Hoeltich and Casparus Waltz, brought etymology into the discussion. In their dissertation (published in 1672) they claimed that the Latin term 'homo' and the Italian, Spanish and French derivatives 'l'huomo', 'l'hombre' and 'l'homme' referred to men only. The German word 'der Mensch' was grammatically male as well, so 'the human', they argued, must be a man.²¹ Even if Hoeltich and Waltz were of the opinion that only men could be fully developed humans, they may not have thought that every man was indeed human. Their dissertation was accepted at the university of Wittenberg, a center of protestantism. Possibly the two young men were familiar with protestant ideals promoted in the popular genre of 'Hausväterliteratur'. In these books, written by protestant writers of the upper class, 'Hausväter' (and 'Hausmütter') were provided with advice in economic and social matters. An important issue was the relation of the 'Hausvater' to his servants. 'Teufelsliteratur', a popular subgenre of Hausväterliteratur, promoted the Hausvater's mistrust and domination of the servants, as Paul Münch has shown. Negative stereotypes were created: servants would be led by the temptations of the devil, they would be lazy, steal, lie, and disobey their master. Referring to the Old Testament's *Liber ecclesiasticus*, Hausväter were advised to treat servants like animals.²² The comparison of servants with animals was also spread through lyrics, catechisms and proverbs.²³

Not only were certain social groups criticized, certain behaviour was as well. Drinking too much alcohol, according to the anonymous author of a leaflet, would reveal the animal character of a person.

²¹ Münch, "Die Differenz zwischen Mensch und Tier" 340–343.

²² Münch P., "Tiere, Teufel oder Menschen? Zur gesellschaftlichen Einschätzung der 'dienenden Klassen' während der Frühen Neuzeit", in Frühsorge G. – Gruenter R. – Wolff Metternich B.F. (eds.), *Gesinde im 18. Jahrhundert* (Hamburg: 1995) (83–107) 89.

²³ Münch, "Tiere, Teufel oder Menschen" 88.

Depending on a person's 'complexio', which was determined by his or her age, gender, physical constitution and predominating humour, alcohol, would promote certain animal characteristics. A sanguine person would become funny and act like a monkey, while a choleric would turn angry and wild like a lion. The melancholic would withdraw like a hedgehog and the phlegmatic, not caring about anything anymore, would act like a sow.²⁴

Being equated with an animal was an offensive matter. Though the reputation of a community's stock bull was much better than the image of an average milk cow, a respectable man would not like to be compared with the former. Being called a stock bull was a verbal dehumanisation. Furthermore, it attacked a man's sexual integrity. As Susanna Burghartz has pointed out, early modern societies differentiated between a woman's and a man's moral integrity. While the honour of a woman was questioned by calling her a whore (or some derivate of 'whore'), a man's honour was attacked rather with social or economic offenses, e.g. calling him a thief. The only exception in the gendered catalogue of dishonour was the direct or indirect accusation that a man was a sodomite.²⁵ The potential seriousness of this offense is illustrated by a charge that was instituted at the local court of the Lower Austrian village of Neumarkt an der Ybbs in 1663. The weaver Veit Behaimber complained against his neighbour, the butcher Caspar Neffgyrer. Veit's son, Christoph Behaimber and Caspar's step-son, Tobias Siebenpeck, had a conflict over the noise the cows made, when they were brought to the stock bull in Veit Behaimber's barn. Christoph told Tobias that if his father Caspar 'would not like and endure the noise, Neffgyrer had better make the calves himself'.²⁶ According to the village court's protocol, Tobias responded: 'Should my father be a calfmaker, then you are a frivolous beggar'.²⁷ The tables turned in the trial. Veit, who

²⁴ Suutala M., *Tier und Mensch im Denken der Deutschen Renaissance* (Helsinki: 1990) 168.

²⁵ Burghartz S., *Leib, Ehre, Gut. Delinquenz in Zürich Ende des 14. Jahrhunderts* (Zurich: 1990) 131.

²⁶ St. Pölten, Niederösterreichisches Landesarchiv [NÖLA], Handschrift [Hs.] 707 (Neumarkt/Ybbs Protokollbuch 1652ff.) fol. 190v: 'wan ermelt dein Vatter die Khüe, so die Purgerschafft und andre Benachbarte in meines Vatters Hoff rever[en]d[o] zum Stier treiben lassen, nicht leiden oder gedulten wolle, solle der Neffgyro rever[endo] die Khalben selber machen'. Literally 'reverendo' indicates something to shy away from.

²⁷ St. Pölten, NÖLA, Hs. 707, fol. 190v: 'solt mein Vatter ain Khalbermacher sein, so bist du ein leichtfertiger Schelben'.

had started the proceedings in order to receive satisfaction and clear his son of the name ‘frivolous beggar’, was condemned to pay a fine for Christoph’s misdeed. Furthermore, Christoph had to apologize to Caspar Neffgyrer and Tobias Siebenpeck in public, whereas Tobias and Caspar Neffgyrer were not punished at all.

This case shows that the accusation of bestiality was taken very seriously in early modern times. A man being called a sodomite had better hurry to rebut the rumour. If not, he risked a trial *in puncto sodomiae*.

The sin and crime against nature

What is meant by *sodomia* in early modern law? The judicial term of *sodomia* refers to the theological term *peccatum contra naturam*, a category applied, indeed, to manifold sexual practices.²⁸ Its subcategories were non-generative heterosexual acts, same-sex relations, masturbation, and sex with a corpse or an animal.

The Christian order of sexuality established a hierarchy of good and bad activities. Following the view of the Church Fathers, chastity constituted the most favourable state. However, sexual inactivity seemed not to be designed for everyone, but for a select few. Second best, to the Church Fathers’ minds, was therefore a restricted sex life within marriage, obeying canon law and aiming primarily at reproduction. While chasteness or a modest, married sex life were considered the best options for Christians, any disregard of canon law’s sexual order was sinful. Sex before or without marriage (fornication), between relatives (incest), with someone other than one’s own spouse (adultery), and in two marriages at the same time (bigamy) offended canon law. Yet worst of all the forbidden sexual practices were the sins against nature. Within this category the sex partners, or from the sinner’s perspective: the object of lust, made the determining difference. According to Gratian, who compiled canon law in his *Decretum Gratiani* (1140), masturbation was only a ‘*peccadillo*’, a little sin.²⁹ Sex with oneself was not as bad as

²⁸ See also: Puff H., “Nature on Trial: Acts ‘Against Nature’ in the Law Courts of Early Modern Germany and Switzerland”, in Daston L. – Vidal F. (eds.), *The Moral Authority of Nature* (Chicago – London: 2004) 232–253; Puff H., *Sodomy in Reformation Germany and Switzerland, 1400–1600* (Chicago: 2003).

²⁹ Brundage J.A., “Sex and Canon Law”, in Brundage J.A. – Bullough V.L. (eds.), *Handbook of Medieval Sexuality* (New York – London 1996) (33–50) 41.

non-generative, heterosexual activities, which in turn were considered less sinful than same-sex practices. Worse than those was sex with a corpse. Worst of all unnatural sins was bestiality, the sexual mingling of men and animals.³⁰

Secular authorities of the early modern period were deeply influenced by religion. When they started to build criminal codes and a regional court system, the ecclesiastical court system with its centre in Rome had already existed for 300 years. The field of sexual deviance, indeed the definition of sexual crimes, was especially inspired by canon law.³¹ In the Habsburgian heartlands of Upper and Lower Austria regional criminal codes were not written before the 16th century. Yet these so-called *Landgerichtsordnungen* did not concern everyone. The clergy, the nobles, members of university and the military were subordinated to separate courts.³² Social status made a difference in early modern law. Thus, considering the construction of sexual crimes in the *Landgerichtsordnungen* means looking at the criminal law valid for the mass of people, in fact, for those not being given preferential treatment by the sovereign. The Lower and Upper Austrian criminal codes of the 17th century, named *Ferdinanda* (1656) and *Leopoldina* (1675) after the ruling emperors and archdukes of Austria, defined ‘unchastity against nature’ as follows:

Those who are unchaste against nature, as a man with another man, a woman with another woman, or a human with an unreasonable beast, have to be punished according to this law.³³

The *Theresiana*, the criminal code for all Austrian provinces from 1768 to 1787, defined the crime of *sodomia* in a similar but extended way:

The most heinous vice of unchastity against nature, or the sodomitic sin, is committed, firstly, between a human and a beast, or a human and a dead body; secondly, between persons of the same sex, as man

³⁰ Brundage, “Sex and Canon Law” 39–45; idem, *Medieval Canon Law* (London – New York: 1995) 47–48.

³¹ For Germany see: Hull I.V., *Sexuality, State and Civil Society in Germany, 1700–1815* (Ithaca – London: 1996).

³² Suttinger J.B., *Consuetudines Austriacae ad stylum excelsi regimimis infra anasum accommodatae* (Nürnberg: 1716) 312–314, 363–380, 598–601, 635–664, 768–769, 935–955.

³³ *Ferdinanda*, Artikel 73; *Leopoldina*, III, Artikel 15: ‘Wer wider die Natur Unkeuschheit treibt, als Mann mit Mann, Weib mit Weib, oder aber ein Mensch mit einem vnvernünftigen Viech, der fällt in die Land=Gerichtliche hernach gesetzte Straf [...]’. The paragraphs in *Leopoldina* and *Ferdinanda* show only slight differences in orthography and punctuation.

with man, woman with woman; and also between man and woman in an unnatural way; thirdly, the self-polluting sin can also be considered a form of sodomia.³⁴

Apparently, the crime against nature was defined with reference to canon law. Nevertheless, there was a fundamental departure from the theological construction: while the sin against nature could be confessed, expiated and forgiven, secular courts showed less mercy. Same-sex relations and bestiality could both entail the death penalty. Following the hierarchy of canon law, bestiality was considered worse than same-sex practices. According to *Ferdinandea* and *Leopoldina*, a delinquent 'having abused one or several unreasonable beast(s), and having accomplished the act,'³⁵ should be burned alive together with the animal(s), whereas a 'man having violated a boy, or a human practising the sodomitic sin with another human'³⁶ should be beheaded and burned.³⁷ Similarly, the *Theresiana* prescribed the stake for bestiality, decapitation and the burning of the corpse(s) for same-sex relations. Any other form of unnatural sex should be punished more or less severely, depending on the actual circumstances.³⁸ According to the criminal codes 'the heinous vice' of *sodomia* would 'hardly leave any traces', as it was 'performed in secret places normally'. Therefore 'a suspect person in the rumor of such a misdeed [...] being actually able to perform the crime' should be observed. If a person turned up in 'a suspect place at darkness' and 'has left traces on or around himself, or on the animal',³⁹ further investigations had to be carried out. Imprisonment was justified, if a suspect had either been 'caught in the act', or, in the case of same-sex practices, a medical report had found physical evidence. Suspects could be tortured to find out 'the truth', if there was circumstantial evidence of sodomitic intention. Torture also had to be applied to a

³⁴ *Theresiana*, Artikel 74, § 1: 'Das abscheulichste Laster der Unkeuschheit wider die Natur, oder sodomitische Sünd wird verübet erstlich: wenn von einem Menschen mit einem Viehe, oder todten Körpern; andertens: wenn zwischen Personen einerley Geschlechts, als Mann mit Mann, Weib mit Weib, oder auch Weib mit Mann wider die Ordnung der Natur Unzucht getrieben wird; worzu drittens: gewissermassen auch die von Jemanden allein begehend-widernatürliche Unkeuschheiten zu rechnen sind'.

³⁵ 'so sich mit ain, oder mehrern vnvernünfftigen Viech vergriffen, vnd die That vollbracht'.

³⁶ 'Ein Knabenschänder, oder aber da sonst ein Mensch mit dem andern Sodomitische Sündt getriben hette'.

³⁷ *Leopoldina*, III, Artikel 15, §§ + 4 und 5; *Ferdinandea*, Artikel 74, §§ 4 und 5.

³⁸ *Theresiana*, Artikel 74, § 6.

³⁹ *Leopoldina*, III, Artikel 15, § 1; *Ferdinandea*, Artikel 74, § 1.

suspect who denied persistently, if there was evidence against him.⁴⁰ The criminal codes gave only short instructions concerning the animal(s) involved. The suspect had to be asked which animal(s) he had abused and to whom it or they belonged. *Ferdinandea* and *Leopoldina* stipulated that the animal, if it could be found⁴¹, had to be burned together with the delinquent. Concerning the public execution, local courts were warned not to read aloud the verdict in cases of *sodomia*.⁴² Compared to *Ferdinandea* and *Leopoldina*, the *Theresiana* put more emphasis on the beast(s) involved.

Even if the delinquent could have escaped, has died, or, for whatever reason, could have avoided the death penalty, the beast whom he performed or tried to perform his atrocity with shall be eradicated secretly by the knacker. No memory or monument of such an atrocity shall be left in the community.⁴³

Thus, the criminal codes emphasized different modes of taboo. The incitement to keep the crime secret by not reading the verdict aloud in

⁴⁰ *Ferdinandea*, Artikel 74, § 2; *Leopoldina*, III, Artikel 15, §§ 1 und 2: 'Dises abscheuliche Laster wirdt gemeinlich an verborgenen Orthten verüebet/daß es also selten kântliche Warzaichen hinter sich lasset/doch dienen nachfolgende anzaigungen zur nachforschung. Anzaigungen zur Nachforschung. Erstlichen/wann die verdächtigte Person ins gemein dises Lasters halber beschrayedt. Andertens/ein gaile vnschambahre/auch dergleichen Persohn wäre/zu der man sich solcher Ubelthat versehen möchte/benebens Drittens/an den verdächtigen Orthten in abwesenheit der Leuth haimblich/bevorab zu nächtllich: vnd finsterner Zeit auß: vnd eingehenter gesehen worden. Viertens/Zaichen dises abscheulichen Lasters/entweders an: bey: oder umb sich/oder dem Viech verlassene hette. Anzaigung zu der Gefängnuß.

§ 2. Da der verdacht gegen einem Knaben wäre/soll der Richter durch hierzue verordnete Medicos, Barbierer/vnd dergleichen/gebührende bschaw vorkehren/befindet sich nun aines/oder das ander würcklich in der That/oder aber der Thäter wurde in der That betretten: soll der Richter auff eine solche verdächtige Person greiffen/dieselbe Befängnussen/nicht weniger auch/da noch über dises alles vorkäme/daß der Thäter Anzaigung zu der peinlichen Frag. Erstlichen/an Orth vnd Endt gesehen/so hierzue gelegen/auch hierzue beraiter gefunden. Andertens/von dem Knaben solches über ihn mit glaublichen vmbständen wäre außgesagt: oder aber Drittens/von denen/mit welchen er dises abscheuliche Laster zu vollbringen begert/wie recht ist/wäre überwisen worden/vnd nichts destoweniger dessen in laugnen stunde/seine Unschuld aber nicht geneugsam an Tag geben könnte'.

⁴¹ *Ferdinandea*, Artikel 73, § 4: 'so es anderst noch vorhanden'.

⁴² *Ferdinandea*, Artikel 74, § 5; *Leopoldina*, III, Artikel 15, § 5.

⁴³ *Theresiana*, Artikel 74, § 6, erstlich: 'Wobey zu bemerken, daß, wenn auch der Thäter entflohen, oder vorher verstorben, oder aus was immer für einer Ursach der Todesstraffe entgangen wäre, dessen unangesehen das Viehe, womit derley Unthat verüebet, oder angemasset worden, bey der Obrigkeit, worunter sich selbes befindet, heimlich durch den Abdecker zu vertilgen seye, damit keine Erinnerung, und Merkmal solchen Greuels in der Gemeinde zuruckbleibe'.

public is of a preventive character, intending to avoid any imitations, which could derive from public accounts of the ‘unspeakable’ crime. On the other hand, the eradication of the beast(s) as ‘memory and monument’ of the vice already presupposes knowledge of the crime; knowledge based on reading the verdict publicly in order to deter the audience. The two principles of criminal policy come into conflict with each other: on the one hand, secrecy as a form of prevention, on the other hand making an example as a form of deterrence. In other words: how could a public execution deter people from committing *sodomia* if the verdict didn’t refer to the committed crime?

The criminal codes dealt with different forms of *sodomia* and the punishment of those committing the crime. Practically speaking, in spite of all differentiation, the law constructed an ideal type. ‘The sodomite’ of the criminal codes was active, adult and male, a man performing ‘unnatural’ sex with beasts or ‘boys’.⁴⁴ Grammatically marked as a man, the sodomite was the one committing the crime, while beasts and boys were described as passive entities, as they were objects or victims of the sodomite’s unnatural lust. The criminal codes’ interest in these passive ‘partners’ was limited. Further instructions concerning the ‘objects’ could be obtained from judicial handbooks and commentaries. These books, written by legal scholars, aimed at teaching younger colleagues how to interpret the law, which most of them analysed paragraph by paragraph. Some issues were illustrated with the help of case studies. Austrian legal scholars regularly referred to these books when writing expertises for local courts, as the criminal codes lacked sufficient information. One of the most prominent judicial authors was the Dutch scholar Jost Damhouder (1507–1581). His *praxis rerum criminalium*, a commentary on the criminal code of Emperor Charles V. for the German speaking territories (*Carolina*), was published in the second half of the 16th century. First printed in Latin, then translated into French and German, Damhouder’s commentary influenced the Austrian jurisdiction in the late 16th century and was still frequently consulted throughout the 17th century. Following canon law, Damhouder differentiates three forms of *sodomia*: first, ‘mollicies’ (masturbation), secondly same-sex relations and non-generative heterosexual acts, thirdly ‘the most heinous of the

⁴⁴ The early modern meaning of ‘Knabe’ was either a male child, or a young, unmarried man. Adelung J.C., *Grammatisch-kritisches Wörterbuch der hochdeutschen Mundart* Zweyter Theil (Vienna: 1811) 1648; Zedler J.H., *Grosses vollständiges Universal-Lexikon aller Wissenschaften und Künste*, vol. XV (Halle – Leipzig: 1737) 991.

unnatural sodomitic atrocities: any human, be it a man or a woman, being unchaste with unreasonable animals'.⁴⁵

Remarkably enough, Damhouder's construction of the sodomite does not only include same-sex relations between women, but mentions women abusing beasts. In his interpretation, the *Carolina* does not advocate different punishments for the three forms of *sodomia*, but condemns all sodomitic sinners to the stake. According to common law, Damhouder says, the sodomite can be strangled before being burned. For him the stake is justified with reference to the Old Testament, as God himself had ordered that the sodomitic sins be punished in this way.

If men or women perform the sin with unreasonable animals the death penalty has to be firmly insisted on. Following divine and normal secular law the punishment of the sodomitic vice with unreasonable animals is that the animal has to die at the same time as the wrongdoer and both must be burned.⁴⁶

Yet Damhouder was not fully content with his own argumentation. The scholar allows his fictitious students to ask him about the animal's role by raising the issue himself:

Now, you might ask why the unreasonable animals, not possessing their own will nor mind, not being able to sin, shall be punished for the unnatural vice, which they were abused for. Then I have to answer that in this case the unreasonable animals are not punished for their own and inner sin, but for being the instruments that helped humans to commit the most shameful disgrace. Therefore they have to suffer a horrible death.⁴⁷

⁴⁵ Damhouder J., *Praxis rerum Criminalium. Gründliche und rechte Underweysung Welcher massen in Rechtfertigung Peinlicher Sachen/nach gemeynen beschriebenen Rechten/vor vnd in Gerichten ordentlich zu handeln. Allen Hohen vnd Nidern Stands Oberkeyten/Richtern/Gerichtsverwandten/vnd sonst ideränniglichen/nützlich vnd nothwendig zu gebrauchen* (Frankfurt a. M.: 1581) 161: 'Die dritte weise der vnnatürlichen Sodomitischen Mißhandlung, ist die aller greulichste: Als wann jrgendein Mensch, es seye Mann oder frauw, mit vnvernünfftigen Thieren Vnkeuschheit treibt'.

⁴⁶ Damhouder, *Praxis rerum criminalium* 161: 'vn wo etwa Manns oder Weibspersonen, mit vnvernünfftigen Thieren sich dergleichen verwircken möchten, die Straff zum Todt fürzunemen ernstlich befohlen. Es wird aber solchem Göttlichen vnd gewöhnlichen Weltlichen Rechte nach, in sträfflicher verfolgung Sodomitischer Mißhandlungen, die mit vnvernünfftigen Thieren begangen, also gestalten, daß eben dasselbig Thier zugleich mit dem Vbelthäter sterben, vnn muß verbrannt werden'.

⁴⁷ Damhouder, *Praxis rerum criminalium*, 162: 'Jedoch möchte hierauff gefragt werden/warumb die vnvernünfftige Thier/welche doch wider das Gesetz/dieweil sie keinen fürsetzlichen Willen oder bedeckend Gemüt haben/nit gesündigt/von wegen angeregter vnnatürlicher Mißthat zugleich mitgestrafft werden. Vnnd ist darauff zu antworten/daß

Damhouder argues that a beast does not possess reason, and therefore cannot perform an act, a sin or a crime of its own volition. However, having been the instrument of a sodomite, the animal's elimination is legitimate and necessary. Damhouder's view was shared by the German legal scholar Benedict Carpzov (1595–1666) more than half a century later. In his well-known *Practica nova rerum criminalium imperialis saxonica* (1635), Carpzov regards animals as the instruments of sodomites that must be extinguished.⁴⁸ Another judicial author, the Austrian Johann Christoph Frölich von Frölichsburg (1657–1729) is less well-known, though his comparative commentary on the *Carolina* was re-published seven times in the first half of the 18th century. First published in Innsbruck 1696 under the title *Nemesis romano austriaco tyrolensis*,⁴⁹ the later versions, dating from 1709, 1714, 1720, 1727, 1733, 1741, and 1759, were called *Commentarius in Kayser Carl des Fünfften und des Heil. Röm. Reichs Peinliche Hals=GerichtsOrdnung*.⁵⁰ Frölich's commentary compares the *Carolina* with the Lower Austrian *Ferdinanda* and the Tyrolian *Landesordnung* of 1573 and draws its own conclusion:

As sodomia committed with a reverendo beast is most atrocious, it has to be punished with the stake, whereas the other species of sodomia shall be punished with the sword. So crime and punishment are related, as it can be observed in Saxonia.⁵¹

in solchen fall/die vnvernünftige Thier/nit jrer eygener vnd innerlicher Sünde haben/sondern darumb/daß sie (also darvon zu reden) mithelffende Werkzeuge/damit Menschen die aller schmähhichste Schande begangen/vnnd darob eines gewlichen Todts sterben müssen'.

⁴⁸ Carpzov B., *Practica nova rerum criminalium imperialis saxonica in tres partes divisa* (Leipzig: 1635) qu. 75, n. 33: 'neque enim animanta bruta in crimine hoc Sodomiae ob peccatum commissum puniuntur, sed quia instrumenta fuere socia, cum quibus homines nefantissimum perpetrarunt nefas. [...] ne animal odium et indignitatem hominibus incuteret'.

⁴⁹ Frölich von Frölichsburg J.C., *Nemesis romano austriaco tyrolensis Das ist: Kurtze, doch gründliche Unterweisung, wie ain, dem richterlichen Amt obligender Nachforschungs, oder Inquisitions-Process, nach Gelegenheit, und Herkommen der O: und U:O: Fürstenthumb und Landen, auch Inhalt der Tyrolischen Statuten, Nider=Oesterreichischer Land=und Peynlicher Halß=Gerichts=Ordnung Carl deß Fünfften, dann gemeinen geschribenen Rechten, von Anfang biß zum Ende, mit Rechtlicher Ordnung zu Prothocoll zu bringen, und zu vollführen seye* (Innsbruck: 1696).

⁵⁰ With some indicated exceptions I refer to the 1741 version: Frölich von Frölichsburg, *Commentarius 1741*.

⁵¹ Frölich von Frölichsburg, *Commentarius 1741* 256: 'Zudeme ist die Sodomiterey, so mit reverendo Vieh verübet wird, abscheulicher und schwerer, einfolglich auch mit der Feuer = Straff zu züchtigen: Herentgegen diese andere Species, als eine geringere Sünde mit dem Schwerdt, damit nach Proportion der Verbrechen die Straffen vorgenommen werden, wie es auch also in dem Sächsischen observirlich ist'.

Frölich indirectly refers to the aforementioned book by Benedict Carpzov to support his view. His categorical differentiation between sodomitic practices with humans and those with beasts is, as he admits, not inspired by the Bible. ‘Generally speaking, there is nothing more atrocious and more horrible than the mingling of human and beastly blood’.⁵² With reference to Damhouder’s commentary, Frölich explains that the beast has to be burned in any case. Not for mere punishment, as he continues, ‘but to extinguish every memory of the atrocious vice’—unless the sodomite is not condemned to the stake. In this case ‘the reverendo beast shall be killed by the reverendo knacker secretly’.⁵³ The intention of this instruction is clear: to avoid any unnecessary fuss. In any case, as Frölich reminds his readers, ‘the innocent owner of the violated beast has to be paid for his loss, either from the sodomite’s property, or, in case he is not wealthy enough, from the court’.⁵⁴ Frölich goes even further in his commentary. Considering sexual relations between a Christian man and a Jewess, or a Christian man and a Turkish woman, he concludes that sex with ‘such a person, who is like a dog, can be interpreted as unchastity with a beast against our religion’. Somewhat inconsistently, he proceeds to state that ‘actually this activity is not against nature, therefore it cannot be punished like true sodomia’.⁵⁵ ‘As long as this crime is not accompanied by other delicts such as

⁵² Frölich von Frölichsburg, *Commentarius 1741* 256: ‘sintemalen insgemein zu reden, ja nichts abscheulichers, und erschrocklicheres seyn kann, als da Menschlich und Viehisch Geblüet vermenget wird’.

⁵³ Frölich von Frölichsburg, *Commentarius 1741* 258: ‘Zudeme wird eben dem Delinquenten auch die Bestia/mit der Unzucht getrieben/abgethan/und mit verbrennet/nicht zwar/ob hätte das Vernunft=lose Vieh eine Sünde begangen/sondern nur damit das Angedencken der abscheulichste Lasterthat auf alle möglichste weise ausgerottet werde. [...] Hiebei ist zu wissen/daß/wann der Delinquent mit dem Feuer wegen eines mildern Umstand nicht gestrafft werde/das reverendo Vieh nur heimlich durch den reverendo Abdecker abgethan werde’.

⁵⁴ Frölich von Frölichsburg, *Commentarius 1741* 256: ‘Jedoch ist zu wissen/daß der Wert da für dem unschuldigen Herrn des geschändeten Vieh entweder von des Sodomiten Vermögen/oder da selbiger nichts vermöchte/von dem Gericht ausbezahlt werden müsse’.

⁵⁵ Frölich von Frölichsburg, *Nemesis 1696* 265: ‘indeme dergleichen Persohn, wie ein Hund geschetzt, und also interpretativè die Unzucht mit einem Viech, gegen unseren Glauben zu sagen, getriben wird, dieweilen aber dergleichen Vermischung der Natur nicht zuwider lauffet, also kan selbe auch, als ein wahre Sodomiterey nicht gestrafft werden’.

aldultery, rape, incest, abduction etc.’, Frölich recommends caning, the galley or an arbitrary punishment.⁵⁶

The instructions given by judicial commentaries mostly concern ‘the sodomite’. Concerning differentiations beyond those in criminal codes, the sodomite is constructed as a man or a woman abusing an animal, a man or a woman performing same-sex activities, or a person engaging in unnatural heterosexual activities. Nevertheless, in the legal scholars’ reasoning the sodomite is male. Not for biological, but for cultural reasons, *sodomia* was perceived an act of penetration performed by an active, ‘male’ person. The question of whether the sodomite has completed the act is judicially measured by the question of *immissio seminis*. The commentaries illustrate this crucial point with the necessity to search for traces the sodomite might have left in or on a beast or boy, whereas sexual practices between women and animals are mentioned as a possibility, but are never described in detail. The sodomite’s cultural ‘maleness’ becomes even more apparent. Frölich explains that women who had used instruments comparable to dildos could be exposed to torture.⁵⁷ Women claiming the male sexual part for themselves risked social and judicial condemnation.

Another source for early modern jurisdiction were instructions (‘Hof-resolutionen’, ‘Patente’, ‘Mandate’) enacted by the emperor’s order. Dealing with various issues, they can be interpreted as manifestations of the emperor’s and his advisers’ most urgent concerns in the legal field. Unlike the advice given in judicial handbooks and commentaries, these instructions were binding. Many of them are collected in the so called *Codex Austriacus*⁵⁸ and the *Codex Austriacus Appendix*,⁵⁹ compilations of legal instructions from the 16th to the 18th century. A resolution from September 21st, 1680 orders that the sodomite shall ‘secretly

⁵⁶ Frölich von Frölichsburg, *Nemesis 1696* 265: ‘es wird dises Laster/dafern keine Ehebruch/Nothzucht/Blut-Schand/Entführungen/ec unterlauffet/gemeiniglich mit Ruthen-Außhauen: Galleer/unnd anderen Extraordinari-Straffen angesehen. Jul. Clar. l. 5. sentent. 3. fornicatio Boer. decis. 316. n. 5’.

⁵⁷ Frölich von Frölichsburg, *Commentarius 1741* 259: ‘Item/da zwischen zwey Weibs= Bilder gar zu freche Antastungen und dergleichen Actus gesehen würden/die mehr verliebten als andern Personen eigentlich seyn/sonderlich/da etwa äusserliche priapische Instrumenta erfunde wordenn wären’.

⁵⁸ *Codex Austriacus ordine alphabetico compilatus d.i.: eigentlicher Begriff und Inhalt aller unter deß Ertzhauises zu Oesterreich [...] außgegangenen in des Justiz- und Politzey-Wesen [...] einlauffenden Generalien [...]*, 6 vols. (Vienna: 1704–1777).

⁵⁹ *Codex Austriacus, Appendix* (Vienna: 1777).

be strangled' before he is burned.⁶⁰ Three further instructions from the early 18th century⁶¹ deal with concealing the strangulation of the sodomite on the stake. Distrusting the effectiveness of the formerly used gunpowder sack, which was put around the convict's neck, strangulation was promoted as an alternative method to quicken death. These instructions aim at sparing the sodomite from a long and painful death, nevertheless they put much emphasis on keeping the strangulation out of the audience's sight. The emperor's mercy is not as important as the deterring aspect of the public execution. What is the animal's role in these instructions? Animals are mentioned frequently. The instructions stipulate that they are to be burned together with the sodomite. Yet the attention directed at them hardly brings them the status of supporting actors. They are merely instruments of sin that have to be extinguished from sight and memory.

Ferdinand Bratsch, an Austrian lawyer, published a handbook commenting on the *Ferdinandea* in the mid-18th century. Including the emperor's instructions in his book, he recommends mistrust of circumstantial evidence, even of the suspect's own confession.⁶² Instead, he demands a careful search for proofs. Taking an example from the judicial literature, he shows his readers how fatal it would be to mistake a confession for the truth.

I have to note a case here. A man confessed he had committed the horrible vice with an English mastiff. Therefore he was condemned to be burned. However, someone inspected the records and saw that the mastiff was pregnant when the vice was committed. Hunting experts attested that a pregnant dog would not allow anyone to have sex with it. Therefore the delinquent cannot have completed the vice. Consequently, he was not condemned to the stake, but punished arbitrarily.

Drawing his conclusions, the author continues:

Whenever a suspect tells you he has committed the sin with a certain beast, make sure that such a beast really exists or has existed. You have

⁶⁰ *Codex Austriacus* II 300–301.

⁶¹ *Resolution vom 28. September 1716*, in Suttinger J.B., *Additiones Consuetudinum Austriacarum Renovatae* (Nürnberg: 1718) 19–20; *Verordnung vom 20. April 1719*, in: Bratsch F.J., *Über Weiland der Römisch-Kayserlichen Majestät Ferdinandi des Dritten Peinliche Land-Gerichtsordnung in Oesterreich unter der Enns ersten und anderten Theil dienliche Anweisungen und nützliche Anmerkungen, wie auch alle hierüber weiters ergangene Hof-Resolutionen, Patenten, Generalien und Novellen [...]* (Vienna: 1751) 196–197; *Resolution vom Oktober 1720*, in Bratsch, *Über Weiland* 197.

⁶² Bratsch, *Über Weiland* 197.

to take into account the height of the delinquent in relation to the height of the beast, to find out if he was actually able to commit the crime. The same has to be observed, when the delinquent claims that he has used a chair.⁶³

The question of whether a suspect has completed the crime of bestiality by insemination is crucial from a judicial point of view. If he has not, the suspect is not guilty of bestiality, but of attempted bestiality, which is not punishable with the stake. If there is proof that the suspect has completed the crime, he has to face the death penalty. The harsh punishment of sodomites is culturally linked with the fear that the sexual mingling of two different species might result in human-animal hybrids. Bratsch explains that even if only a little of the human semen reaches the *vas bestiae*, it will be enough to have it ‘implanted in the animal’s blood’.⁶⁴ A judicial dissertation dating from 1720 renders the matter still more explicit, yet conceals its meaning using Latin: ‘Effectus quandoque in brutis est partus monstrosus’.⁶⁵ Apart from judicial literature, bestiaries, leaflets, and newspapers⁶⁶ illustrated the expected

⁶³ Bratsch, *Über Weiland* 194–195: ‘Hier ist der Casus anzumercken, daß einer bekennet habe, mit einer Englischen Docke dieses schandliche Laster begangen zu haben, wessentwegen er auch zum Feuer condemniret worden ist, da aber jemand diese Criminal-Acta eingesehen, und daraus ersehen hat, daß diese Docke zur Zeit dieses vollbrachten Lasters tragend gewesen, haben vor ihm Inquisten die Jägerey=Verständige eine Parere dahin von sich gestellet, daß ein Hund, so tragend ist, keinen anderen so lang, bis er ausgeschüttet, zulasse; mithin dieser Delinquent mit der tragend=gewesenen Englischen Docke das Laster nicht habe vollenden können, wessentwegen dieser Delinquent nicht mit dem lebendigen Feuer, sondern extra-ordinariè gestraft worden ist. Wann ein Inquisit aussaget, mit einem gewissen Vieh sich versündigt zu haben, muß man vor allem inquiren, ob ein dergleichen Vieh vorhanden, oder vorhanden gewesen seye; item muß man auch die Grösse des Delinquenten, und des Viehs ermesen, mithin hieraus erkennet werden, ob die That habe vollbracht werden können, welches ebenfalls zu observiren ist, wann der Delinquent sich eines Stühlerls bedienet zu haben vorgibet’.

⁶⁴ Bratsch, *Über Weiland* 195: ‘daß nemlichen zu Vollbringung der Sodomiterey mit einem Vieh nicht die völlige Einlassung des Menschlichen Saamens in vas Bestiae erforderlich, sondern schon genug seye, daß auch nur ein Theil vom Saamen in dasselbe würcklichen eingelassen werde, und hierdurch die Einpflanzung des Gebluets beschehe’.

⁶⁵ Strauch J., *Dissertatiuncula Juridica de Crimine Sodomiae* oder: Von der Sodomiterey (Halle: 1720) 8; more about the causes of monstrous births: Niccoli O., “Menstruum Quasi Monstruum. Monstrous Births and Menstrual Taboo in the Sixteenth Century”, in Muir E. – Ruggiero G. (eds.), *Sex and Gender in Historical Perspective* (Baltimore – London: 1990) 1–25 and Ewinkel I., *De monstis. Deutung und Funktion von Wundergeburten auf Flugblättern im Deutschland des 16. Jahrhunderts* (Tübingen: 1995).

⁶⁶ Buchner E., *Das Neueste von gestern. Kulturgeschichtlich interessante Dokumente aus alten deutschen Zeitungen* (Munich: 1911).

outcome of sexual misbehaviour: babies with animal characteristics, without a human soul.⁶⁷

To summarize: the judicial attitude towards animals was a quite functional one. Neither possessing rationality nor free will, animals were not able to commit a crime. However, animals could serve as instruments of sin and crime. As the Austrian author Franz Joseph Greneck put it in the mid-18th century:

Unreasonable animals lacking knowledge are not able to commit a crime. Nonetheless, there are situations that demand the killing of an animal, e. g. when it was used for, or contributed to a crime, then its memory has to be extinguished.⁶⁸

The normative regulations are quite clear. The abused animal is not considered as a criminal, but as the instrument of the criminal, whereas the sodomite is perceived as a criminal sinner. The instrument has to be destroyed. The sodomite has to be executed as a remorseful sinner. The question is whether or not the normative instructions were actually translated into action.

Prosecution

On May 13th, 1699, Georg Dörffl, a man of 75 years, was led to the place of execution in the Lower Austrian market of Pöggstall. In front of the local audience he was beheaded by a professional executioner. Georg Dörffl died accompanied by a cow, which had already been killed. The corpses of Dörffl and the cow were burned at the stake. The ashes were scattered. This dramatic scene is the conclusion of the trial against Georg Dörffl, taking place at the court of Pöggstall between October 28th, 1698, and May 13th, 1699. This episode also became

⁶⁷ Fudge E., "Monstrous Acts. Bestiality in Early Modern England", *History Today* (August 2000) 20–25.

⁶⁸ Greneck F.J., *Theatrum jurisdictionis Austriae oder Neu=eröffneter Schau=Platz Oesterreichischer Gerichtbarkeit, Darinnen zu ersehen die Gerechtsamkeiten welche in dem Erz=Herzogthum Oesterreich unter der Enns allen Ständen von dem allerhöchsten Lands=Fürsten, bis auf den geringsten Haus=Vatter in Ansehung eines jedwederen seinem Gebiet und Herrschaft zustehen* (Vienna: 1752) 15: 'Man kann doch sagen, das folgerisch und uneigentlich auch die Thier zum Augenmerck des Hochgerichts dienen, in so weit sie nemlich mit einem von dem Menschen begangenen Laster verwandtet, oder zu einen so groben Verbrechen etwas beygetragen, daß dessen Gedächtnuß anderen zum Beyspiel müsse nothwendig vertilget werden'.

the subject of a 50-page entry in the court book of Pöggstall, a narration justifying the proceedings. It was evidently written after the trial was over, based on court records which no longer exist. Nevertheless, the trial of Georg Dörffl is comparatively well documented. The old farmer Georg Dörffl lived with his wife in a separate part of the farm he had already handed over to his son Georg. The farm was situated in the village of Theya, belonging to the parish of Laimbach and the court district of Pöggstall. On October 22nd, 1698 Georg Dörffl was arrested in his house and taken into custody in Pöggstall. A few days passed until the first (official) examination took place. The court book reports that he was confronted with the rumour that he had engaged in unnatural sex and had committed the sodomitic sin. The answer given by the inquisit⁶⁹ is astonishing:

He has not done anything bad and would like to tell what has happened and why there is rumour about him. In fact he is physically damaged by a hernia. Whenever it hurts, his male member erects. In order to assuage his pain, he put his member close to the cow, when he was in the barn anyway, cleaning it out and feeding the cow. However, he has not penetrated the cow. This has happened in the cowshed three times.⁷⁰

This nearly medical explanation of bestiality as a kind of pain reliever did not satisfy the examining judges. It would be very unlikely that his pain arose accidentally three times, when he was in the cowshed. Georg Dörffl replied that it had been the other way round: when he suffered, he went into the cowshed, because the warmth might possibly help to relieve his pain.⁷¹ When questioned as to whether his pain was actually assuaged, Georg Dörffl had to negate. Then why had he done it a second and third time, the judges wanted to know. A bit perplexed he

⁶⁹ I prefer to stick with the old term ‘inquisit’ instead of using the modern formulation ‘prisoner awaiting the trial’.

⁷⁰ Examinations have been taken down in indirect speech until mid-18th century. St. Pölten, NÖLA, Kreisgerichtsarchiv [KGA] Krems, Herrschaftsarchiv [HA] Pöggstall, Hs. 102, Prozess gegen Georg Dörffl, fols. 103v–104: ‘Er habe weiter nicht Übles gethan, sondern wolle erzehlen, wie es hergangen, undt warumb Er in Verdacht u. geschrey were; Nembl. Er habe einen leibschaden und grossen bruch, welcher wan die schmerzen kommet Ihme das Mennliche glied dick auf baumete, diesen Schmerz nun zu stillen habe er, weillen er ohne dem der Kühe gefüttert und ausgeputzt habe, das Männliche glied zu der S:V: Kuhe gehalten, Jedoch nit hineingesteckt, und seye dises in seinem Kuhstall 3 mahl geschehen’.

⁷¹ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 104v: ‘Wan die schmerzen kommen sein seye Er wegen der Wärme in d[e]n Kühstall gangen, undt habe hernach also linderung gesucht’.

answered: 'He does not really know, the devil has seduced him to do so'. Hopefully, he added: 'If he has sinned, God the Father and the Virgin Mary will forgive him'.⁷² His hopes for remission and mercy were disappointed. Two further examinations are documented, taking place on November 10th and December 22nd, 1698. The judges asked suggestively whether Georg Dörffl had not sinned with the cow because of his own will and lust.⁷³ Nearly giving in, Georg Dörffl admitted that it had been so the second and third times he had put his member close to the cow. Backing out, he continued that it had come to his mind just in time to refrain from it.⁷⁴ The judges still doubted the inquisit's innocence. Under the pressures of long imprisonment and persistent questioning, Georg Dörffl finally confessed that he had penetrated the cow and had performed the sin lustfully.⁷⁵ He then had to answer technical questions: had he inseminated the cow? How exactly had he performed the crime? Had he put off his pants? How often had he done it, and with how many different cows? And, most importantly, had he been observed by anybody? The broken inquisit replied that his semen entered the cow only one time. He had propped himself up on the divider in the barn to commit the crime, but always kept on his pants. He had not seen anyone observing him. And, he added, he regretted his sin heartily.⁷⁶ In a last examination, only two days later, Georg Dörffl was asked to reconfirm his confession.

In order to reach a verdict in cases punishable by death, courts were obliged to send the records to legal scholars working for the Lower Austrian government. The records concerning Georg Dörffl were returned with the comment that the Georg Dörffl's confession was insufficient as long as there was no *corpus delicti* or testimony of an eyewitness. Further investigations had to be made. Surprisingly, the court seemed to know very well whom to summon: Georg Dörffl's son Georg and the maid Sophia Steinbergerin. No other family members' or servants' testimony

⁷² St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 104v: 'habe er gesündigt, würdt Ihme Gott und Unser Liebe frau wider helfen'.

⁷³ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 106r: 'Es Niemahl aus einer freywillig gekommenden begierdt geschehen seye [...] in disen begürden würcklich Vorgenomen mit der S:V: Kuhe zu sündigen'.

⁷⁴ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 106r.

⁷⁵ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 108r: 'sein Männliches Glied würcklich [in die Kuh] hieneingesteckt undt d[a]s werk völlig mit begierdt begangen'.

⁷⁶ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 108r.

was asked for. The explanation can be found a few pages later in the court book: the inquisit's son was very probably the one who initiated his father's trial. As it turns out, young Georg Dörffl had spoken with a village judge from Laimbach about the problems he had with his father. He told him that he was afraid of losing the farm if the authorities found out about the sin his father had committed. Probably the village judge then informed the court of Pöggstall, which led to Georg Dörffl's imprisonment. What exactly young Georg Dörffl did tell the judge remains unclear. Presumably, he mentioned the observation the maid told him she had made. He claimed that he had tried to speak with his father, who got very angry and threatened him. He then did not dare to ask him anymore.⁷⁷ Maybe young Georg Dörffl just wanted to ask the village judge's advice. However, it is more probable that he wanted his father imprisoned without having to denounce him directly. The testimony of the maid Sophia Steinbergerin played a key role in the final verdict. She described how she had seen Georg Dörffl in the cowshed committing the crime of bestiality, while she was fetching straw. When asked for details, she said: 'He had not put off his pants, he propped up the divider, straddling his feet. With one hand he held the cow's tail, the other one was on the divider'.⁷⁸ Quite an acrobatic achievement for a 75 year-old man. The witness continued: 'She could see well that he managed to put his male member into the cow, then moved heavily and completed the act like a bull. All in all it took a quarter of an hour'.⁷⁹ Later, when she went into the cowshed to get a dung fork, she saw that the cow behaved as if a bull had been with her.⁸⁰ To make sure that the records would not be sent back a second time by the legal scholars, Sophia Steinbergerin had to take an oath and was confronted with Georg Dörffl.

⁷⁷ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 110v–111r: 'habe Ihme aber starck angefahren undt gesagt, Es vergingen Ihme solche sachen [...] weiters darvon zu reden [...] nit getrauet'.

⁷⁸ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 113r: 'Nein die Hosen habe er nit ausgezogener gehabt, seye auch auf nichts gestanden. Sondern er habe sich mit den fussen auf die Lorwandt gespreizet, undt also starck hinauf gebahnet, mit der einen Handt hab er der S:V: Khue Schweiff gehalten, mit der andern handt habe er sich auch an die lorwandt gehalten'.

⁷⁹ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 113r: 'Ja sie habe gar wohl gesehen d[a]s Er sein Männliches Gliedt hinein gethan, undt gutt gelangen können, wie Er sich dan starck beweget, undt die sach wie ein stier verrichtet habe; seye schier ein Viertel stundt Umbgegangen mit der Verrichtung'.

⁸⁰ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 113r.

February 1699 had passed when the (by then extended) records were sent to Vienna again. A group of eight legal scholars wrote the expertise. Not everyone pled for the death penalty at first, but finally they recommended that the judges condemn Georg Dörffl to be beheaded and then burned together with his cow.⁸¹ As we already know, the judges at the court of Pöggstall followed the advice.

Georg Dörffl's case is extraordinary. An old, married and wealthy man was condemned to death. His wealth can be ascertained from the testament he left, indicating that he possessed land and a few hundred florins. His last will was written only a few days before his execution. The trial expenses were to be paid from Dörffl's property, monks from the franciscan order in Ybbs received 3 florins for celebrating requiems, and the inhabitants of the poorhouse were to get 1 florin for praying for Georg Dörffl's soul. The remaining money was to be divided among his wife and children, except his son. Young Georg Dörffl could not get any money, as his father had lent him 150 florins, which was more than enough.⁸²

Georg Dörffl's execution was to remain the only one for bestiality in the court district of Pöggstall. Three generations later, in 1777, Lorenz Weissenlechner was accused of fornication and bestiality. The judges submitted a request to burn him at the stake, but the Lower Austrian government decided that 10 years of forced labor would be enough.⁸³

The prosecution and judgement of *sodomia* depended on the concrete social, economic and political circumstances. It is no coincidence that a series of trials *in puncto sodomiae* can be observed in the troubled years of the very late 16th and early 17th century. These trials took place in Wartenburg, a south-western court district of Upper Austria. It was governed until 1627 by the protestant family of Polheim, who then had to leave the recatholicized country. In times of competing denominations moral issues were of greater concern than ever. In the years from 1598 until 1622, six cases *in puncto sodomiae* were brought to trial. Each of the six accused men was condemned to death, and the sentence was carried out. In the same period of time 'only' three other trials, two for theft and one for fraud and forgery, ended with the death penalty.

⁸¹ St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 124v–125r.

⁸² St. Pölten, NÖLA, KGA Krems, HA Pöggstall, Hs. 102, fol. 126r–126v.

⁸³ St. Pölten, NÖLA, KGA Krems, K. 2025 (HA Pöggstall, Strafsakten 1747–1816).

The first ‘sodomite’ to die was the coach-builder Hans Schembperger. He was imprisoned in late November 1598, and was condemned, after being tortured, by a council of local judges on December 2nd:

because Hans Schembperger has broken faith with his governor and has committed many secret thefts during day and night time, he should be condemned to hang. However, there is still the most abominable vice of sodomitic unchastity, which he has committed, with many unreasonable beasts, against the human nature. So he shall be punished with the fire from life to death.⁸⁴

His sentence was finally commuted to decapitation, but his corpse had to be burned. No specific animal is mentioned in the account of this trial and, as far as we know, no animal was burned together with his corpse. In October 1599, not even one year after Hans Schembperger’s execution, Wolf Haager was taken into custody. In the course of his inquisition, he confessed to being a notorious horse thief. He also revealed that he had had something ‘to do’ with a cow in his adolescence. The court records note:

still living at home with his father, being around 14 years old, he had to bring one of his father’s cows to the stock bull in the neighboring village of Neidharting. On his way, the bad enemy (satan) told him to commit the sodomitic unchastity against nature with the cow, and so he did.⁸⁵

He further confessed to having abused three mares, and to having married a second time, though his first wife was still alive.⁸⁶ Wolf Haager was tortured during the questioning just as Hans Schembperger had been one year earlier. The number of terrible crimes Wolf Haager

⁸⁴ Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26, Urtl Hannsen Schembpergers (2.12.1598): ‘diweil bemelter SchembPerger alß ein geliebter Underthan neben seinem Eheweib an ihren gnedigen herrn iber erzaigthe guetthatten treuebruchig worden und Vielfeltig haimblichen diebstall bey tag unnd nacht begangen, Unnd er woll deßwegen mit dem Strang am leben zustraffen währ, So ist doch daß aller abscheulichst laster der Sodomitischen unkeuschhait daß er mit unterschiedlichen unnd Unnvernünfftigen Vieh Wider die menschlich Natur gehandelt, hierinen zu observiren. derowegen soll er mit dem Feuer vom leben zum Todt gestrafft werden’.

⁸⁵ Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26, Gütige und peinliche Urgicht und Bekahndnuß (21./22.11.1599): ‘alls Er noch dahaimb bei seinem Vatter war, und damalls etwa seines allters im funfzehnten Jare gewest, hette Er bemelltes seines Vattern Khue aine, Reverendo Zu ainem Stier gehen Neitharting getriben. Under dessen Er auß Eingebung des bösen feindts. auf dem Weeg, mit ernannter Khue die Sodomitische Unkeuschait wider die Natur begangen’.

⁸⁶ Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26, Gütige und peinliche Urgicht und Bekahndnuß (21./22.11.1599).

finally confessed to led to his execution. On December 10th, 1599 he was condemned to be hanged, his corpse being burned on a stake afterwards. Nobody pled for mercy, the sentence was carried out without alleviation.⁸⁷ About two years later, in 1602, Johann Pöldeneder was condemned to death for theft and bestiality. He was beheaded and his corpse was burned. No records of his trial remain, but his case is mentioned in an older study.⁸⁸ In January of 1604, Abraham Pichler tried to commit suicide. His plan failed and he was arrested. Questioned as to the reason for his sinful deed, he told the court that he was so desperate because his stepdaughter had run away. He was worried that she would drown herself, so he wanted to hang himself. As it turned out later, Abraham Pichler had raped his stepdaughter, in judicial terms 'he had committed incest with her, using violence'. It remains unclear how many times Abraham Pichler was questioned, but we certainly know that he was tortured. The result of his inquisition is an astonishing account of criminal activities, noted in chronological fashion. As an adolescent, he committed the sodomitic vice for the first time, when his mother brought a white hen to his bed, hoping the warmth there would encourage the hen to lay an egg. Instead Abraham Pichler was seduced by the devil and 'engaged in the horrible vice against human nature'. Furthermore, he was involved with a calf in his father's barn, a red cow belonging to his sister, a black spotted calf in the neighbor's barn and a white sheep, also belonging to the neighbor. The account of sodomitic activities is interrupted by the narration of two small thefts, then the sins during his matrimony are enlisted. He confessed to having sinned with his own cow (which was no longer living), with his light brown mare (which he had sold to someone in Bavaria), with his black spotted cow, and finally with his brown sheep (which died later on). The council of judges met on February 27th. Unsurprisingly, Abraham Pichler was condemned to death. The verdict stated:

⁸⁷ Linz, OÖLA, HA Wartenburg, Schubert 10, Faszikel 26, Schreiben Joseph Khremers an Wolf Nidermaier (11.12.1599).

⁸⁸ Strnadt J., *Materialien zur Geschichte der Entwicklung der Gerichtsverfassung und des Verfahrens in den alten Vierteln des Landes Ob der Enns bis zum Untergange der Patrimonialgerichtsbarkeit* (Vienna: 1909) 194–195. Probably the records got lost during the time when the records were kept in the castle of Wartenburg. The records of Wartenburg were delivered to the central archive of Upper Austria only in 1948. Grüll G., *Verzeichnis der Herrschaft Wartenburg* (G 33a) V–XI.

because he had not only committed several small thefts, but also committed the sin against human nature with a mare or motherhorse, three calves, two cows, two sheep and a hen, he shall be chained up to a pillar on the stake and then be burned alive together with the still existing cow.⁸⁹

Very probably his own black spotted cow had to be killed and burned with him. However, the verdict was not carried out as the judges had decided. The court district's governor ordered instead that 'the poor sinner shall be bound to a ladder and get a sack with gunpowder around his neck' before he is burned alive; and so it happened.⁹⁰ A few years later, on October 24th, 1612, Friedrich von Polheim, owner and governor of the court district of Wartenburg wrote to the legal scholar Abraham Schwarz:

I have a man arrested, forty or more years old, who has never had a wife. Unfortunately he was caught committing the crime against nature reverendo with a sow. [...] Though he was questioned and tortured, he does not confess anything else. Neighbours deposed he had never done anything bad. [...] Now some people are of the opinion that Georg Wegleuthner, for committing this crime only once and not confessing anything else even under torture, shall abjure all vengeance and then shall be banned from my court district.⁹¹

⁸⁹ Linz, OÖLA, HA Wartenburg, Schubert 10, Faszikel 26, Mallefiz Urtl über Abrahamen Pichler von Retl (27.2.1604): 'Auf des bey der Landt Gerichts Herrschafft Wartenburg verhaftten Abraham Pichlers gueth und Peyndlich darüber beharten bekhandtnus, wierdet durch das bestellte Khays Paanngericht in osterreich ob der Ennß sambd deme besezten rechts geding hirmit zu recht erkhendt Weillen sich in seiner Aussag lautter befunden das Ermelder Pichler nit allain clainre diebstall begangen, sonndern wider die Menschliche Natur R[everen]do mit ainem Mueter Pfärdt oder Stueden, drey khalben, zway Khüen, zwein Schafen und ainer henne zuegelassen, und die unzucht demnach ermelder Thätter solcher höchst Thättlicher verbrechen willen an der gewöndlichen Richtstatt auf dem Scheitterhauffen an ein Seylen geschnidt und nebd der noch verhandenen Khue Lebendig verprendt werden'.

⁹⁰ Linz, OÖLA, HA Wartenburg, Schubert 10, Faszikel 26, Notiz am Mallefiz Urtl über Abrahamen Pichler von Retl (27.2.1604).

⁹¹ Linz, OÖLA, HA Wartenburg, Schubert 10, Faszikel 26, Schreiben Friedrichs von Polheim an Dr. Abraham Schwarz (24.10.1612): 'Ich hab alhir eine gefangene Manns Person bey 40 oder mer Jar alt, die nie khain Weib gehabt, welche laider, d[a]s Sodamitische Werckh wider die Natur, Reverendo mit einer Schwein, begangen, auch an wahrer Thatt, betretten worden ist. [...] über vielfeltiges güetig und peinliches fragen und Zuesprechen, will er sonst nichts, alls diß ainige factum bekennen [...] So hatt man auch, Nachdem im hiesigen Refier seine Eltern gehabt, und under der Paurschafft von Jugend auf bekhandt, zuvor nichts unbilliches oder unErbares gehört noch gesehen. [...] So sein doch Personen verhandten, die vermainen, weill der gefangene diß delictum Nur Einmall begangen, und über die außgestandne Tortur merers nit

For Friedrich von Polheim and his court district administrator Wolf Nidermair, it was the fifth case of *sodomia* within 14 years. The trials and death penalties carried out in the preceding years certainly were a financial burden. Each time, the council of judges had to convene. The chairman (Bannrichter), the executioner (Freimann) and several servants had to travel from Linz to the south-western district of Wartenburg. Accommodations had to be prepared and the travellers had to be supplied with food and wine; not to mention the costs for the execution itself. Building and guarding the stake, and arranging everything according to the verdict was quite expensive. From an economic point of view, it is understandable that Friedrich von Polheim wanted to avoid a further execution. Maybe he also took pity on Georg Wegleuthner. However, following the normative setting of the Upper Austrian criminal code of 1599, the owner of a court district was neither allowed to pass a sentence nor to grant pardon. So Friedrich von Polheim was cautious when he addressed the legal scholar:

Now this is a very severe affair, which has to be dealt with carefully. Therefore I am moved to consult you, doctor, as a legal scholar, I only ask you, if in such a case, when the unpleasant sodomitic crime against nature, with a beast, has only happened once, can the punishment be limited and reprieve be granted? If so, how, in which form can I pardon the man? How can I avoid acting against divine and secular law, and how can I take on responsibility? I would like to be merciful, as far as I am allowed as owner of the court district in front of God and secular authorities.”

He added a postscript:

In case the delinquent could be pardoned and his life could be saved, the question arises, what shall be done with the reverendo sow with which Georg Wegleuthner was caught in the act.⁹²

Bekhenndt, Ich müge Ime gegen Einer Urphed mit Verweisung meines Landgerichts, woll wider ledig lassen’.

⁹² Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26, Schreiben Friedrichs von Polheim an Dr. Abraham Schwarz (24.10.1612): ‘Nun sein dises sehr schwere und gewissenhaffüge sachen, daher Ich verursacht werde, den herrn doctor als einen Rechtsgelehrten zu consuliern, und ist mein frag allain d[a]s, ob in Einem sölchen Casu, wo die laidige Sodomitische That wider die Natur, mit einem Viech Nicht öffter alls Anmall beschehen, Ein Limitation und begnadung statt hat. Item wie und auf was weeg, dergleichen begnadung erzaigt werden khann, damit gleichwoll dem Gotlichen und Weltlichen Rechten nicht zu vill abPruch beschehe, noch Ich mir hirdurch eine schwere Verandworttung auflade, Ich wolte zwar neben dem Rechten, auch gern

The last question turned out to be unnecessary, for the legal scholar did not recommend a pardon. Quite on the contrary, he insisted on the death penalty,

because this vice was not a common, but one of the most terrible crimes, delictum atrocissimum. [...] God has explicitly ordered that such sodomites shall be burned together with the beasts (*Exodus 22, Leviticus 20*). God has executed the same punishment for the inhabitants of Sodom and Gomorrah because of this blatant vice (*Genesis 19,37*). If secular authorities did not punish sodomia severely, all the people without any difference could be concerned with desolation, rising prices, pestilence, earthquakes and other punishments.⁹³

Georg Wegleuthner was beheaded. His corpse was burned with the abused sow.⁹⁴ Ten years later, in 1622, Johann Huebmer shared the fate of Georg Wegleuthner. He was condemned to be beheaded and then burned for murder, bestiality and forgery.⁹⁵ One hundred years passed until someone in the court district of Wartenburg was next accused of *sodomia*. However, Hans Schmidt was not condemned to the stake in 1722, but hanged. Obviously the charge of theft outbalanced the accusation of incest and *sodomia* in his case.⁹⁶

What may be learned from a consideration of the series of trials *in puncto sodomiae* which took place in the protestant court district of Wartenburg in the late 16th and early 17th centuries? Throughout these 24 years of intense prosecution, Friedrich von Polheim and his administrator Wolf Nidermair were responsible for the court of Wartenburg. The trouble they had with the harsh punishment of *sodomia* increased

Barmherzigkheit mit underlauffen lassen, doch so weith es mir alls landgerichtsherrn, gegen Gott und der hohen Obrighkheit zuverantworten ist’.

⁹³ Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26, Schreiben Dr. Abraham Schwarzs an Friedrich von Polheim (28.10.1612): ‘weill dises Lastern mit der gemainen, sonder höchsten Verbrechen aines ist, delictum atrocissimum, [...] Welches nit allain die Weltliche Rechten am leben zu straffen befolhen, [...] Sonder auch worden ist Gott von himmel selbsten mit außtruckhlichen worten, Exod. 22. und Levit. 20. da er außtruckhlich beflcht, daß dergleichen Sodomiten, mit sambt dem Viech, sollen verbrennt werden. Ja Gott hat selbst solche straff an denen zu Sodoma und Gomorra über diß laster exequirt, alß welches gar gehn himel schreyt, Genes. 19 und 37. und allerlay Landsverderbung, Theurungg, Pestillenz, Erdbiden und andere straffen, wo mans nit mit ernst straffet, über die Inwohner bringet’.

⁹⁴ Strnadt, *Materialien* 195.

⁹⁵ Strnadt, *Materialien* 194–195.

⁹⁶ Death by hanging was the typical sentence for notorious thieves. Linz, OÖLA, HA Wartenburg, Schuber 10, Faszikel 26 (Sodomie 1598–1722); Linz, OÖLA, HA Wartenburg, Schuber 11 (Verbotener Geschlechtsverkehr 1717–1831).

appreciably over the course of time. In the case of Abraham Pichler (1604), Friedrich von Polheim altered the verdict without authorization from the archduke's government. In the case of Georg Wegleuthner, he even asked for a way to pardon the delinquent, but without success. On the one hand, moral and political interests motivated the prosecution of *sodomia*; on the other hand, the economic burden arising from the trials promoted the interventions of the court district's owner and administrator. Except for Georg Wegleuthner, who was accused exclusively of bestiality, all the other delinquents were accused of several crimes. According to the records, Hans Schembperger was a notorious thief. The same can be said of Wolf Haager, who was accused of countless horse thefts, as well as bigamy and fornication. Abraham Pichler was found guilty of attempted suicide, incest, making a pact with the devil, and several thefts. In short: the charges contained social dynamite. People who stole and disregarded fundamental rules of community life had to face sanctions. The combination of economic and sexual crimes was consequently punished severely. In the 'dramaturgy' of the trials, *sodomia* always was the gravest of all the committed crimes. The confession of *sodomia*, even if it was obtained under torture, provided an irrefutable argument for the judges to condemn a man to death. In this regard, Wartenburg was by no means exceptional. All known trials *in puncto sodomiae* which took place in Upper and Lower Austria in the 16th and early 17th centuries ended with a death sentence, in most cases with the stake. As far as may be determined from the sources, the court district governor's denominational affiliation (either catholic or protestant) had no bearing on the judgment of *sodomia*.⁹⁷

⁹⁷ Several executions took place in the Upper Austrian court district of Kremsmünster. In 1581, Stephan Irrendorfer was burned alive for reiterated bestiality. In 1594 Wolf Lechner was beheaded and burned for theft, adultery, murder, arson, and bestiality. In 1665, Sebastian Wiser was beheaded and burned for bestiality. In the Upper Austrian court district of Spital am Pyhrn Leonhard Finsterrigler was burned alive for theft, adultery, and reiterated bestiality in 1594. In 1639, Daniel Weissenstainer was beheaded and burned for fornication and bestiality. In 1660, Wolf Gösweiner was decapitated for theft and bestiality. In the Upper Austrian court district of Weinberg, Wolf Kauzenberger was beheaded and burned for theft and reiterated bestiality in 1599. In 1604, the rebellious farmer Sigmund Träxl was condemned to be burned alive for rebellious behaviour, violence, fornication, adultery, and reiterated bestiality. In Vienna, Hans Ruob was burned alive for 'unnatural sins' in 1637. In 1672, Jacob N. shared Hans Ruob's fate. In 1674 Jacob Fuehr was beheaded and burned for reiterated bestiality. In the Lower Austrian district of Gaming Paul Türckh was burned alive for arson, incest, and bestiality in 1680. Kremsmünster; StiftsA Kremsmünster, Kasten Ia/III/a: Ingedenk-Prothocoll; Linz, OÖLA, StiftsA Spital am Pyhrn, Schuber 202, 648;

While the court made assiduous efforts to convict the suspects of bestiality, the beasts involved were nothing but marginal figures. The sources do not specify whether the abused animals were searched for. Was the court, consisting of honourable farmers and chaired by a professional judge, at all interested in killing useful working animals? If someone was caught in the sodomitic act, as had happened to Georg Wegleuthner, the court probably had no choice but to take the animal into custody as well. In the case of Wolf Haager, the sodomitic activities had happened many, many years ago, so any search for the animals would have been unsuccessful. In the case of Hans Schembperger we do not even know which animals were involved and when. Abraham Pichler was burned together with a cow, probably his own, as no search for any other animals is documented in the records.

What can be said about the prosecution of *sodomia* in early modern Austria on a broader scale? This study is based on the records of 53 trials *in puncto sodomiae*, which took place in the provinces of Lower and Upper Austria between 1581 and 1780. 42 of the 53 can be identified as bestiality cases, as they either name specific animals, or use the term *bestialitas* to indicate the crime. In the remaining 11 cases, *sodomia* either remains unspecified, or the records reveal heterosexual or same-sex relations.⁹⁸ Regarding the 42 bestiality cases, the question of which and how many animals were abused is difficult to answer. Court records do not always name the abused animals. Some delinquents, under the pressure of torture, enumerated a whole string of working animals, e.g. Abraham Pichler, who told the court he had ‘sinned against nature with a mother horse or mare, three calves, two cows, two sheep, and a hen’. Similarly, Sigmund Träxl, a rebellious farmer from the Upper Austrian district of Weinberg, confessed in 1604 under torture that he had committed ‘the very sinful sodomitic vice with four cows, a mare and a sheep’.⁹⁹ In 1644 Sebastian Offenstainer admitted not only to several thefts, to adultery, and to incest, but also to having had sex with a foal, a goat, two cows, a she-ass, three mares, and a sheep.¹⁰⁰

Linz, OÖLA, HA Weinberg, Schubert 123; Wien, WStLA, Unterkammeramtsrechnung (UKAR) 1637; Wien, WStLA, Hauptarchiv-Akten (HAA) 1b/1686.

⁹⁸ The trials of Isaak Löbl and Magdalena Gallin, Johann Georg Wolfshuber and Anna Maria Wolfshuberin concern heterosexual practices, while the trial of Vincenz Wötzenbacher deals with same-sex masturbation.

⁹⁹ Linz, OÖLA, HA Weinberg, Schubert 123, Urteil (1.9.1604).

¹⁰⁰ Wien, Haus-, Hof- und Staatsarchiv [HHSStA], SchlossA Grafenegg, Buch 415, fol. 43r–46v: Guett: und Peinliche Bekhandtnus Sebastian Offenstainers (5.11.1644).

The animals mentioned were always marked as females, whereas the sodomite could be compared to a male animal. This was the case for Georg Dörffl, who ‘acted like a bull’ according to the testimony of the maid. Though construed as a ‘crime against nature’, bestiality was perceived within the heterosexual matrix. In spite of being dehumanised, the sodomite’s maleness was beyond doubt.

Another example of dehumanisation can be found in the trial of Isaak Löbl and Magdalena Gallin, taking place in the Upper Austrian court of Freistadt in 1779/80. This case is extraordinary as it concerns the suspicion of heterosexual sodomit practices between a Jewish peddler and a Catholic day labourer. In the correspondence between the court’s administrator and the consulted legal scholar, the delinquents are frequently humiliated. Isaak Löbl is referred to as a ‘Hebrew knight’, a ‘Hebrew billy-goat’, a ‘Jewish billy-goat’ and a ‘stinking beard of a goat’, whereas Magdalena Gallin is cynically called ‘mistress of his heart’, ‘Christian goat’, ‘unchaste sack’, ‘decent virgin’, ‘slut’ and ‘Christian hussy’.¹⁰¹ Beyond the other offenses, the verbal equalization with goats indicates the loose morals Isaak Löbl and Magdalena Gallin were accused of. Goats typically symbolized perversion and promiscuity.¹⁰² Other delinquents, like Hans Schembperger or Wolf Kauzenberger, who was sentenced to death in Weinberg in 1599, were accused of having been unchaste with many different animals.¹⁰³ As ‘many’ and ‘different’ animals are neither countable nor definable, they cannot be taken properly into consideration. The animals mentioned in the accusation *in puncto bestialitatis* must be excluded as well. The prevailing number of the analysed records *in puncto sodomiae* concern observed or suspected sexual relations between men and animals. Keith Thomas stated with regard to early modern England that bestiality mostly concerned cows

¹⁰¹ Linz, OÖLA, HA Freistadt, Schubert 23, Schreiben des Dr. Franz Xaver Gruber an den Freistädter Landgerichtsverwalter (16.02.1780): ‘hebräischer Ritter’, ‘hebräischer Bock’, ‘jüdischer Bock’, ‘stinkender Bocksbart’, ‘Herzens Gebietherin’, ‘christliche Ghaiß’, ‘unzüchtiger Schleppsack’, ‘zartes Jungfäulein’, ‘liederliches Band’, ‘christliches Luther’. See also Hehenberger S., “‘Die Löbl Isaackische Liebes-göttin und ihr hebräischer Ritter’. Ein Sodomieprozess (Freistadt 1779/80)” in: Griesebner A. – Lutter T. (eds.), *Die Macht der Kategorien. Wiener Zeitschrift zur Geschichte der Neuzeit* 2, 2 (2002) 38–56.

¹⁰² Salisbury J.E., *The Beast Within. Animals in the Middle Ages* (New York – London: 1994) 82.

¹⁰³ Linz, OÖLA, HA Wartenburg, Schubert 10, Faszikel 26, Urteil gegen Hans Schembperger (2.12.1598) sowie Linz, OÖLA, HA Weinberg, Schubert 123, Todesurteil gegen Wolf Kauzenberger (11.1.1599).

and mares.¹⁰⁴ The biologist Midas Dekkers explains the preference for mammals with an anatomic similarity to women. Regarded from behind, he states, cows, she-asses and mares are equipped with hips, buttocks and thighs comparable to those of women. This could and can be quite tempting, he supposes.¹⁰⁵ Whether it was because of this specific attraction or not, cows and mares indeed constitute the majority among the abused animals in early modern Upper and Lower Austria. Twenty-one cows are mentioned in the records, followed by ten mares, six sheep, four calves, three goats, two sows, one foal, one she-ass and one hen. Forty-nine animals are explicitly named.

Now, how many animals were actually killed for being men's instruments of sin? Few indeed, if we trust the sources. As I have already mentioned, in practice, the courts were not very interested in the elimination of abused animals, as the search for them and their killing only caused additional work and (often) additional costs. Therefore the standard phrases that an animal had already perished, or that it had been slaughtered years ago seem to have suited the judges. If an abused animal was still in the possession of the condemned sodomite, then it was quite likely to die with its owner, as we see from the cases of Georg Dörffl and Abraham Pichler. Three mares, six cows, one sow and one calf were provably killed. Once an unspecified beast had to be burned.

Looking at the death sentences and the actual executions reveals that each of the seven trials in the 16th century ended with the death penalty and six of the condemned men were actually executed.¹⁰⁶ Sixteen out of twenty-two trials from the 17th century ended in death sentences. Thirteen executions are documented. Two out of twenty-four trials from the 18th century ended in death penalties; one was actually carried out. Superficially, this might be taken for proof of increasing mercy in the 18th century. Upon closer examination we find the matter is not so simple. The sources for the 18th century are often incomplete. In nine of the twenty-four trials, no verdict has been preserved, let alone any proof of the execution. All in all, the records include the

¹⁰⁴ Thomas K., *Man and the Natural World. Changing Attitudes in England 1500–1800* (Hammondsworth: 1984) 119.

¹⁰⁵ Dekkers M., *Geliebtes Tier. Die Geschichte einer innigen Beziehung* (Munich – Vienna: 1994) 84.

¹⁰⁶ The actual execution of a death sentence can be proved either with accounts enlisting the costs, notes in the records or short entries in court books.

verdicts for forty-three of the fifty-three analysed cases, the remaining ten have been lost.¹⁰⁷

Out of 25 death sentences, 22 sodomites were condemned to the stake, whereas two were sentenced to be decapitated and one to be broken on the wheel. This high rate of 'fire verdicts' can be explained in the mosaic tradition. In mosaic law, certain sexual contacts were considered as grave sins that had to be punished with the stake: incestuous liaisons, fornication with a priest's daughter, and bestiality (*Leviticus* 20,11–17; 21,9). Roman law also punished arson, forgery and treason with the stake. In medieval and early modern times, several religious and sexual delicts were punishable by death at the stake.¹⁰⁸ According to the *Carolina*, released in 1532, the cathartic power of the fire should help to save the souls of remorseful sinners, who had been condemned for forgery, witchcraft, sodomia, arson and theft of a monstrance.¹⁰⁹ In 17th and 18th century Austria, theft in a church and blasphemy were also punishable with the stake.¹¹⁰ If a person was accused of more than one crime, the punishment for the gravest delict had to be carried out. A condemnation to the stake could be mitigated by decapitating or strangling the convict before the fire was lit. Until the late 17th century the use of a gunpowder sack was also considered a merciful end. Some of the delinquents condemned to the stake had only confessed *sodomia*, others also confessed adultery, bigamy, fornication, incest, arson, and theft. Nine out of twenty-two men condemned to the stake were burned alive, ten were beheaded and two strangled beforehand. In one case a gunpowder sack is mentioned. Proof of the actual execution could be found for seventeen of the twenty-two trials, indicating a killing rate

¹⁰⁷ Verdicts are missing in the trials against: Hans Schachner (Freistadt/ Weinberg 1699), Johann Haan (Freistadt 1721), Johann Pichler (Weinberg 1721), Hans Schmid (Wartenburg 1722), Hans Gadereder (Freistadt 1724), Matthias Wegschaider (Mitterau 1728), Hans Schmid (Wartenburg 1722), N.N. (Obernberg 1741), Vincenz Wötzenbacher (Gaming 1742) and Johann Hauer (Schiltern 1765/1766).

¹⁰⁸ Erler A. – Kaufmann E. (eds.), *Handwörterbuch zur deutschen Rechtsgeschichte*, vol. 1 (Berlin: 1971) col. 1125–1128; Zedler, *Großes vollständiges Universal-Lexikon* 47 (1746) col. 239–241.

¹⁰⁹ *Carolina*, Art. 109 (Zauberei), Art. 111 (Münzfälschung), Art. 116 (Sodomie), Art. 125 (Mordbrennen), Art. 172 (Diebstahl einer Monstranz).

¹¹⁰ *Ferdinanda*, Art. 59 (Gotteslästerung), Art. 60 (Zauberei), Art. 73 (Sodomie), Art. 83 (Mordbrennen), Art. 85 (Kirchendiebstahl), Art. 87 (Münzfälscherei); *Theresiana*, Art. 56 (Gotteslästerung), Art. 58 § 12 drittens (Zauberei mit böswilligem Teufelsbündnis), Art. 63 (Münzfälschung), Art. 74 (Sodomie), Art. 95 (Kirchendiebstahl), Art. 99 (Brandstiftung/ Mordbrennen).

of at least 77 %.¹¹¹ The authorities' interest in executing the sodomite surpassed by far their interest in eliminating an abused animal.

Conclusion

21 witch trials took place in Lower and Upper Austria between 1581 and 1780; in comparison to that number, the (now documented) 53 trials *in puncto sodomiae* from the same time period are an empirical argument for further investigations into this field. Taking into account that the actual prosecution of various crimes in early modern times often deviated from the normative instructions in criminal codes (and judicial literature), the rigidity and consequence in the prosecution of *sodomia* is exceptional.¹¹² While the jurisdiction for many delicts was more lenient than the corresponding paragraphs had laid down, the crime of *sodomia* was mostly punished without mercy. In fact, men accused of bestiality were comparatively often condemned to be burned at the stake, especially in the 16th and 17th centuries.

How can this phenomenon be explained? Why did secular authorities perceive and judge bestiality as an unforgivable crime? Several reasons for the rigid punishment of bestiality in early modern Austria can be adduced. The most important in my view is that bestiality questioned human identity. The difference between men and animals constituted a grave issue for ancient philosophers, Christian theologians and early modern scientists. Depending on a philosophical, theological or scientific perspective, human supremacy was based on either the higher quality of the human soul, God's will or the natural order. Above and beyond these differences, it was generally affirmed that rationality and language elevated humans above all other creatures. Men accused of bestiality

¹¹¹ Actual executions: Stephan Irrendorfer (Kremsmünster 1581), Leonhard Finsterigler (Spital am Pyhrn 1594), Wolf Lechner (Kremsmünster 1594), Hans Schembperger (Wartenburg 1598), Wolf Haager (Wartenburg 1599), Wolf Kauzenperger (Weinberg 1599), Abraham Pichler (Wartenburg 1604), Georg Wegleuthner (Wartenburg 1612), Hans Ruob (Wien 1637), Daniel Weissenstainer (Spital am Pyhrn 1639), Jacob N. (Wien 1672), Jacob Fuehr (Wien 1674), Paul Türckh (Gaming 1680), Andreas Hauser (Kremsmünster 1691), Georg Dörffl (Pöggstall 1698/99), Stephan Pfenning (Wien 1699) and Lorenz Weiss (Scheibbs 1739).

¹¹² For the prosecution of bestiality in early modern Scotland see: Maxwell-Stuart P.G., "‘Wild, filthy, execrable, destabill, and unnatural sin’: bestiality in early modern Scotland", in Betteridge T. (ed.), *Sodomy in Early modern Europe* (Manchester 2002) 82–93.

lost this human status. They were dehumanised by their presumed or witnessed ‘unnatural’ activities. Though dehumanised, the sodomite’s maleness remained unquestioned. In theory as well as in practice, ‘the sodomite’ was perceived as an active male abusing a female animal. Further reasons for the harsh condemnation of bestiality were physical and metaphysical fears. Performing bestial acts blurred the boundary between humans and animals. People feared the emergence of hybrids resulting from forbidden sexual intercourse with animals. Even some judicial authors were afraid of monstrous births as the possible outcome of ‘unnatural’ sex. Closely linked to the horror of hybrids was the metaphysical fear of God’s wrath. According to a Justinianic novella, if the worst crimes remained unpunished by secular authorities, catastrophes of the most horrible proportions would be the inexorable consequence. Early modern criminal codes and the judicial literature interpreting the law promoted this fear, referring to ancient law and the Old Testament. From a religious point of view, sovereigns were responsible for their subjects’ deeds. Sins and crimes were constructed in similar ways. They should be avoided, but if they had been performed, they had to be regretted and confessed by the sinner/criminal. As *sodomia* was one of the worst sins and crimes, secular courts, being subordinated to the sovereign, had to take vigorous action – as indeed they did.

As opposed to the “active” delinquents, the abused animals were nothing but the instruments of sin. While the criminal codes and further judicial instructions emphasized the necessity to kill them, the actual efforts made to find and eliminate the abused animals were limited. The ‘real beasts’ were the sodomites.

Selective Bibliography

- ADELUNG J.C., *Grammatisch-kritisches Wörterbuch der hochdeutschen Mundart*, Zweyter Theil (Vienna: 1811).
- BRATSCH F.J., *Über Weiland der Römisch-Kayserlichen Majestät Ferdinandi des Dritten Peinliche Land-Gerichtsordnung in Oesterreich unter der Enns ersten und anderten Theil dienliche Anweisungen und nützliche Anmerkungen, wie auch alle hierüber weiters ergangene Hof-Resolutionen, Patenten, Generalien und Novellen etc.* (Vienna: 1751).
- BRUNDAGE J.A., "Sex and Canon Law", in Brundage J.A. – Bullogh V.L. (eds.), *Handbook of Medieval Sexuality* (New York – London: 1996) 33–50.
- , *Medieval Canon Law* (London – New York: 1995).
- BRUNNER K., "Pferde und Pfauen. Tiere im Weltbild mittelalterlicher Menschen", *Beiträge zur Mittelalterarchäologie in Österreich* 15 (1999) 9–25.
- BUCHNER E., *Das Neueste von gestern. Kulturgeschichtlich interessante Dokumente aus alten deutschen Zeitungen* (Munich: 1911).
- BURGHARTZ S., *Leib, Ehre, Gut. Delinquenz in Zürich Ende des 14. Jahrhunderts* (Zurich: 1990).
- CARPZOV B., *Practica nova rerum criminalium imperialis saxonica in tres partes divisa* (Leipzig: 1635).
- CODEx AUSTRlACUS ordine alphabetico compilatus d.i.: eigentlicher Begriff und Inhalt aller unter deß Ertzhauses zu Oesterreich, [...] außgegangenem in des Justiz- und Politzey-Wesen [...] einlaufenden Generalien etc. 6 Partes (Vienna: 1704–1777).
- CODEx AUSTRlACUS APPENDIX (Vienna: 1777).
- DAMHOUDER JOST, *Praxis rerum Criminalium. Gründtliche und rechte Underweysung Welcher massen in Rechtfertigung Peinlicher Sachen/nach gemeynen beschriebenen Rechten/vor vnd in Gerichten ordentlich zu handeln. Allen Hohen vnd Nidern Stands Oberkeyten/Richtern/Gerichtsverwandten/vnd sonst iedermänniglichen/nützlich vnd nothwendig zu gebrauchen* (Frankfurt a. M.: 1581).
- DEKKERS M., *Geliebtes Tier. Die Geschichte einer innigen Beziehung* (Munich – Vienna: 1994).
- ERLER A. – KAUFMANN E. (eds.), *Handwörterbuch zur deutschen Rechtsgeschichte* (Berlin: 1971).
- EWINKEL I., *De monstribus. Deutung und Funktion von Wundergeburten auf Flugblättern im Deutschland des 16. Jahrhunderts* (Tübingen: 1995).
- FERDINANDEA: *Der Römischen Kayserlichen/auch zu Hungarn und Böheimb/u. Könighchen Majestät Ferdinandi Des Dritten/u. Ertzherzogens zu Oesterreich: Unsers allergnädigsten Herrn. Neue peinliche Landgerichts=Ordnung in Oesterreich vnter der Ennß. Erster: vnd Anderer Theil* (Vienna: 1656).
- FRÖLICH VON FRÖLICHSBURG J.C., *Nemesis romano austriaco tyrolensis Das ist: Kurtze, doch gründtliche Unterweysung, wie ain, dem richterlichen Amt obligender Nachforschung, oder Inquisitions-Process, nach Gelegenheit, und Herkommen der O: und U:O: Fürstenthumb und Landen, auch Inhalt der Tyrolischen Statuten, Nider=Oesterreichischer Land=und Peynlicher Halß=Gerichts=Ordnung Carl deß Fünfften, dann gemeinen geschribenen Rechten, von Anfang biß zum Ende, mit Rechtlicher Ordnung zu Prothocoll zu bringen, und zu vollführen seye* (Innsbruck: 1696).
- FUDGE E., "Monstrous Acts. Bestiality in Early Modern England", in *History Today* (August 2000) 20–25.
- GILBERT R., "Seeing and Knowing: Science, Pornography and Early Modern Hermaphrodites", in Fudge E. – Gilbert R. – Wiseman S. (eds.), *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period* (New York: 2002) 150–170.
- GRENECK F.J., *Theatrum jurisdictionis Austriae oder Neu= röffneter Schau=Platz Oesterreichischer Gerchitbarkeit, Darinnen zu ersehen die Gerechtsamkeiten welche in dem Erz=Herzogthum Oesterreich unter der Enns allen Ständen von dem allerhöchsten Lands=Fürsten, bis auf den geringsten Haus=Vatter in Ansehung eines jedwederen seinem Gebiet und Herrschaft zustehen* (Vienna: 1752).

- GRÜLL G., *Verzeichnis der Herrschaft Wartenburg* (G 33a).
- GUERRINI A., *Experimenting with Humans and Animals. From Galen to Animal Rights*. (Baltimore – London: 2003).
- HEHENBERGER S., “‘Die Löbl Isaackische Liebesgöttin und ihr hebräischer Ritter’. Ein Sodomieprozess (Freistadt 1779/80)”, in Griesebner A. – Lutter T. (eds.), *Die Macht der Kategorien. Wiener Zeitschrift zur Geschichte der Neuzeit* 2,2 (2002) 38–56.
- HULL I.V., *Sexuality, State and Civil Society in Germany, 1700–1815* (Ithaca – London: 1996).
- LEOPOLDINA: *Des Ihro Römisch=Kayserslich=und Königlich=Catholischen Majestät Leopoldi Ertzherzogens zu Österreich Unsers Allernädigsten Herrn: Neue Land-Gerichts Ordnung. In Criminal-Vorfällenheiten neuerlichst Allernädigst gemachte Satzungen, Wie auch unterschiedliche in diesem Land eingeführte Ordnungen* (Linz: 1675).
- MAXWELL-STUART P.G., “‘Wild, filthy, execrable, destable, and unnatural sin’: bestiality in early modern Scotland”, in Betteridge T. (ed.), *Sodomy in Early modern Europe* (Manchester: 2002) 82–93.
- MEYER H., “Frühe Neuzeit”, in Dinzelbacher P. (ed.), *Mensch und Tier in der Geschichte Europas* (Stuttgart: 2000) 293–403.
- MÜNCH P., “Freunde und Feinde. Tiere und Menschen in der Geschichte”, in ZDF-nachtstudio (ed.), *Mensch und Tier: Geschichte einer heiklen Beziehung* (Frankfurt a.M.: 2001) 19–36.
- , “Tiere, Teufel oder Menschen? Zur gesellschaftlichen Einschätzung der ‚dienenden Klassen‘ während der Frühen Neuzeit”, in Frühsorge G. – Gruenter R. – Wolff Metternich B.F. (eds.), *Gesinde im 18. Jahrhundert* (Hamburg: 1995) 83–107.
- NICCOLI O., “Menstruum Quasi Monstruum. Monstrous Births and Menstrual Taboo in the Sixteenth Century”, in Muir E. – Ruggiero G. (eds.), *Sex and Gender in Historical Perspective* (Baltimore – London: 1990) 1–25.
- PUFF H., “Nature on Trial: Acts ‘Against Nature’ in the Law Courts of Early Modern Germany and Switzerland”, in Daston L. – Vidal F. (eds.), *The Moral Authority of Nature* (Chicago – London: 2004) 232–253.
- , *Sodomy in Reformation Germany and Switzerland, 1400–1600* (Chicago: 2003).
- SALISBURY J.E., *The Beast Within. Animals in the Middle Ages* (New York – London: 1994).
- SCHIEBINGER L., *Am Busen der Natur: Erkenntnis und Geschlecht in den Anfängen der Wissenschaft* (Stuttgart: 1995).
- SCHLEICH J., *Hexen, Zauberer und Teufelskult in Österreich* (Graz: 1999).
- STAGUHN G., *Tierliebe. Eine einseitige Beziehung* (Munich – Vienna: 1996).
- STRAUCH J., *Dissertatiuncula Juridica de Crimine Sodomiae oder: Von der Sodomiterey* (Halle: 1720).
- STRNADT J., *Materialien zur Geschichte der Entwicklung der Gerichtsverfassung und des Verfahrens in den alten Vierteln des Landes Ob der Enns bis zum Untergange der Patrimonialgerichtsbarkeit* (Vienna: 1909).
- SUTTINGER J.B., *Additiones Consuetudinum Austriacarum Renovatae* (Nürnberg: 1718).
- , *Consuetudines Austriacae ad stylium excelsi regiminis infra anasum accommodate* (Nürnberg: 1716).
- SUUTALA M., *Tier und Mensch im Denken der Deutschen Renaissance* (Helsinki: 1990).
- THERESIANA: *Constitutio criminalis Theresiana oder der Römisch=Kaysersl. Zu Hungarn und Böhme ec. Königl. Apost. Majestät Mariä Theresiä Erzherzogin zu Oesterreich u.u. peinliche Gerichtsordnung* (Vienna: 1768).
- THOMAS K., *Man and the Natural World. Changing Attitudes in England 1500–1800* (Hammondsworth: 1984).
- TUANA N., “Der schwächere Samen. Androzentrismus in der Aristotelischen Zeugungstheorie und der Galenschen Anatomie”, in Orland B. – Scheich E. (eds.), *Das Geschlecht der Natur. Feministische Beiträge zur Geschichte und Theorie der Naturwissenschaften* (Frankfurt a.M.: 1995) 203–223.

- WALZ R., “Die Verwandtschaft von Mensch und Tier in der frühneuzeitlichen Wissenschaft”, in Münch P. – Walz R. (eds.), *Tiere und Menschen. Geschichte und Aktualität eines prekären Verhältnisses* (Paderborn-Munich-Vienna-Zurich: 1998) 295–321.
- ZEDLER J.H., *Grosses vollständiges Universal-Lexikon aller Wissenschaften und Künste* (Halle – Leipzig: 1737).

RENAISSANCE MENAGERIES.
EXOTIC ANIMALS AND PETS AT THE HABSBURG
COURTS IN IBERIA AND CENTRAL EUROPE

Almudena Pérez de Tudela
Annemarie Jordan Gschwend

All these beasts Arcimboldo has painted from life [...] Imagine his cleverness; there is something stupefying about it (Gregorio Comanini, *Il Figino, ovvero del fine della pittura* (Mantua: 1591) 44).¹

Introduction

This essay represents the third in a series of studies undertaken by the authors on the artistic and cultural exchanges between the courts of Iberia (Madrid and Lisbon) and those of Central Europe (Vienna, Prague, Graz, Innsbruck and Munich) in the sixteenth century. The first, published in 2001,² constituted a systematic approach to a series of unpublished documents, letters, accounts and inventories dispersed in archives in Spain, France, Portugal, Belgium and Austria. The second essay appeared in an exhibition catalogue of a show held in the Palacio Real in Madrid in 2003, dedicated to the Oriental and exotic objects in Spanish royal collections from the sixteenth to the eighteenth

¹ This article is dedicated to Pedro Fuerte, Master of the Horse of the Imperial Ambassador in Spain, Hans Khevenhüller, and others like him, who traversed Europe many times with wild, exotic animals, large and small, in order to please emperors and kings. The authors are grateful for Paul Smith's critical editing of this text and for his insightful comments.

² Pérez de Tudela A. – Jordan Gschwend A., "Luxury Goods for Royal Collectors: Exotica, princely gifts and rare animals exchanged between the Iberian courts and Central Europe in the Renaissance (1560–1612)" in Trnek H. – Haag S. (eds.), *Exotica. Portugals Entdeckungen im Spiegel fürstlicher Kunst- und Wunderkammern der Renaissance. Die Beiträge des am 19. und 20. Mai 2000 vom Kunsthistorischen Museum Wien veranstalteten Symposiums, Jahrbuch des Kunsthistorischen Museums Wien* 3 (Mainz: 2001) 1–127.

centuries.³ Both studies made advances into the history of Habsburg collecting at the courts in Spain, Portugal, Austria and the Netherlands, presenting new insights on how collectors in the Renaissance acquired their objects, from where, and how these reached their final destinations. As the century progressed, the exotic component of these Habsburg collections took precedence, assuming the most important area of collecting. After 1550, Habsburg collectors concentrated on, and spent a great deal of time, energy and money, in the acquisition of luxury wares from distant points of the world.

Curiosity collections, or *Kunstkammern*, reflected the peculiarities and tastes of their princely owners. The discovery of direct sea routes to Africa, Asia, the Far East and the Americas in the sixteenth century opened up a global market and a traffic for goods, which afforded discriminating collectors a unique opportunity to buy, commission and collect an assortment of commodities (spices, medicinal drugs, plants, seeds, herbs), luxury goods, furniture, textiles, all forms of exotic wares, and above all, animals and birds, never seen in Europe before. Owning and collecting exotic and domestic pets became part of the tradition of Habsburg collecting in the Renaissance.⁴ Menageries of live specimens, some exotic pets reserved for amusement, entertainments and hunting, became extensions of the *Kunstkammer* outdoors. Menageries with European, New World and Asian animals mirrored in microcosmic fashion the collections of rarities indoors, displayed in magnificent gardens, themselves planted with exotic trees, shrubs and ornamental flowers. Novel fauna and flora reflected a ruler's mastery and dominion over territorial space.⁵ By the late sixteenth century, princes cultivated a garden culture, some patrons more scientific and systematic than others, whereby animals and plants were assembled and planted to dazzle and amaze, as symbols of an owner's power and prestige.⁶ As Jorge Cañizares-Esguerra has recently observed, gardens and menageries

³ Jordan Gschwend A. – Pérez de Tudela A., "Exotica Habsburgica. La Casa de Austria y las colecciones exóticas en el Renacimiento temprano", in *Oriente en Palacio. Tesoros asiáticos en las colecciones reales españolas* (Madrid: 2003) 27–44.

⁴ Schleichl A., *Cammerhundt, Schweiczerkue und Tigertier. Frühneuzeitliche HabsburgerInnen und ihre Tierwelt* (Ph.D. dissertation, University of Vienna: 1999). The authors are grateful to Andrea Scheichl for permission to consult her unpublished thesis; Jordan Gschwend A., "Animals in Sixteenth-Century Europe" in Jackson A. – Jaffer A. (eds.), *Encounters. The Meeting of Asia and Europe, 1500–1800* (London: 2004) 41–43.

⁵ Cañizares-Esguerra J., "Iberian Science in the Renaissance: Ignored How Much Longer?", *Perspectives on Science* 12,1 (2004) (86–124) 114.

⁶ Cañizares-Esguerra, "Iberian Science" 98.

served a political function for monarchs, glorifying them as learned kings deeply concerned with the secrets of nature.⁷

The objective of this present contribution is to introduce a series of unpublished documents regarding exotic and domestic animals at Habsburg courts, the purposes of such collections, the role these creatures played in court life, and their imaging at court in various media. The best artists were recruited to execute portraits, drawings, watercolors, engravings, medals and Flemish tapestries, some of which are illustrated here, as visual records not only of favorite pets, but also as visual records of the patronage of menageries, aviaries and gardens the Habsburgs promoted in the second half of the sixteenth century.

Royal Menageries in Portugal

No other Renaissance court was so altered by the Age of Discoveries than Portugal. The overseas explorations and the establishment of trade routes via Africa to India, Southeast Asia and the Far East – after Vasco da Gama’s historical journey around the Cape of Good Hope in 1498 –, forever changed the manner in which daily life in Lisbon was led. After 1500 no other contemporary European court could even dream of competing with the opulence of this court. The strange, the fantastic, the marvelous and the exotic became not only commonplace, but also part and parcel of everyday life in Portugal. Asian animals were the first rarities brought to Portugal by the fleets returning from India.⁸

As ruler of a newly discovered Eastern empire, Manuel I set the trend in Renaissance Europe, by imitating Indian potentates and collecting elephants of state. A rhinoceros from Cambay (the first seen in Europe since antiquity), sent to Lisbon by the sultan of Gujarat, reconfirmed Manuel as *dominus mundi*, ruler of the world.⁹ On ceremonial occasions, Manuel paraded from the royal palace (the *Paço da Ribeira*) to the cathedral with no fewer than five pachyderms, led

⁷ Ibidem.

⁸ Vilhena Barbosa I. de, *Apontamentos para a história das collecções e dos estudos de zoologia em Portugal* (Lisbon: 1885), especially iv–vii. Also Lach D., *Asia in the Making of Europe, Volume I: The Century of Discovery* (Chicago: 1969).

⁹ Manuel reigned from 1498 to 1521. Brito G. de, “Os pachidermes do Estado d’El Rei D. Manuel”, *Revista de educação e ensino* 9 (1894) 80–85.

by Asian trainers (mahouts). During the sixteenth century, at least thirteen young Asian elephants were imported to Portugal; some of which Manuel later sent as rare gifts to other rulers. The Portuguese demanded tribute from Asian vassals and the kingdom of Jaffna was expected to send ten elephants each year to Portugal.¹⁰ European rulers vied with one another with requests for Manuel to send them elephants and other rare specimens for their menageries. The most famous of Manuel's elephants was Hanno, a white elephant, which Pope Leo X received as a gift for his coronation, along with panthers for his Vatican zoo, when a formal embassy led by Tristão de Cunha arrived in Rome in 1514.¹¹ The Papal court and Rome's citizens were overwhelmed by the pachyderm, its Hindu mahout, the lavish gifts of Asian beasts and luxury wares sent by the Lisbon court, beside the luxurious opulence and exoticism of the Portuguese entourage. Later Popes kept up this tradition of receiving elephants from the Lisbon court for the papal menagerie, as in 1561, when Pius IV requested Sebastian of Portugal (ruled 1557–1578) to send a pair.¹²

Portuguese sailors brought home smaller animals (monkeys and parrots) as pets, or as supplemental income. Lucas Rem, a commercial agent for the Welser family of Augsburg, in Lisbon from 1503 to 1508, bought 'strange new parrots and long-tailed monkeys' from Africa available for sale in Lisbon.¹³ In 1500 Pedro Alvares Cabral discovered Brazil, a new land called 'the land of the parrots', from where feathers of red macaws and other parrots species were brought to Lisbon. Gray parrots, weaver birds and parakeets came from Africa, large macaws from Brazil, while small multicolored ones (Lories), came from Asia, as did the plumage of the bird of paradise from Indonesia. A profitable trade in parrots and exotic birds was established by the first quarter of the sixteenth century, as Diego Velho da Chancellaria commented in 1519: Lisbon was a place where 'monsters, talking birds, diamonds

¹⁰ *As Gavetas da Torre do Tombo 2* (Lisbon: 1962) doc. 2067, 706–711 (letter from the Viceroy Antão de Noronha to Catherine of Austria, Goa, December 30, 1564).

¹¹ Bedini S., *The Pope's Elephant* (Nashville: 1998).

¹² The letter of the Portuguese ambassador to Sebastian in Sousa Viterbo F.M.O., "Orientalismo em Portugal no Século XVI", *Boletim da Sociedade de Geografia de Lisboa* 12,7–8 (1892–1893) 318. The Portuguese king promised to find a pair as soon as possible, but no record exists of their arrival in Rome.

¹³ Lach, *Asia 22*; Barclay Lloyd J., *African Animals in Renaissance Art and Literature* (Oxford: 1971).

and porcelain' had become quite common.¹⁴ Manuel I created an aviary within the compound of the Lisbon royal palace, stocked with parrots and hunting falcons imported from the Netherlands.¹⁵ In 1514 he offered Leo X numerous parrots from his personal collection.¹⁶ As ruler of a global empire, Manuel's aviary symbolically embodied the distant reaches of the earth: the gray parrots from Africa representing the Old World and the large colorful macaws the New World.¹⁷

*Catherine of Austria, Queen of Portugal:
Royal Link to Africa, Asia and Brazil*

The tradition of collecting animals and expanding the royal menageries continued at the court of Manuel's son, John III (reigned 1521–1557). John's spouse, Catherine of Austria (1507–1578), the youngest sister of the Habsburg emperor, Charles V (1500–1558), assumed a leading role in the procurement of exotic and rare animals for herself and her extended Habsburg family in Spain, Central Europe and the Netherlands. Exotic animals, and slaves, from strategic, geographic points of the Portuguese empire, became an integral part of the spectacle and imagery at her court, as it would at the courts of her relatives. Members of her family vied with one another to obtain the best exotica (animals and luxury wares) available in Lisbon and Catherine proved to be an essential link in acquiring such goods. A great deal of time and expense was invested in the acquisition of curious and extraordinary species – a monopoly Catherine controlled with help of her global network and connections.

A system to obtain these rarities was organized from the onset of Catherine's reign: factors, merchants, agents, Portuguese viceroys and household officials stationed in Goa, Cochin and Malacca were recruited

¹⁴ Bedini, *The Pope's Elephant* 161.

¹⁵ In 1520 Manuel purchased 20 falcons in Antwerp, which originated from Norway. Instituto dos Arquivos Nacionais/Torre do Tombo (IAN/TT), Lisbon, Corpo Cronológico (CC) 1, maço 26, doc. 28 (June 13, 1520) and CC 1, maço 26, doc. 64 (September 18, 1520). Also Goris J.-A., *Étude sur les Colonies Marchandes Méridionales (Portugais, Espagnols, Italiens) à Anvers de 1488 à 1567* (Louvain: 1925) 224. Cf. Paravicini W., "Tiere aus dem Norden", *Deutsches Archiv für Erforschung des Mittelalters* 59 (2003) 559–591, especially 564–72 for the discussion of Norwegian falcons at medieval courts.

¹⁶ Bedini, *The Pope's Elephant* 28.

¹⁷ Boehrer B.T., *Parrot Culture. Our 2500-Year-Long Fascination with the World's Most Talkative Bird* (Philadelphia: 2004) 73.

to aid the queen in her search for exclusive items. As early as 1531, ships sailed in the Far East for three years on behalf of the queen, and, later in 1537, Catherine relocated a valet of her bedchamber, Antonio Correa, to Goa, where he was paid a salary to serve the queen in India.¹⁸ As the queen's agent, Correa was to buy from direct sources in Asia, at cheaper prices, and keep her regularly informed of goods and animals for sale in these markets. Catherine evolved into a merchant queen with a great deal of business acumen, even undertaking overseas ventures to finance her shopping sprees. The assimilation of strange and wild animals at the Lisbon court became an essential part of her surroundings.

She adored parrots and since early childhood owned birds and small lap dogs, during the years she lived in Tordesillas (Spain). Manuel I's parrot culture was taken up by this queen, who obtained many.¹⁹ She turned to resources in West Africa, to buy monkeys, parakeets and civet cats, the latter bred there for her by Simão Roiz, the factor in São Jorge da Mina. In April 1557 he sent a cage with parakeets (*passaros de rabo*) and two civet cats.²⁰ Another official Afonso Gonçalves Botafogo, sent, with another fleet, six civet cats, two monkeys called *bugios* and one parrot.²¹ In a second shipment, Botafogo gave the queen two bearded monkeys.²² Parrots were especially prized by Catherine and her family for their ability to talk and amuse. She frequently sent them as gifts to Spain. In one diplomatic letter, she promised her grandson, Carlos (1545–1568), a parrot that could speak just as well as the one she had recently sent her niece, Juana of Austria. There was one problem: she had to comb the city of Lisbon to find a suitable parrot that met her expectations, could speak well, and was in a reasonable state of health to be transported to Spain.²³ Beside exotic birds, the queen kept an aviary in the Lisbon palace complex stocked with pheasants,²⁴ some

¹⁸ IAN/TT, Lisbon, Núcleo Antigo (NA) 792, fol. 109.

¹⁹ Cf. Jordan Gschwend – Pérez de Tudela, "Exotica Habsburgica" 31, n. 46.

²⁰ IAN/TT, Lisbon, CC I, maço 101, doc. 18 (April 12, 1557). Cited by Barclay Lloyd, *African Animals* 54.

²¹ IAN/TT, Lisbon, CC I, maço 101, doc. 24 (April 18, 1557).

²² IAN/TT, Lisbon, CC I, maço 101, doc. 25 (April 18, 1557). In the latter, Botafogo refers to the queen's simians as *bugios com barba*, which perhaps were apes or baboons often sold to the Portuguese at the mouth of the River Gambia. Cf. Barclay Lloyd, *African Animals* 27.

²³ IAN/TT, Lisbon, Ms. de S. Vicente, vol. 10, fol. 327.

²⁴ IAN/TT, Lisbon, CC I, maço 84 doc. 49, CC I, maço 93, doc. 109 and CC I, maço 98, doc. 30.

destined for the royal table. There are indications she hunted, as her 1557 inventory records bells for hawks,²⁵ and in 1550 she obtained twenty-two young falcons from the Netherlands.²⁶

Some animals acquired by Catherine during her reign, were stabled in the queen's garden of the Lisbon palace;²⁷ a menagerie which symbolically represented her majesty and rule over flora and fauna in Africa, Asia and Brazil. In the Renaissance, theorists believed wild animals tamed by monarchs revealed their royal power and magnificence.²⁸ As a counterpoint to the menagerie, was the botanical garden of the palace, where exotic plants, seeds and bulbs, like tobacco and chili grew, which Carolus Clusius (1526–1609), Maximilian II's court botanist and gardener, visited in 1564–65, during an extended journey of Iberian gardens in the company of two Fugger brothers.²⁹ Strange animals and plants became part of Catherine's self-imaging; the notion that as a powerful ruler she could domesticate the untamable forces of nature. As queen of a maritime empire, few could compete with Catherine's singular position and global network. For reasons of image, prestige and representation, the queen went to great trouble and expense to procure animals few rulers had access to.

She developed a passion for civet cats. This species secretes an oily, odorous musk (known then as *algalea*), used for perfumes and medicines in the queen's kitchen and apothecary. Civet cats and their musk were extremely rare and costly in Renaissance Europe. An adult male can produce up to twenty grams a week. Between 1550 and 1554, Catherine owned ten stabled in separate quarters in Lisbon, under the charge of the Spaniard, Cristovão Carmones, apparently a specialist in the care of such cats.³⁰ They were housed in Carmones's house, who was paid 800 *reais* for the upkeep of each cat over a six month period. These animals were also acquired as an investment, since the queen sold nine, with immense profit, in 1552, for 100,000 *reais*.

²⁵ Jordan A., *The Development of Catherine of Austria's Collection in the Queen's Household: Its Character and Cost* (Ph.D. Thesis, Brown University, Providence, R. I.: 1994) 222.

²⁶ IAN/TT, Lisbon, CC I, maço 87, doc. 34.

²⁷ Senos N., *O Paço da Ribeira: 1501–1581* (Lisbon: 2002) 154–159.

²⁸ Lazarro C., "Animals as Cultural Signs: A Medici Menagerie in the Grotto at Castello", in Farago C. (ed.), *Reframing the Renaissance. Visual Culture in Europe and Latin America 1450–1650* in (New Haven: 1995) 197–227.

²⁹ Carolus Clusius, *Rariorum aliquot stirpium per Hispanias [...]* (Antwerp: 1576) 299.

³⁰ IAN/TT, Lisbon CC I, maço 84, doc. 78 (June 28, 1550); CC I, maço 88, doc. 71 (July 26, 1552); CC I, maço 87, doc. 107 (February 17, 1552). Cf. Jordan Gschwend – Pérez de Tudela, "Exotica Habsburgica" 37, n. 50.

Catherine emulated her father-in-law, Manuel I, giving away rare, expensive animals as diplomatic gifts to impress other courts and consolidate alliances. In order to cement relations with a North African potentate, a pair of civet cats was presented by the queen to the King of Belez, after his visit to Lisbon, whose representative, Ali Açelahui, took home in specially built cages paid for by the queen.³¹ She often surprised courtiers and members of her family with rare animals: one civet cat was presented to the Spanish aristocrat, the Duchess of Frías, in 1552. The queen's sister-in-law, Empress Isabella of Portugal, received three civet cats in Spain.³² To distract Charles V, during his retirement at Yuste in 1557, Catherine made sure he was entertained with a very talkative parrot (*un muy buen papagayo*) and two Indian cats he kept amused with live mice. Her niece, Juana of Austria, was offered four lap dogs in 1566, which Catherine sent with a list of their names and explicit instructions on how to maintain and feed, revealing her knowledge of canines and their dietary needs.³³ This portrait shows the princess with one of these dogs Catherine gave her, *Asicomovós* [Fig. 1], painted not long after it's arrival at the Spanish court.

In the same shipment to Spain, an assortment of exotic birds and animals, not all from Portuguese colonies, were included for her nephew, Philip II and her grandson, Carlos: 2 large birds, perhaps waterfowl (the queen called *gangas*, and which ate wheat and corn), a pair of civet cats (male and female), 2 *macaos* (macaws from Brazil), and a small songbird (*pintisilejo*) from Santo Domingo now Dominican Republic, whose feathers changed colors every time it moved.³⁴ The fact Catherine went to such lengths and expense to obtain rarities for loved ones is telling in itself, even going so far as to buy a songbird from a Caribbean island under the dominion of her nephew, the king of Spain. The queen must have monitored the market on a daily basis, well-informed of shipments of foreign animals and birds to Lisbon.

³¹ IAN/TT, Lisbon, CC I, maço 93, doc. 14 (July 18, 1554).

³² Archivo General de Simancas (AGS), Casa y Sitios Reales (CSR), leg. 67.

³³ Biblioteca Pública Municipal do Porto, Porto, Ms. 85, fols. 903r–903v. Cf. Bouza F., *Palabra e Imagen en la Corte. Cultura oral y visual de la nobleza en el Siglo de Oro* (Madrid: 2003) 23–24, who cites an incorrect folio number. The queen advised the princess to feed two of the dogs, which were pregnant, roasted chestnuts cooked with meat.

³⁴ Biblioteca Pública Municipal do Porto, Porto, Ms. 85, fols. 903r–903v. The songbird must have not lived long, as its "portrait" was recorded in the inventory of the prince's estate after his early death in 1568. Its uniqueness, probably a species unknown in Europe, must have prompted the prince to commission its portrayal. AGS, Contaduría Mayor de Cuentas (CMC), 1ª época, leg. 1051, fol. 28.



Fig. 1 [COL. PL. XXI]. Alonso Sánchez Coello, Portrait of Juana of Austria with her lap dog Asicomovós. Oil on canvas, 98 × 83 cm. Monastery of the Descalzas Reales, Madrid (Copyright Patrimonio Nacional).

A portrait of Philip's daughters, Isabella Clara Eugenia and Catalina Michaela, painted by Alonso Sánchez Coello between 1568–1569, depicts songbirds beloved by royal children [Fig. 2]. Unfortunately, some of the exotic birds Catherine sent in 1566 died en route, but were brought regardless to the Escorial palace, where Philip ordered drawings, watercolor studies and oil paintings made of them.³⁵ The latter were framed and displayed in his private quarters, alongside others of overseas animals the king had commissioned, such as this study of a monkey, formerly in his collection [Fig. 3]. Few of these bird portraits have survived, however, a sketch of the wing of a green South American parrot (genus *Amazona*) by an anonymous artist, may be one of the birds Catherine sent from Lisbon [Fig. 4].³⁶ The artist, highly skilled and schooled in Flemish and German traditions, rendered a scientific image in the manner of Albrecht Dürer.

The Portuguese queen adored her grandson, Carlos, and could not resist surprising him with a zebra in 1555, the first African zebra imported to Europe since Antiquity. A year later she delighted him with a prize *açor* (gyrfalcon) for hunting.³⁷ She continued over the years to regale the Spanish court with gifts of animals, as in 1571, when she again sent her niece Juana parrots,³⁸ and in 1575, Philip, some small deer, perhaps African antelopes; the king delighted with their strangeness.³⁹

Catherine took pleasure in giving her relatives unique gifts, none more so than when she presented her nephew, Maximilian II and her niece, Maria of Austria, with a thirteen-year old Indian elephant named Suleyman.⁴⁰ This pachyderm traveled from Lisbon to Valladolid, then to

³⁵ *Cartas de Felipe II a sus hijas*, ed. F. Bouza (Madrid: 1998) 89, note 191.

³⁶ Sáenz de Miera J., in *Felipe II. Un monarca y su época. Un príncipe del Renacimiento* (Madrid: 1999) 664, cats. 282–283.

³⁷ Gyrfalcons (*Falco rusticolus*), especially the white variants, are the most expensive hunting falcons. While goshawks, common birds of prey used for falconry, were used mostly by the lower aristocracy. We should like to thank Paul Smith for this information. Jordan Gschwend – Pérez de Tudela, “Exotica Habsburgica” 31, n. 45; IAN/TT, Lisbon, CC I, maço 92, doc. 35 (March 14, 1554) for this bird brought to Spain by John III's huntsman, Antonio Barroso.

³⁸ Biblioteca da Ajuda, Lisbon, Ms. 49-X-1, fol. 19.

³⁹ AGS, Estado 392, fol. 204 (El Pardo, September 19, 1575), letter from Philip to Catherine. In Vienna in 1569, Maximilian II also acquired bizarre sheep, each with four horns, through Juana de Cardona. Haus, Hof-, und Staatsarchiv (HHStA), Vienna, Spanien, Diplomatische Korrespondenz, Karton 8, konv. 3, fol. 4.

⁴⁰ Saurer K. – Hinshaw-Fischli E.M., “They Called Him Suleyman. The Adventurous Journey of an Elephant from the Forests of Kerala to the Capital of Vienna in



Fig. 2 [COL. PL. XXII]. Alonso Sánchez Coello, Portrait of the Infantas Isabella Clara Eugenia and Catalina Michaela. Oil on canvas, 103 × 118 cm. Monastery of the Descalzas Reales, Madrid (Copyright Patrimonio Nacional).



Fig. 3 [COL. PL. XXIII]. Anonymous (Flemish Painter?), Monkey. Oil on paper; 22 × 16 cm. Philip II's Quarters, Palace of the Austrias, Real Monasterio, S. Lorenzo de El Escorial (Copyright Patrimonio Nacional).



Fig. 4 [COL. PL. XXIV]. Anonymous (Flemish Painter?), Wing of a Green Amazon Parrot. Oil on paper, 18.6 × 15.7 cm. Philip II's Quarters, Palace of the Austrias, Real Monasterio, S. Lorenzo de El Escorial (Copyright Patrimonio Nacional).

Barcelona with the imperial party, who sailed to Genoa and traversed the Alps by way of Tyrol (Brixen), triumphantly entering Vienna on May 7, 1552.⁴¹ It was the first elephant ever seen in Austria and shortly after was installed in Maximilian's recently established menagerie at Schloss Kaiser Ebersdorf, just outside of Vienna.⁴² Suleyman, died one year later in December 1553 and a commemorative medal by the court sculptor, Michael Fuchs, was commissioned by the emperor in 1554 [Fig. 5]. A part of his bones were fashioned into a stool bearing the imperial coat of arms of Maria and Maximilian.⁴³ Although lost, a letter from the Portuguese monarchs was said to have accompanied this impressive gift, detailing why Suleyman had been named after the Turkish arch enemy of the Habsburgs.⁴⁴ Thus, through family ties with Portugal, the Viennese court benefited from the prestige of an allied kingdom, whose power, rule and hegemony extended over half the world.⁴⁵

Menageries in Renaissance Spain

During the second half of the sixteenth century, the Spanish royal family also benefited enormously from family ties with Portugal to acquire domestic and exotic animals. When Maximilian II (then king of Bohemia) and his wife, Maria, resided in Valladolid as regents of Spain, from 1548 to 1551, he partook in hunts, and appreciated the falcons sent from Portugal.⁴⁶ When Philip II was traveling in the Netherlands in 1549, Maximilian took advantage of his stay there to request falcons

the middle of the Sixteenth Century" in Mathew K.S. (ed.), *Maritime Malabar and the Europeans* (Guragon: 2003) 153–164.

⁴¹ Lach, *Asia* 144–146.

⁴² Giese U., *Wiener Menagerien. Ebersdorf, Neugebäude, Belvedere, Schönbrunn* (Vienna: 1962) 9–18.

⁴³ Jordan Gschwend, "Animals" 43, fig. 3.13.

⁴⁴ Lietzmann H., *Das Neugebäude in Wien. Sultan Süleymans Zelt – Kaiser Maximilians II. Lustschloss* (Vienna: 1987) 33–34, n. 70.

⁴⁵ In September 1563 another young Indian elephant (eight years of age) was sent to Maximilian II, transported by sea to Zeeland and driven to Antwerp, where he was displayed. Lach, *Asia* 150–151; Scheichl, *Commerhundt* 150–152.

⁴⁶ Minute of a letter from Maximilian to Lope Hurtado de Mendoza (Spanish ambassador in Portugal). AGS, Estado, libro 72, fol. 5v (Valladolid, March 12, 1549), in which he writes Pedro Sarmiento, a gentleman of his household, has brought a falcon from the king of Portugal. A second bird was on its way, and Maximilian requested John III be thanked on his behalf.



Fig. 5. Michael Fuchs, Commemorative Medal of Suleyman the Elephant, 1554. Lead, present whereabouts unknown. Inscription: DISER HELFANT IST KUMEN GIEN WIEN IN DIE STAT DA MAN IN BEI SEINEM LEBEN ABKONTERFET HAT (Photo from Franz Dworschak, „Die Renaissance-medaille in Österreich“, *Jahrbuch der Kunsthistorischen Sammlungen in Wien* N.F. 1 (1926) pl. XXV, Fig. 6).

from the North.⁴⁷ He also hunted in other locations, such as El Bosque (near Segovia),⁴⁸ sending the prize venison home to his wife, and he is documented chasing wolves.⁴⁹ Bullfights were staged in Valladolid in these years, where a prize bull was sent as a gift.⁵⁰ Other courts, even

⁴⁷ Minute of letter from Philip II to his ambassador in France. AGS, Estado 504, fol. 63 and fols. 64–65 (Brussels, January 1550) in which Philip sent Diego Pacheco to Spain with eight falcons (4 *jerifaltes* and 4 *neblís*, a white gyrfalcon).

⁴⁸ AGS, Estado, libro 72, fol. 5v. In July 1549, Maximilian sent venison to Valladolid and fol. 2v for the bloodhound he received through Pedro Sarmiento, a gift from the Commander of Piedrabuena.

⁴⁹ AGS, Estado 81, fol. 252 (Valladolid, May 12, 1550), letter from Antonio Sendín, huntsman (*sotamontero*), to Philip II about these wolf hunts and that Maximilian needed waxed cloths for hunting in the mountains, which Philip should buy either in Florence or France.

⁵⁰ AGS, Estado, libro 72, fol. 2 (Valladolid, February 27, 1549), minute of a letter from Maximilian to the Commander of Piedrabuena and AGS, Estado 78, fol. 117

rival enemies, were aware what passionate hunters the Habsburgs (both male and female) were. In 1550, the king of Tunis traveled expressly to Genoa, with the intention of bringing Charles V horses, lions and falcons, in exchange for political favors.⁵¹ With the intention of strengthening family ties, Philip II sent his Portuguese cousin, Prince John, hunting birds, originating from Northern Europe.⁵²

Besides horses and dogs reserved for the hunt,⁵³ the Habsburg courts in Spain and Central Europe also collected in quantity exotic hunting birds from overseas, which differentiated their courts from others. Collecting these New World birds became synonymous with a level of luxury and majesty not seen elsewhere. One monopoly reserved for Habsburg princes were *Aplomado* falcons found in Central and South America. The importation of these rare birds began in the 1570s and soon after portraits of Habsburg princes with their new pets were commissioned, as in the portrayal of Archduke Wenceslaus with his American bird by Alonso Sánchez Coello painted at the Spanish court.⁵⁴

Shipping live animals from their indigenous habitats overseas to the Iberian peninsula was no easy undertaking. Even more difficult, and often riddled with logistical problems, was their transportation from Lisbon, Seville or Madrid to final destinations in Vienna or Prague.

(Piedrabuena, March 10, 1549) for Piedrabuena's response. In this, the Commander writes of the bloodhound and bull he sent, and is to have accompanied the animals himself and served Maximilian as his huntsman (*montero*).

⁵¹ Letter from Gómez Suárez de Figueroa to Maximilian II, AGS, Estado 1381, fol. 3 (Genoa, January 7, 1550). A second visit took place in 1554. AGS, Estado 1472, fol. 67 for the summary of letters from Juan de Vega to Philip II, especially those dated February 18 and the end of March 1554, which relate the visit of the ambassador of the king of Tunis, who brought Charles V 30 horses and some falcons.

⁵² Letter from Lope Hurtado de Mendoza to Philip, AGS, Estado 375, fol. 50 (Almerim, September 23, 1551). The ambassador writes prince John adores hunting with falcons, and he suggests Philip send him a *vuelo de milano*. Also a letter from Mendoza to Philip regarding the latter in AGS, Estado 375, fol. 59 (November 4, 1551). Philip's response to Mendoza from Madrid on fol. 61, states he will send this bird as soon as he receives one. Years later, in 1568 prince John's son, Sebastian, would request from Philip II falcons from Spain (AGS, Estado 385, fol. 147).

⁵³ For more on horses, consult AGS, Cámara de Castilla, libro 121, fol. 22v (Augsburg, May 13, 1551), for 30 Spanish horses sent to Maximilian II's stables. AGS, Estado 505, fol. 74, 1553, for horses sent to the king of England. AGS, Cámara de Castilla, Libro de Cédulas 124, fol. 46 (Madrid, May 27, 1553), for Spanish horses sent to the king of Portugal. For the quality and quantity of jennets (small Spanish saddle horses) in John III's stables in Lisbon, see the comments Jorge Diaz made to Philip II ca. 1549–1550 in IAN/TT, Lisbon, Núcleo Antigo 871, doc. 105.

⁵⁴ Today located at Schloss Ambras, Innsbruck. Pérez de Tudela – Jordan Gschwend, "Luxury Goods" 17, figs. 8–9.

When the Spanish court could not, or was unable to, fulfill continual requests from the Austrian court,⁵⁵ the imperial ambassador in Spain, Hans Khevenhüller,⁵⁶ took over, helping his royal patrons in their endless search for foreign animals and Spanish horses. He scouted markets in Iberia and overseas, and before definitive purchases were made, sent couriers to Vienna with portraits and drawings of animals for sale.

Animals never ceased to play a role in the exotic imaging of princes and rulers at Habsburg courts, but problems often arose with their upkeep and maintenance. When Philip II, informed his Portuguese uncle, John III, of his desire to own an elephant, a pachyderm was duly dispatched to Spain in 1549, the year Philip took his extended trip through the Netherlands. During his absence, the beast was sent to live with his son, Carlos, residing in Aranda del Duero (Burgos).⁵⁷ The young prince delighted in his new pet, however, it soon became an inconvenience, and its upkeep, with that of his Indian mahout, a financial burden. The expense and cold weather, coupled with difficulties in finding proper food, made the elephant's maintenance quite unbearable. Luis Sarmiento de Mendoza wrote Philip, proposing to house the pachyderm at the hunting palaces of either El Pardo or Aranjuez, outside of Madrid, locations which had more moderate temperatures. Aranjuez would become, by the end of the sixteenth century, famous for its spectacular gardens and menagerie [Fig. 6]. The lion pen at the Alcázar palace in Madrid was just as renowned for the four lions Philip II received from Suleyman II, as was the *Casa del jardín* which housed an Indian goat (African antelope?), whose twisted horns were cherished and recorded years later in the king's collection.⁵⁸

⁵⁵ Maximilian II also acquired exotic animals through Marco Antonio Spinola in Genoa, receiving in Prague, in 1567, an ostrich, 3 lions and a tiger. HHStA, Familienakten 88, fol. 88v.

⁵⁶ Jordan Gschwend A. – Pérez de Tudela A., "Hans Khevenhüller, Imperial Ambassador at the Spanish Habsburg Court. Statesman, Art Agent and Connoisseur" in Neuwirth M. (ed.), *Theatrum Mundi. Die Kunstkammer als Spiegel der spanischen und portugiesischen Expansion* (Innsbruck: forthcoming 2007); Jordan A., "Diplomata e dealer de arte", *L + Arte* 20 (2005) 58–60.

⁵⁷ Letter from Sarmiento de Mendoza to Charles V, AGS, Estado 78, fol. 171 (Aranda, November 6, 1549) and Estado 77, fol. 112; Letter from Juan Vázquez de Molina to Philip complaining of the elephant's expense, AGS, Estado 85, fol. 218 (Valladolid, March 16, 1551).

⁵⁸ The exact date of arrival is unknown, but the lions came equipped with gold leashes and collars engraved with the Spanish king's coat of arms. In 1562 one lioness escaped and was hunted down by the queen Isabel of Valois and her court. Amezúa y Mayo, A.G. de, *Isabel de Valois. Reina de España (1546–1568)* (Madrid: 1949) 285–286;

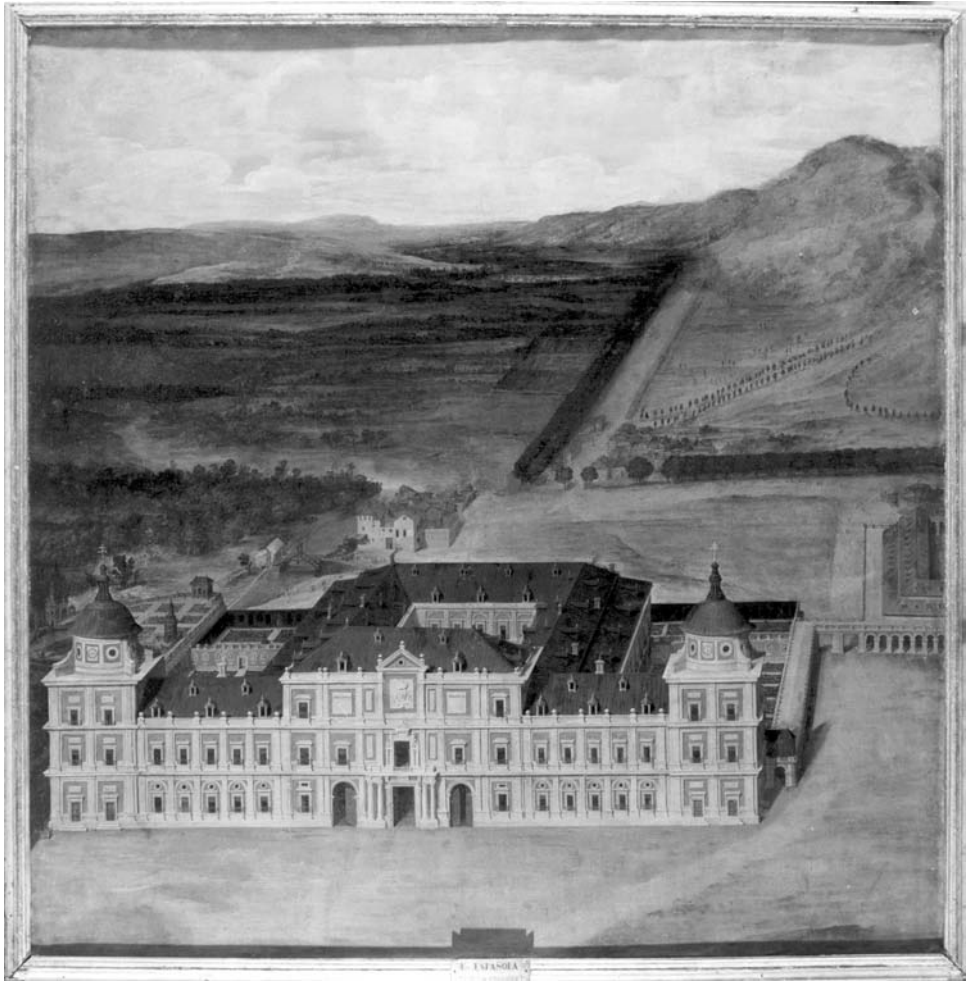


Fig. 6 [COL. PL. XXV]. Anonymous (Spanish Artist?), View of Aranjuez. Oil on canvas, 186 × 188 cm. King's Antechamber, Palace of the Austrias, Real Monasterio, S. Lorenzo de El Escorial (Copyright Patrimonio Nacional).

The impact of the 1549 elephant upon the king's sister, Juana of Austria, prompted her, shortly after her arrival in Portugal in 1552, to ask the Portuguese queen Catherine for a crystal elephant salt cellar from her collection, today in the Kunsthistorisches Museum in Vienna.⁵⁹ After her return to Spain in 1554, Juana inspired by the opulence of the Lisbon court, aimed to transform her quarters in the Descalzas Reales convent, she founded in Madrid, into an exotic *kunstammer* replete with Indian textiles, Asian and Far Eastern luxury goods and exotic animals.⁶⁰ Later documents make no further reference to the 1549 elephant and what became of its fate is unknown. Perhaps, Philip found the upkeep too costly, ceding him to Maximilian II, who took him to Vienna in 1551. Whether this 1549 pachyderm could be the elephant Suleyman is not yet clear.

The 1549 elephant was by no means the only one Carlos received from Lisbon. Later in Alcalá de Henares, where he was studying in 1561, his cousin, king Sebastian, sent him a small young elephant, which the prince kept in his room.⁶¹ If the 1549 elephant created a commotion at the Spanish court, so too did the arrival of a Central American jaguar brought to Seville, from Panama, in December 1550 by the Bishop of Palencia, Pedro de la Gasca (1485–1567), author of a botanical book of the plants of Peru.⁶²

Once Philip II became king, and definitively returned to Spain in 1559, he dedicated himself to renovating his palaces and gardens, modeling them after those seen in Flanders, stocking lakes with fish (carp from France) and swans.⁶³ He acquired numerous pheasants, which were

Sánchez Cánton F.J., *Inventarios Reales. Bienes muebles que pertenecieron a Felipe II 2* (Madrid: 1949) 150.

⁵⁹ Jordan A., "A Crystal Elephant from the *Kunstammer* of Catherine of Austria", *Jahrbuch der Kunsthistorischen Sammlungen in Wien* 87 (1991) 121–126.

⁶⁰ Biblioteca Pública Municipal do Porto, Porto, Ms. 85, fol. 903v. Also Jordan Gschwend A. – Pérez de Tudela A., *Juana de Austria. Corpus Documental* (forthcoming Madrid: 2008).

⁶¹ Carlos had suffered a fall and operation, and was seen recuperating and playing with his new elephant in his quarters. The latter event related in a letter from the ambassador Paolo Tiepolo to the Venetian Senate on December 1, 1561. Gachard L. P., *Don Carlos y Felipe II* (Real Sitio de San Lorenzo de El Escorial: 1994) 76; 86.

⁶² Letter from Francisco Osorio (*limosnero*) to Philip II, AGS, Estado 81, fol. 322 (Valladolid, December 13, 1550). Cf. Gonzalo Sánchez-Molero J.L., "La bibliofilia regia en la España del siglo XVI (1504–1558)", in *Regia Bibliotheca. El Libro en la Corte Española de Carlos V* 1 (Mérida: 2005) 307–309.

⁶³ British Library (BL), Add. 28350.

sent by the regent of Milan, Giulio Claro, via Genoa,⁶⁴ and Alicante.⁶⁵ To stock his aviaries, Philip bought pheasant and other cage-birds from Bernardino de Mendoza, who owned a garden next to the Puerta de Balnadú in Madrid.⁶⁶ In January 1574 animals and eight pheasants from Genoa were transported to Madrid and Aranjuez.⁶⁷ Other European rulers regularly sent falcons to Spain as diplomatic gifts, as did the Duke of Brandenburg annually,⁶⁸ and Catherine de Medici in 1560.⁶⁹ When more were needed, the king gave orders for falcons to be found elsewhere in Crete and Flanders.⁷⁰ Animals, in turn, were acquired by Philip as royal gifts for the imperial court, and animal handlers were sent along, to accompany them on their journeys from Madrid to Central

⁶⁴ Archivo Histórico Nacional (AHN), Madrid, Consejos, libro 2385, fols. 108v–109 (Madrid, July 3, 1567).

⁶⁵ Letter from Pedro de Hoyo to Philip, August 1567, BL, Add. 28350, fol. 257r, describing 52 male and female pheasants from Italy. Also British Library, Add. 28262, fol. 346, for letters from Antonio Pérez, regarding the same.

⁶⁶ Archivo General de Palacio (AGP), Madrid, Administraciones Patrimoniales, El Pardo, caja 9380, expediente 12.

⁶⁷ AHN, Consejos, libro 2334, fol. LXXV (S. Lorenzo, January 4, 1574).

⁶⁸ AGS, Estado 650, fol. 176 (1561), letter from Joachim II, Duke of Brandenburg to Philip; Estado 653, fol. 2 (October 2, 1565), 12 falcons; Estado 655, fol. 70 (1566) and Estado 656, fol. 14 (1567), 12 falcons. On fol. 60 (Madrid, March 8, 1567) Philip sends a letter of thanks. Estado 661, fol. 22, 10 falcons, and Estado 664, fol. 39 (1570), for a response dated April 25, 1571. Estado 666, fol. 16 (March 4, 1577), 8 falcons. Estado 680, fol. 102, Philip thanks him in Latin for 8 falcons, and Estado 684 (Madrid, January 27, 1578), minute of letter of thanks for other falcons.

⁶⁹ Ferrière H. de la (ed.), *Lettres de Catherine de Médicis* (Paris: 1885) I 158. The king of France had various birds from Northern Europe taken to Spain by his ambassador. Cf. Idem (Paris: 1891) IV 2, for six horses the French queen sent Philip in September 1570.

⁷⁰ AGS, Cámara de Castilla, Libro de Cédulas 119, fols. 600v–601 (Madrid, May 10, 1552), for a payment made to the Greek, Miguel, from Crete for falcons brought for Charles V's aviary, which the Count of Castaneda bought instead for Philip II. For other references to falcons consult Libro de Cédulas 113, fols. 210v–211 (1546) and Libro de Cédulas 122, fol. 153v (Monzón, October 19, 1552), in which the Count of Coruña in Seville was ordered to deliver gyrfalcons (*neblís*) to the Count of Castaneda for the royal aviary. Equally AHN, Consejos, leg. 4408, fol. 121 (Madrid, October 11, 1578): Dimitrio Cosma, Philip's falconer, solicits his salary for four years, complaining of the vicissitudes suffered during his travels, when he lost many falcons. Also AGP, Cédulas Reales, IV, fol. 258 (1573), concerning falcons from Crete. AHN, Consejos, libro 2392, fol. 28 (Madrid, January 20, 1589), letter from Philip to the deputies of Valencia about his cases arriving in Alicante from Genoa. AGP, Cédulas Reales, VIII, 1591, fols. 247v–248, for bells and accessories for hunting birds, and fol. 535 (1594–1595), regarding falcons Miguel Vinanz brought from Flanders. Cédulas Reales, X, fol. 203v, for Juan Colombo, a Venetian falconer at Philip's court.

Europe, making sure they acclimatized to their new environments.⁷¹ This special care underscores how much these animals were valued and appreciated by the Habsburgs: just as the Portuguese monarchs guaranteed Indian mahouts came from Goa with their pachyderms, in order to train staff later responsible in Europe.

The most prestigious animals at the Viennese court were the Andalusian horses from Spain. Philip II owned stables in Córdoba and Naples, receiving innumerable requests (*licencias de sacas*) for breeding and show horses. There are abundant documents concerning the sale and gifts of horses from Spain; some sent as far away as Poland⁷² and Japan⁷³ as diplomatic presents. It was often for political necessity that Philip consented to frequent petitions from Prague for horses, as advised by the Spanish ambassador, Khevenhüller, in order to resolve conflicts with the imperial court. Horses were the only way Philip could attract Rudolf II's attention to state matters.⁷⁴

Philip's children lived in the Alcázar palace in Madrid surrounded by exotic animals as companions, such as parrots and monkeys, which they dressed in court clothes, and for which stands on wheels were supplied.⁷⁵ His daughters were portrayed with pets, as in this 1573 portrait by Sofonisba Anguissola of Catalina Michaela, holding her Brazilian marmoset [Fig. 7]. Thrushes, starlings, finches and exotic birds were not only housed in palace aviaries, but also traveled in cages between residences,⁷⁶ as did the tame squirrels, monkeys and parrots.⁷⁷ Beloved

⁷¹ Rodrigo Morales took falcons to the imperial court and remained there a certain period to serve the emperor. AHN, Consejos, Cámara de Castilla, leg. 4407, fol. 143.

⁷² AHN, Consejos, leg. 4408, fols. 106–107 (Madrid, September 5, 1578): 24 Spanish and 12 Neapolitan horses,

⁷³ AGS, Secretarías Provinciales, libro 1550, fol. 11 (January 11, 1586), letter from Archduke Albert of Austria, Viceroy of Portugal, to Philip requesting 4 horses for the Japanese embassy.

⁷⁴ Letter from Guillén de San Clemente to Juan de Idiáquez, AGS, Estado 703 (July 2, 1596): Rudolf is described as a glutton (*golosissimo*) for horses, owning races of many kinds. He wanted Neapolitan horses for breeding, complaining Philip used to send his father, Maximilian II, six horses each year.

⁷⁵ AGP, Administrativa, Cuentas Particulares, leg. 5220 and leg. 660 (Madrid, October 26, 1582).

⁷⁶ AHN, Consejos, libro 2266 (Aragón), fol. 9 (November 5, 1585), pass for Felipe de Vanomsem, aide of the treasury (*guardajoyas*) to take from Madrid 2 cases containing monkeys and parrots which were to accompany Isabel Clara Eugenia on her trip to Monzón, Cataluña and Valencia.

⁷⁷ AGP, Admin., CP, leg. 5220 (1), Cuentas de carpinteros (after 1583), for parrot and monkey cages made in 1585.



Fig. 7 [COL. PL. XXVI]. Sofonisba Anguissola, Portrait of Catalina Michaela with a Marmoset. Oil on canvas, 56 × 47 cm. Private Collection (Photo courtesy of Rafael Valls, London).

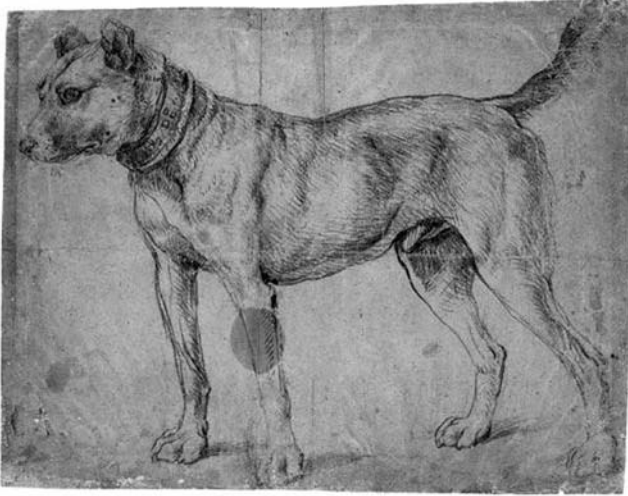


Fig. 8. Circle of Anthonis Mor, Study of a Hound with an ornate collar. Pencil on paper. Sotheby's New York, Sale no. 27760, January 25, 2002, lot22, present whereabouts unknown.

dogs were given special names and collars decorated with the arms of their royal owners. Many came from Europe,⁷⁸ while others disembarked from more exotic destinations, like the hairless Chinese dog Rudolf II received from Lisbon in 1583.⁷⁹ Painters, such as Anthonis Mor and Sánchez Coello, were commissioned to memorialize pets in paintings and drawings [cf. Fig. 8]. Giuseppe Arcimboldo incorporated exotic specimens, witnessed first-hand in the imperial menageries in Vienna and Prague, in his composite portrait heads, such as *The Allegory of Earth*. Juan of Austria, the victor of Lepanto, had himself portrayed with his lion, *Austria*, which he caught in Tunis and took with him to Naples [Fig. 9]. This lion was so tame, it lived and slept in his master's quarters.⁸⁰

Other animals in Philip's menageries included lions,⁸¹ bears, rhinoceros, elephants, and civet cats. These were housed in royal parks, in particular, the famed gardens of Aranjuez, praised by contemporaries as

⁷⁸ Ferrière H. de la (ed.), *Lettres de Catherine de Médicis* vol. IV 2 for six small dogs from Lyon sent by Catherine de Medici to her granddaughters in Spain in 1570. In 1561 she gave Philip II 10 hunting dogs from Brittany. Amezúa y Mayo, *Isabel* 281.

⁷⁹ Jordan Gschwend – Pérez de Tudela, "Exotica Habsburgica" 31.

⁸⁰ Amezúa y Mayo, *Isabel* 284.

⁸¹ AHN, Consejos, libro 2389, fol. 40 (December 22, 1583), letter from Philip to the Viceroy of Valencia, regarding a lion.



Fig. 9 [COL. PL. XXVII]. Anonymous, Copy after Scipione Pulzone, Portrait of Juan of Austria with his lion Austria. Oil on canvas, 220 × 115 cm. Deposit of the Museo del Prado, Madrid, Real Monasterio, S. Lorenzo de El Escorial (Copyright Patrimonio Nacional).

a terrestrial Paradise, and where the royal family often resided. Camels were kept and bred there,⁸² and Philip constructed a house for ostriches and other birds.⁸³ Aranjuez was designated a botanical center, where specialists could study plants and animals. Certain species were placed there according to scientific criteria, and for this reason, Pedro de Venegas de Córdoba, was sent to Tanger to procure pregnant camels, ostriches and West African sheep.⁸⁴ Jean Lhermite mentions forty camels, 6 ostriches, 1,400 peacocks, an aviary and 222,695 distinct trees and plants in his account of this palace.⁸⁵ The magnitude of Philip's menageries influenced artistic commissions, as in the conception of tapestry cartoons drawn by Michael Coxcie for the *History of Noah* [Fig. 10], in which animals in the main panels and borders resemble those housed in his royal parks. The king, as seen above, commissioned portraits of his favorite animals set into frames, which hung in his private quarters of the Escorial monastery.⁸⁶ Many no longer survive, with the exception of Figs. 3 and 4, discussed above.

In the expectation of showcasing exotic animals in his capital, Philip bought houses near the Alcázar royal palace, in 1583, to stable an elephant sent to Portugal in 1582. When damages were incurred, the king had to cover these expenses.⁸⁷ The crown jewel of his menagerie, however, was the famous rhinoceros, the Marvel of Lisbon, he brought to Madrid,⁸⁸ even though the beast was blind and hornless.

⁸² British Library, Add. 28345, fols. 17–18 (February 2, 1584), letter from Luis Ossorio to Mateo Vázquez about 2 camels recently born in Aranjuez. Also AGP, Cédulas Reales, V, fol. 186, for food (*pastos*) for these same camels.

⁸³ Instituto Valencia de D. Juan (IVDJ), Madrid, Envío 7 (II), fol. 373 (December 13, 1584), letter from Ossorio to Vázquez detailing the construction of this aviary. Fol. 374v for Philip's decision to build it, and fol. 375v (December 20, 1584). An aviary was also built at the Pardo palace (AGP, Admin., El Pardo, caja 9381, 10, 1583).

⁸⁴ AGS, Estado 426 (Lisbon, November 19, 1581), letter from Philip to his officials (*corregidores*) at Cádiz and Gibraltar about Venegas's purchases.

⁸⁵ Morán M. – Checa F., *El Coleccionismo en España. De la Cámara de Maravillas a la Galería de Pinturas* (Madrid: 1985) 148.

⁸⁶ The list includes portrayals of lions, dogs, exotic birds, parrots, wolves, chameleons, eagles and rhinoceros. Cf. Zarco Cuevas J. (ed.), *Inventario de las alhajas, relicarios, estatuas, pinturas, tapices y otros objetos de valor y curiosidad donados por el rey don Felipe II al Monasterio de El Escorial. Años de 1571 a 1598* (Madrid: 1930) 188.

⁸⁷ AGP, Admin., El Pardo, caja 9381, 9 (August 1, 1583): payment made to Catalina Santaclara for damages done by the elephant to her house next to the Alcázar.

⁸⁸ AGP, Admin., El Pardo, caja 9381, 10, 1583, for the house built to stable the rhinoceros and monies paid to the locksmith, Benito Hernández.



Fig. 10 [Col. pl. XXVIII]. Attributed to Michael Coxie, Embarkation of Noah. Tempera and watercolour on canvas, 290 × 484 cm. Palacio Real de Madrid (Copyright Patrimonio Nacional).

Not long after its arrival at the Lisbon court in 1577,⁸⁹ a diplomatic impasse ensued as Habsburg rulers vied to buy it. Hans Khevenhüller was desperate to send it to Prague, and, in late 1578, it was even promised to Pope Gregory XIII.⁹⁰ The conquest of Portugal in 1580 and Philip's incorporation of the Portuguese crown resolved the issue; both the rhinoceros and elephant were brought to Spain as trophy.⁹¹ As symbols of his new Asian empire, Philip had them put on public display for all to see.

Encounters with new worlds in Asia and in the Americas offered Habsburg courts in Portugal, Spain, Central Europe and the Netherlands unique opportunities to acquire new plants and strange animals. Commerce and trade brought these novelties to Europe,⁹² opening up global markets which royal collectors tapped into with the assistance of merchants, agents and diplomats. The Habsburgs relied upon family networks to procure exclusive pets, animals and birds. The more exotic the animal, the more highly it was prized. Menageries and aviaries became a fundamental part of the imaging of Renaissance courts; however, the empires under their rule gave Habsburg collectors a greater advantage in their acquisitions. Exotic pets colored daily life, fêtes and entertainments, playing a fundamental role in the creation of Habsburg collections and *kunstkammern* after the mid-sixteenth century.

⁸⁹ Morán M. – Checa F., *El Coleccionismo* 107, n. 1. AGS, Estado 396, fol. 61, Juan de Silva to Gabriel de Zayas, Lisbon, June 5, 1578.

⁹⁰ AGS, Estado 402, fol. 14, Cristóbal de Moura to Gabriel de Zayas, Lisbon, October 18, 1578; Archivo del Ministerio de Asuntos Exteriores, Madrid, Ms. 80, fol. 121, letter from Zayas to Moura, Madrid, October 28, 1578; AGS, Estado 402, fol. 27 (Lisbon, November 10, 1578), Moura to Zayas.

⁹¹ Staudinger – Irblich E., „Naturstudien Kaiser Rudolfs II. (1576–1612). Zur Kunstkammer auf der Prager Burg“; Irblich E. (ed.), *Thesaurus Austriacus. Europas Glanz im Spiegel der Buchkunst, Handschriften und Kunstalben von 800–1600* (Vienna: 1996) 261–268.

⁹² Smith P. – Findlen P., *Merchants and Marvels. Commerce, Science and Art in Early Modern Europe* (New York: 2002).

Selective Bibliography

- BARANTAY E. – HARDOUIN-FUGIER E., *Zoos. Histoire des jardins zoologiques en l'Occident (XVI^e–XX^e siècle)* (Paris: 1998).
- BEDINI S., *The Pope's Elephant* (Nashville: 1998).
- BIBL V., “Die Kulturlüte Wiens und seiner Umgebung unter Kaiser Maximilian II.”, *Monatsblatt des Vereines für Landeskunde von Niederösterreich* 9 (1918) 142–143.
- BOEHRER B.T., *Parrot Culture. Our 2500-Year-Long Fascination with the World's Most Talkative Bird* (Philadelphia: 2004).
- BOUZA F. (ed.), *Cartas de Felipe II a sus hijas* (Madrid: 1998).
- CAÑIZARES-ESGUERRA J., “Iberian Science in the Renaissance: Ignored How Much Longer?”, *Perspectives on Science* 12,1 (2004) 86–124.
- CHECA CREMADES F., *Las Maravillas de Felipe II* (Madrid: 1997).
- DELAUNAY P., *La Zoologie au XVI^e siècle*, *Histoire de la pensée* 7 (Paris: 1962; reprint Paris: 1997).
- DÜRER ALBRECHT, *1520.1521. Das Tagebuch der Niederländischen Reise*, ed. Goris J.-A. – Marlier G. (Brussels: 1970).
- FABER KOLB A., *Getty Museum Studies on Art. Jan Breughel the Elder. The Entry of the Animals into Noah's Ark* (Los Angeles: 2005).
- FICHTNER P., *Emperor Maximilian II* (New Haven: 2001).
- GIESE U., *Wiener Menagerien. Ebersdorf, Neugebäude, Belvedere, Schönbrunn* (Vienna: 1962).
- GORGAS M., “Animal Trade between India and Western Eurasia in the Sixteenth Century. The Role of the Fuggers in Animal Trading”, in Mathew K.S. (ed.), *Indo-Portuguese Trade and the Fuggers of Germany* (New Delhi: 1997) 195–225.
- HAUPT H. – VIGNAU-WILBERG Th. – IRBLICH E. – STAUDINGER M. (eds.), *Le Bestiaire de Rodolphe II. Cod. Min. 129 et 130 de la Bibliothèque nationale d'Autriche* (Paris: 1990).
- HUBER W. – KRAFT R., “‘Aufrecht stehendt, mit Stro ausgeschopp’t. Der Erste Elefant in München”, *Charivari. Zeitschrift für Kunst, Kultur und Leben in Bayern* 12 (December 1994) 29–34.
- HYE F., “Der ‘Brixner’ Elefant von 1552 – ein heraldisches Denkmal des nachmaligen Kaisers Maximilian II”, *Der Schlern* 48 (1974) 112–114.
- JORDAN GSCHWEND A. – PÉREZ DE TUDELA A., *Juana de Austria. Corpus Documental* (Madrid: 2008).
- JORDAN GSCHWEND A., “Diplomata e dealer de arte”, *L + Arte* 20 (2005) 58–60.
- , “Images of Empire: Slaves in the household and court of Catherine of Austria”, in Earle T. Low E. (eds.), *Black Africans in Renaissance Europe* (Cambridge: 2005) 155–180.
- , “Animals in Sixteenth-Century Europe,” in Jackson A. – Jaffer A. (eds.), *Encounters. The Meeting of Asia and Europe, 1500–1800* (London: 2004) 41–43.
- JORDAN GSCHWEND A. – PÉREZ DE TUDELA A., “Exótica Habsburgica. La Casa de Austria y las colecciones exóticas en el Renacimiento temprano,” in *Oriente en Palacio. Tesoros asiáticos en las colecciones reales españolas* (Madrid: 2003) 27–44.
- KUGLER G. – BIHL W., *Die Lippizaner der Spanischen Hofreitschule* (Vienna: 2002).
- LACH D., *Asia in the Making of Europe*, vol. I *The Century of Discovery* (Chicago: 1969).
- , “Asian Elephants in Renaissance Europe,” *Journal of Asian History* 1 (1967) 133–176.
- LHERMITE J. LE, *Passetemps* [...], publiée d'après le manuscrit original par E. Ouverlaux et J. Petit (Antwerp: 1896).
- LIETZMANN H., *Das Neugebäude in Wien. Sultan Süleymans Zeit – Kaiser Maximilians II. Lustschloss* (Vienna: 1987).
- LLOYD J. BARCLAY, *African Animals in Renaissance Art and Literature* (Oxford: 1971).
- LOISEL G., *Histoire des ménageries de l'antiquité à nos jours*, 3 vols. (Paris: 1912).
- MEDICI CATHERINE DE, *Lettres de Catherine de Médicis*, 11 vols. (Paris: 1885–).

- MORÁN M. – CHEGA F., *El Coleccionismo en España. De la Cámara de Maravillas a la Galería de Pinturas* (Madrid: 1985).
- OPPL F. – RUDOLF K., *España y Austria* (Madrid: 1997).
- PARAVICINI W., “Tiere aus dem Norden”, *Deutsches Archiv für Erforschung des Mittelalters* 59,2 (2003) 559–591.
- PÉREZ DE TUDELA A. – JORDAN GSCHWEND A., “Luxury Goods for Royal Collectors: Exótica, princely gifts and rare animals exchanged between the Iberian courts and Central Europe in the Renaissance (1560–1612)”, in Trnek H. – Haag S. (eds.), *Exotica. Portugals Entdeckungen im Spiegel fürstlicher Kunst- und Wunderkammern der Renaissance*. [...] *Jahrbuch des Kunsthistorischen Museums Wien* 3 (2001) 1–127.
- PIEPER R., “Papageien und Bezoarsteine. Gesandte als Vermittler von Exotica und Luxuserzeugnissen”, in EDELMAYER F. (ed.), *Hispania-Austria II. Die Epoche Philips II. (1556–1598)* (Vienna: 1999) 215–224.
- PINTO CORREIA C., *Return of the Crazy Bird – The Sad, Strange Tale of the Dodo* (New York: 2003).
- POMAR J.H., *El Codice de Jaume Honorat Pomar (c. 1550–1606): Plantas y animals del Viejo mundo y de America*, ed. J.M. López Piñero (Valencia: 2000).
- RIBEIRO MENDES I., “A Propósito dos Descobrimentos: Animais Exóticas e outras Novidades”, *História* 127 (1990) 20–29.
- ROBBINS L.E., *Elephant Slaves and Pampered Parrots. Exotic Animals in Eighteenth-Century Paris* (Baltimore: 2002).
- RUDOLF K., “ANTIQUITATES AD ORNATUM HORTORUM SPECTANTES. (Coleccionismo, Antigüedad Clásica y Jardín durante el Siglo XVI en las Cortes de Viena y Praga)”, in Adán y E. Eva en Aranjuez. *Investigaciones sobre la escultura en la Casa de Austria* (Madrid: 1992) 15–34.
- SÁENZ DE MIERA J., “Lo raro del orbe. Objetos de arte y maravillas en el Alcázar de Madrid,” in *El Real Alcázar de Madrid. Dos siglos de Arquitectura y coleccionismo en la corte de los Reyes de España* (Madrid: 1994) 265–287.
- , “Ciencia y Estética en torno a Felipe II. Imágenes Naturalistas de América en El Escorial”, *Reales Sitios* 29,112 (1992) 45–60.
- SALZGEBER D., *Albrecht Dürer: Das Rhinoceros* (Reinbek bei Hamburg: 1999).
- SAURER K. – HINSHAW-FISCHLI E.M., “They Called Him Suleyman. The Adventurous Journey of an Elephant from the Forests of Kerala to the Capital of Vienna in the middle of the Sixteenth Century”, in Mathew K.S. (ed.), *Maritime Malabar and the Europeans* (Guragon: 2003) 153–164.
- SCHLEICHL A., “*Cammerhundt, Schweiczerkue und Tigertier.*” *Frühneuzeitliche HabsburgerInnen und ihre Tierwelt* (Ph.D. diss., University of Vienna: 1999).
- SOUSA VITERBO F.M., “O Orientalismo em Portugal no Seculo XVI”, *Boletim da Sociedade de Geografia de Lisboa* 12,7–8 (1892–1893) 317–330.
- STAUDINGER M., “Die Erwerbung amerikanischer Tiere für den Kaiserhof im 16. Jahrhundert”, in *1492–1992: Spanien, Österreich und Iberoamerika*. Innsbrucker Beiträge zur Kulturwissenschaft, Sonderheft 86 (Innsbruck: 1993) 209–215.
- STAUDINGER M. – IRBLICH E., *Naturstudien Kaiser Rudolfs II. (1576–1612). Zur Kunstkammer auf der Prager Burg* (Nr. 47), in Irbllich E. (ed.), *Thesarus Austriacus. Europas Glanz im Spiegel der Buchkunst, Handschriften und Kunstalben von 800–1600* (Vienna: 1996) 261–268.
- TAUNAY A.E. DE, *Zoologia Fantástica do Brasil. Séculos XVI e XVII* (São Paulo: 1934).
- VILHENA BARBOSA I. DE, *Apontamentos para a história das collecções e dos estudos de zoologia em Portugal* (Lisabon: 1885).
- ZARCO CUEVAS J. (ed.), *Inventario de las alhajas, relicarios, estatuas, pinturas, tapices y otros objetos de valor y curiosidad donados por el rey don Felipe II al Monasterio de El Escorial. Años de 1571 a 1598* (Madrid: 1930).

THE CONSTRUCTION OF THE ANIMAL
IN LITERATURE AND IN THE VISUAL ARTS

NOAH'S ARK DISEMBARKED IN HOLLAND:
ANIMALS IN DUTCH POETRY, 1550–1700

Johan Koppenol

On the 25th of October 1682 Constantijn Huygens wrote a short poem, entitled “Myn Geckies grafschrift” (“My Silly’s Epitaph”) on the death of his little dog. It is only a slight work, nothing special in any way: Huygens wrote thousands of such epigrams during his lifetime. And yet there is something remarkable about these four lines, as can be concluded from the fact that the poem is reproduced in the majority of anthologies of his poetry.

This is my doggy’s grave.
I won’t say more about it,
Than that I wished (and it wouldn’t harm the world)
That my little Silly lived, and all the great would die.¹

In all its simplicity, this small epitaph on a dog reveals an aspect of seventeenth-century life that seems to be rarely shown in Dutch Golden Age poetry. The idea that the poet is moved by the death of his pet dog renders this poem an evident attraction for today’s readers, who recognize their own sentiments. The fact that Huygens used the death of Silly to comment on the madness of the contemporary world does not appear to detract from his personal emotion.

Animal welfare however – let alone love for pets – does not seem to have been an issue for all people during the seventeenth century. One only has to remember one of the most famous poems of the time, the “Boeren geselschap” (“Farmers Company”) by Gerbrand Adriaensz. Bredero: it describes a rustic feast in the village of Vinkeveen where one of the attractions was the game ‘pulling the goose’. A live goose was hung up, and the competitors, riding past on horseback or in a coach, tried to rip off the poor animal’s head (which was often greased with

¹ Constantijn Huygens, *De gedichten*, ed. J.A. Worp, 8 vols. (Groningen: 1892–1899) vol. VIII 303: ‘Dit is mijn Hondjes Graf:/Ick segger er niet meer af,/Als dat ick wenschten (en de Werld waer niet bedurven)/ Dat mijn klein Gekje leefde en all’ de groote sturven’.

oil, butter or soap to make it more difficult).² And although Bredero sketches a detestable way of life in order to make clear that a gentleman should shun the company and cruel amusements of such countrymen, it is unlikely that the author's main intention was to express his disgust at the cruelty to the animal, since the abuse of animals for public entertainment was not restricted to the lower social classes. The higher social strata had their own variety of the same "game": they used swans and peacocks instead of the cheaper geese, eels or cats. And talking of cats: what to think of the fireworks during the formal entry into Bruges organized in 1582 for William, Prince of Orange and Francis, duke of Anjou, with living cats tied up for "special effects"? The beasts were doomed to die in the flames.³

According to Gerard Brom, there is a clear difference between seventeenth-century Dutch painting and poetry when it comes to representing animals: 'Domestic animals, depicted so strikingly by our painters, were of no account to our poets, they were too mundane'.⁴ According to Brom, the only animals that poets wrote about were mythological and fabulous beasts, with little or no bearing on Dutch reality. This article will put Brom's statement to the test by offering a first inventory of animals in Dutch poetry.⁵

The presence of animals in Dutch literature – even when limited to poetry from 1550–1700 – is not exactly a fleabite, despite Brom's gloomy words. Animals are mentioned on almost every page, appearing in different guises: in metaphors, allegories, descriptions of country life and scientific works, as well as in religious songs glorifying God's creation. This wide range of texts and genres offers, consequently, as many different types of information on animals. In order to get a grip on this vast number of texts, and to be able to say something more about the position of animals in seventeenth-century daily life, it is necessary to distinguish, or at least to try to distinguish, between texts depicting animals according to literary conventions and the exigencies of literary genres on the one hand, and texts about animals that are

² Gerbrand Adriaenz. Bredero, *Groot lied-boeck*, ed. G. Stuiveling e.a., 3 vols. (Culemborg: 1975–1979) vol. I 47–49.

³ Gouw J. Ter, *De volksvermaken* (Haarlem: 1871) 352–353.

⁴ 'Huisdieren, die door onze schilders zo raak getroffen worden, tellen bij de dichters niet mee, omdat ze al te gewoon zijn'. See Brom G., *Schilderkunst en literatuur in de 16^e en 17^e eeuw* (Utrecht-Antwerp: 1957) 206.

⁵ A recent anthology of mainly modern animal poetry in: Zaal W. (ed.), *Een eeuw is eigenlijk iemand. Nederlandse dierenpoëzie* (Amsterdam: 2006).

based on or at least give the impression to be based on reality on the other hand.

There is, however, no such thing as a rigorous separation between texts based on literary prescriptions and "realistic" texts. Several popular genres, based on literary, often classical models, were in fact renewed by Dutch authors who introduced and incorporated realistic elements. Nevertheless there are a few literary genres and phenomena in which animals play a very prominent role: beast fables, emblems, pastoral and georgic poetry and metaphorical satire. These genres deserve some specific attention and will be discussed first. The images of animals they project are often not very realistic, sometimes positively unrealistic; sometimes however, the genres show, as stated, an increasing realism.

Subsequently, this article will sketch the presence, the place and the role of animals in Dutch society as represented in its poetry. In doing so, texts from different genres will be used. Attention will be paid to cattle and pets, as well as to wild animals, hunting and fishing. What was the Dutch attitude to farm animals, and how did they think of wild creatures? Was there anything like attention for animal welfare? How common were cruelties to animals? Was the sadness expressed by Huygens for the death of his lapdog an exception or not?

Finally, attention will be paid to the advancement of science and the ideas about God, creation, mankind and animals. Does poetry reflect some of the rapid developments in the natural sciences? Were animals regarded as living and feeling creatures, or only as useful species? And were there limits to the human dominance over the Creation? It goes without saying that not every poetical oeuvre is equally relevant in this search for the "real animal" and the ideas about animals. The work of a countryman and sportsman such as Jacob Westerbaen offers far more material than the mannerist love poems of P.C. Hoof. But, taken as a whole, Dutch poetry proves to be a rather rich source, that helps to get an idea of the presence of all kinds of animals in Dutch life and society, and the way people thought about them.

A. *Literary genres depicting animals*

Beast fables and animal epic

The fable can be characterized as a short story that ends with a clear, often practical, moral lesson. In many fables animals play the lead,

but this is not always so: inanimate objects, men and gods may also appear. Even mythical creatures such as the unicorn may play a part. The creatures in a beast fable display many human characteristics, without belying their own natures completely. They talk and argue, but retain their (assumed or not) animal behaviour. The fox is presented as a fierce and very cunning predator; the goose swims about and is rather dull.⁶

The history of the beast fable is extensive and takes us back to the cradle of western literature. The most important author of fables in antiquity was Aesop. His work in its original form has been lost, but thanks to compilers and imitators it has nevertheless come down to us. The work of Aesop, written in prose, was adapted at an early stage: his creations – augmented by new ones – were put into verse. Phaedrus and Avianus provided translations into Latin that in their turn became the basis of a rich medieval tradition of translations and adaptations, in both Latin and the vernaculars. The most famous specimen in Dutch medieval literature is *Esopet*, a collection of short stories with unambiguous morals. The plain and didactic nature of fables made them ideal subjects for tuition, and beast fables were used in schools for centuries. Besides the *Esopet*, there were other fable collections available in the Netherlands in the medieval period: the *Parabelen van Cyrillus* (Parables by Cyrillus) and the *Twispraec der creaturen* (Dialogues by creatures) are two examples translated from Latin. The fables by Aesop himself became available in the fifteenth century, when a Dutch translation of Heinrich Steinhöwel's French edition of *Esopus* was made.⁷

The popularity of the beast fable is demonstrated by the fact that it formed the origin of the animal epic, a literary genre developed during the Middle Ages. Animal epics were lengthy stories with animals rather than human beings as protagonists. The Dutch *Vanden vos Reinaerde* (Reinaert the fox) is generally considered the high point of

⁶ Sells A.L., *Animal poetry in French and English literature and the Greek tradition* (Bloomington: 1955); Grubmüller K., *Meister Esopus. Untersuchungen zu Geschichte und Funktion der Fabel im Mittelalter* (Munich: 1977); Dicke G. – Grubmüller K., *Die Fabeln des Mittelalters und der frühen Neuzeit. Ein Katalog der deutschen Versionen und ihrer lateinischen Entsprechungen* (Munich: 1987); Klingender F., *Animals in Art and Thought to the End of the Middle Ages* (Cambridge: 1971).

⁷ Schippers A., *Middelnederlandse fabels. Genre, collecties, catalogus* (Nijmegen: 1995); Bouwman A.Th., "Het dier in de Middelnederlandse letterkunde", in Idema W.L. – Schipper M. – Schrijvers P.H. (eds.), *Mijn naam is haas. Dierenverhalen in verschillende culturen* (Baarn: 1993) 57–65.

the tradition. But this genre was not confined to the Netherlands: we are talking about a European phenomenon. In the animal epic again we see creatures with partly human, partly animal features: the ideal device to portray human activity, with all its wickedness and wiliness, in a razor-edged manner.⁸

During the transitory decades of the early modern age the fable continued to interest many scholars. Many fable books were printed during the late fifteenth and sixteenth century, and the humanists were familiar with the genre – not surprisingly, since it originates from classical antiquity. But there was an image problem: despite its Greek roots, the genre was not held in high esteem. The beast fable was regarded as old-fashioned, juvenile literature which was, all the same, very useful and valuable for educational purposes. When Erasmus recommended fables for their didactic utility, he did so by referring to Quintilian, who said that fables were good for illiterate and simple folk.⁹

A solution for this lack of appreciation was finally found when authors started to incorporate the old fable in the new renaissance genre of the *emblemata*. Before turning to the emblemata, though, it must be explicitly stated that the fable and the animal epic, despite all humanistic renewal, did not disappear for a long time to come. Beast fables were reprinted again and again in the shape of school books in different languages, up to the eighteenth century.¹⁰ No one left school in the Dutch Republic without having learned the stories of the fox and the raven, the lion and the donkey, the cricket and the ant. Reynard the fox also remained popular: he was part of popular culture, appearing in chapbooks and children's stories.

Emblems

The emblem, developed more or less accidentally as interplay of words and images, took literature by storm after the publication of Andrea Alciato's *Emblematum libellus* in 1531. The main type of emblem consists

⁸ Jauss H.R., *Untersuchungen zur mittelalterlichen Tierdichtung* (Tübingen: 1959); Knapp F.P., *Das lateinische Tierepos* (Darmstadt: 1979); Ziolkowski J.M., *Talking animals. Medieval Latin beast poetry, 750–1150* (Philadelphia: 1993); Bouwman A.Th. – Besamusca B. (eds.), *Reynaert in tweevoud* (Amsterdam: 2002).

⁹ See: Geirnaert D. – Smith P.J., “Tussen fabel en embleem: *De warachtighe fabulen der dieren* (1567)”, *Literatuur* 9 (1992) (22–33) esp. 22.

¹⁰ See e.g. Jacob Cats, “Leersame fabulen” (1653), in idem, *Alle de werken*, ed. W.N. Wolterink, 2 vols. (Dordrecht: 1880) vol. II 468–472.

of three elements: a short motto (preferably not comprehensible at first glance), a picture and an explanatory verse. One needs to see only a few emblematic works to ascertain that animals play a crucial role in the genre. Very often, authors drew their inspiration from the old fable collections, thus increasing the prestige of the beast fable. The first to link the beast fable and the emblem was the French humanist Gilles Corrozet, who published his *Les fables du tresancien Esope* in 1542. By illustrating and presenting fables in this way, he combined the fable and the emblem.¹¹

Corrozet's book was adapted and published in Dutch in 1567 as *De warachtighe fabulen der dieren* (True fables about animals). The book contains 106 engravings by Marcus Gheeraerts, who probably also took the initiative for the publication. The engravings are accompanied by scriptural texts and poems by Eduard de Dene, a member of Bruges' chamber of rhetoric. The emblematic character is even stronger than Corrozet's original, and *De warachtighe fabulen* is therefore recognized as one of the oldest emblem books in Dutch.¹² *De warachtighe fabulen* was very influential: it was repeatedly reprinted, imitated and translated into French and even Latin. The engravings by Gheeraerts offered eminent and realistic depictions of the animals concerned. The original copperplates were bought in the early seventeenth century by the Amsterdam printer and publisher Dirck Pietersz. Pers. He asked the promising young poet Joost van den Vondel to write new explanatory verses. The result was published as the *Vorstelijck warande der dieren* (Glorious pleasure-ground of the animals, 1617).¹³ Both *De warachtighe fabulen* and the *Vorstelijck warande* retell beast fables, with great emphasis on the moral lesson they contain. Despite the realism of Gheeraerts, the poetic animals retain their half-human and half-animal behaviour: ants talk, lobsters make friends and deer get drunk.

Fable collections by Aesop and others were not the only source of inspiration for the authors of emblems that used animals: they also derived their information from the inexhaustible storeroom of scientific and pseudo-scientific natural sciences, founded by classical authors such

¹¹ Tiemann B., *Fabel und Emblem. Gilles Corrozet und die französische Renaissance-Fabel* (Munich: 1974).

¹² Eduard de Dene, *De warachtighe fabulen der dieren* (Roeselare: 1978); Geirnaert – Smith, "Tussen fabel en embleem"; Smith P.J., *Het schouwtoneel der dieren. Emblemfabels in de Nederlanden (1567–ca. 1670)* (Hilversum: 2006).

¹³ Joost van den Vondel, *Werken*, ed. J.M.F. Sterck e.a., 10 vols. (Amsterdam: 1927–1937) vol. I 498–767.

as Pliny and Aristotle. In these works poets found interesting information on animals which they used in their own work: there are emblems telling us about chameleons living on air and salamanders surviving in fire [Fig. 1]. Needless to say, emblems based on this kind of information have little to do with real animals: they are academic conceptions. It is very unlikely that De Dene or Vondel ever saw a dromedary or an ostrich – not to mention mythological creatures such as the basilisk or phoenix. It has been truthfully said that Vondel had no eye for real animals: during his long poetic career he never managed to depart from the symbolic approach characteristic of the animal emblem.¹⁴

During the seventeenth century, however, other poets seem to have become more interested in composing emblems which depicted animals in a more natural pose, both in word and image – but of course the two are not automatically corresponding. When Roemer Visscher in his *Sinnepoppen* (Emblemata, 1614) includes an emblem of a hound with a cudgel around his neck, telling us that this was a common hunting practice to slow down the dog, he is imparting reliable information on the treatment of animals [Fig. 2].¹⁵ Jacob Cats was also often inspired by the animals around him. In his famous emblem book *Sinne- en Minnebeelden* (Emblemata and love emblems, 1618) the influence of reality is still relatively modest. A swimming dog and a spider in the window, which might have been inspired by his own observation, figure beside an ape and a crocodile which are undoubtedly based on other emblematic works and literature. The engraving of the crocodile makes it clear that neither Cats nor his illustrator Van de Venne had an adequate idea of what a crocodile looked like [Fig. 3].¹⁶ In his later works, for example his *Hof-gedachten* (Garden thoughts, 1655), Cats's work however seems to be almost exclusively based on reality and his own experience. He writes about the animals he observes in his own garden, such as frogs, a heron catching a mole, a snake, and a dead bee.¹⁷

¹⁴ Sabbe M., *Dierkennis en diersage bij Vondel* (Antwerp: 1917).

¹⁵ Roemer Visscher, *Sinnepoppen*, ed. L. Brummel (The Hague: 1949) 80 (II 19); Davids K., *Dieren en Nederlanders. Zeven eeuwen lief en leed* (Utrecht: 1989) 28–29.

¹⁶ Jacob Cats, *Sinne- en minnebeelden*, ed. H. Luijten, 3 vols. (The Hague: 1996) vol. I 222; 270; 54; 234.

¹⁷ Jacob Cats, *Alle de werken* vol. II 395–415.

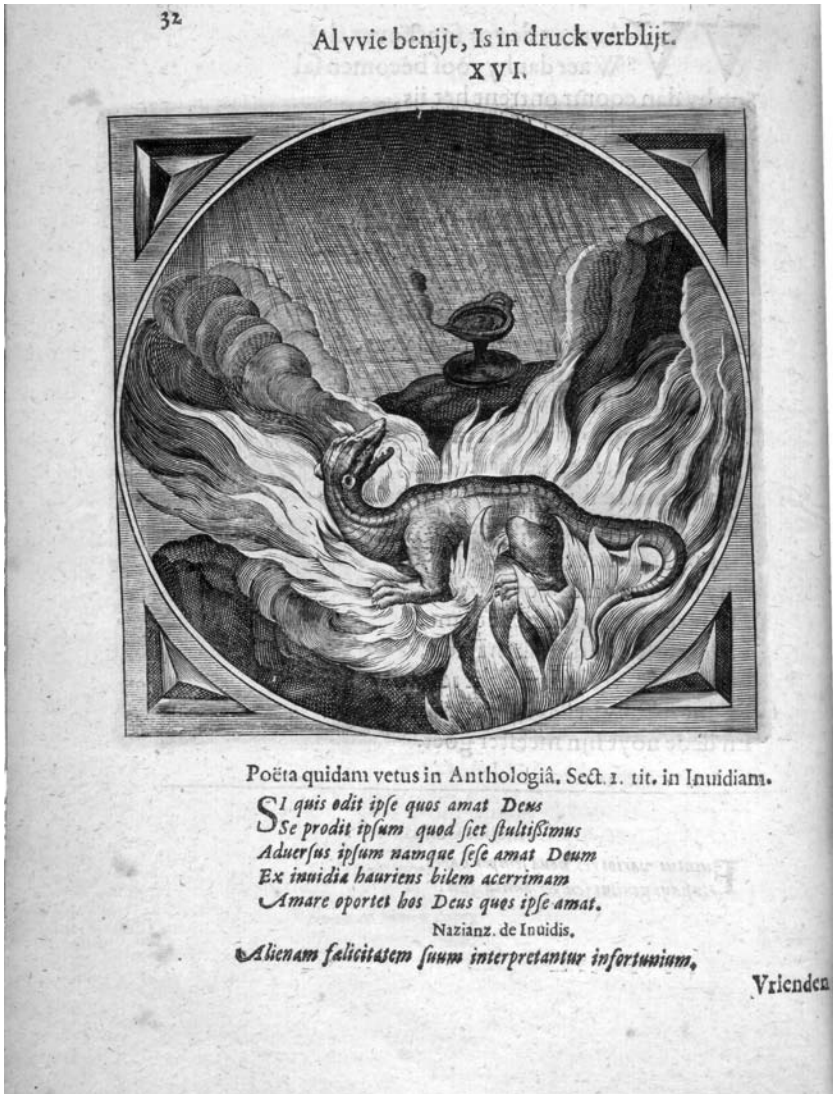


Fig. 1. Adriaen van de Venne, Salamander in the fire. From Jacob Cats, “Emblemata moralia et aconomica”, in idem, *Proteus ofte Minne-beelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) embl. no. 16, p. 32. Royal Library, The Hague.

XIX

Ignari legum sic.

IN de tijdt dat de Iacht verboden is, te weten, van de Meert tot in Augusto toe, als alle beesten haer jonghen teelen ende voeden: om het jonghe goet te beter aen te focken, soo worden alle jacht Honden met kneppels aen de hals beswaert, om haer snelheydt te verhinderen, en soo worden zy onder de wetten en willekeuren ghehouden. Desghelijcks, die met Reden ondergheen wetten kunnen ghehouden worden, die moeten met banden en ghevanghenissen daer toe bedwongen worden.

Ignari legum sic.

Fig. 2. Claes Jansz. Visscher, A hound with a cudgel around his neck. From Roemer Visscher, *Sinnepoppen* (Amsterdam, W. Jansz. [Blaeu]: 1614) embl. no. II 19, p. 80. Royal Library, The Hague.



Fig. 3. Adriaen van de Venne, Crocodile. From Jacob Cats, *Proteus ofte Minnebeelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) embl. no. 34, p. 200. Royal Library, The Hague.

Pastoral and georgic literature

Another popular genre during the seventeenth century was pastoral literature: songs, poems and plays about shepherds, shepherdesses and their love-life in a rural setting. This genre is also rooted in classical antiquity, especially the work of Theocritus and Virgil. There were two Italian authors, however, who made pastoral literature internationally popular: Torquato Tasso (*Aminta*, 1573) and Giambattista Guarini (*Il pastor fido*, 1589). One would expect that in these pastoral texts, with shepherds as protagonists, the animals they care for would play an important role. This, however, is not the case. In Italian pastoral plays, country life is little more than a vague, idealized atmosphere. The same is true for *Granida*, the play written by P.C. Hooft in 1605 (published in 1615).¹⁸ This work is nowadays seen as constituting the definitive introduction of the pastoral fashion to the Dutch Republic. The flock entrusted to the care of shepherd and principle character Daifilo remains invisible, and nature is mainly presented as a backdrop. Not for a single moment do the shepherds devote attention to their sheep: they live a kind of idealized life, and their only occupation is courting. When Daifilo falls in love with a princess he abandons his poor sheep without a backward glance. It is clear that Hooft was only interested in love affairs and the philosophy of love.

Yet there were other Dutch poets who did pay attention to sketching the pastoral life, such as Daniel Heinsius, Jan Harmensz. Krul and Jacob Cats.¹⁹ Cats wrote some pastoral poems, such as his “Harders-clachte” (“Shepherd’s complaint”; later rewritten under the title “Galathea ofte harders minne-klachte”, Galathea or the shepherd’s love complaint) and his “Harders-liet” (“Shepherd’s song”), both first published in 1618. Cats situates his pastoral protagonists in a realistic Zeeland setting, letting them speak and act like shepherds. The scenery is still idealized, but more recognizable. In “Harders-liet” Phillis tends her flock in the fields between Arnemuiden and Veere and talks about sheep, rams and lambs. The same is true for the shepherd named Daphnis in “Harders-clachte”. He complains about Galathea, the woman he loves but who is seduced by the temptations of the city [Fig. 4]. Daphnis’s language

¹⁸ Pieter Cornelisz. Hooft, *Granida: spel*, ed. L. van Gemert (Amsterdam: 1998).

¹⁹ Smits-Veldt M.B., “Nederlandse pastorale poëzie in de 17^{de} eeuw: verliefde en wijze herders”, in Brink P. van den (ed.), *Het gedroomde land. Pastorale schilderkunst in de Gouden eeuw* (Zwolle: 1993) 58–75.



Fig. 4. Anonymous, Shepherd with sheep, goats, cows and beehives. From Jacob Cats, “Galathee ofte harder minne-klachte”, in idem, *Proteus ofte Minne-beelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) p. 17. Royal Library, The Hague.

is imbued with the country life. When Galathea exchanges her simple clothes for more fashionable attire, he uses a metaphor from his peasant vocabulary to express his wonder:

Since then you wear your hood
With lace, shaped like a pee-wits tuft.²⁰

He reminds her of the wealth of the stable and the abundance of meat, and praises the providence of a man who has gathered and counted his sheep.

The plainness and honesty of the pastoral life in contrast to the complexity and wickedness of the city can also be found in another closely related genre that gained popularity at the same time as the pastoral text: georgic poetry, which describes and idealizes the farmer's life. Hesiodus's *Works and days*, Virgil's *Georgics* and Horace's ode "Beatus ille" were the most influential classical models for this genre. Horace's ode in particular was very popular and widely known in the Netherlands. This text about a farmer calmly ploughing his fields, untroubled by the violence of war or the dangers of the sea, was translated, adapted and imitated again and again.²¹ The bucolic scenery had again little to do with reality. As early as 1596 Jan van Hout wrote a pastiche on the "Beatus ille", emphasizing the hardship contemporary peasants suffered.²² The idyllic image was a literary commonplace, popular with well-to-do citizens with plenty of spare time to reflect on the negative aspects of the city. Like the wealthy Romans who left Rome to settle down in the countryside, rich townspeople also exchanged the city, especially during summer, for their mansions along the river Vecht or in the dunes nearby The Hague and Haarlem.

This culture of country houses in combination with the literary, georgic tradition resulted in a new type of literary text that may be characterized as typically Dutch, the so-called "hofdicht" ("country house poem").²³ Poets such as Hondius, Huygens, Westerbaen and

²⁰ Jacob Cats, *Alle de werken* vol. I 93: 'Sedert draegdy aen uw huyl,/Kanten als een kivit's kuyl'.

²¹ Meertens P.J. – Groot J.H. de, *De lof van den boer. De boer in de Noord- en Zuidnederlandse letterkunde van de middeleeuwen tot 1880* (Amsterdam: 1942) 336.

²² Koppenol J., *Leids heelal. Het Loterijspel (1596) van Jan van Hout* (Hilversum: 1998) 276–280.

²³ Veen P.A.F. van, *De soetichedyt des buyten-levens, vergheselschap met de boucken. Het hofdicht als tak van een georgische litteratuur* (The Hague: 1960); Vries W.B. de, *Wandeling en verhandeling. De ontwikkeling van het Nederlandse hofdicht in de zeventiende eeuw (1613–1710)* (Hilversum: 1998).

Cats wrote voluminous works. In some of these poems animals play an important role – not surprisingly, since animals (either domestic or wild) were an inalienable part of country life – and therefore these poems will be frequently referred to later on. However, the lives of gentleman-farmers such as Cats and Westerbaen had just as little to do with the everyday life of an average Dutch peasant as Horace’s farmer had in his time.

Vondel combines aspects of the pastoral and georgic traditions in his *Leeuwendaelers*, the “Lantspel” or country play written in 1647 on the occasion of the forthcoming Munster peace treaty which ended the Eighty Years War.²⁴ Vondel took Tasso’s *Aminta* as his model, but because the idealized scenery was supposed to represent the agrarian Dutch Republic, he replaced the shepherds by farmers. As stated earlier, Vondel had no particular talent for the realistic description of animals. For *Leeuwendaelers*, however, he did his best. His farmers talk about farming and Vondel borrows his metaphors from the barn and the field. Subsequently, a lot of animals are to be found. Vondel used and incorporated, for example, the well known story about the storks of Delft: when the New Church, where they nested, burnt down in 1536, they would not abandon their offspring and chose a desperate death amid the flames. In a scene showing an argument, two farmers, Govert and Warner, blame each other for the loss of an animal. The two farmers are meant to represent the Northern and Southern Netherlands. Despite their allegorical character, they behave like real farmers. One of Govert’s lambs has been driven into a ditch by Warner’s dog and drowned, while Govert’s servant has broken the leg of Warner’s best cock, Rookam (Red Comb):

Wherever fought a cock so proud, with pinion, beak and spurs?
 Even when gasping for breath, even when blood ran down his body
 Dripping from the head, still the warrior kept his nerve
 And made his foe rush away: then he stood firm as a wall.
 How proud his bearing was! And what a clockwork this beast
 Carried in his head! How lustily, how clearly and distinctly he used
 To waken village and countryside every new day!²⁵

²⁴ Joost van den Vondel, *Werken* vol. V 261–353.

²⁵ Joost van den Vondel, *Werken* vol. V 303:

Waer vocht oit haen zoo trots, met slaghpēn, beck en sporen?
 Al stack hy op zijn aēm, al quam langs ’t lijf het bloet
 Gedropen van het hoofd, noch hielt de kamper moedt,
 Dat ’s vyants veder stoof: dan stont hy als een muurwerck.

The opponents go on to accuse each other of a variety of what one might call rustic crimes. The enumeration as such is rather overdone, but no doubt such misdemeanours took place in reality: rifling eel-baskets, cutting off a horsetail to steal the hair, robbing and destroying beehives, etcetera.

Political pamphlets and religious satire

Finally, we can distinguish some genres using animals in a metaphorical or allegorical way. Animals of course were used in all genres in similes, some very simple (as strong as a lion, as timid as a hare), others more sophisticated. In the opening scene of his *Gysbreght van Aemstel*, Vondel describes Gysbreght's brother, who is chasing their enemies, in a bombastic and, zoologically speaking, impossible simile:

Just as one might often see a pack of cruel wolves
And fierce tigers flee from the horrifying cries
Of the king of all animals, the hungry lion.²⁶

These simple similes are of little interest for this survey of animals in Dutch renaissance poetry.²⁷ A few animals in this category deserve special attention however for the way they were used for political or religious purposes.

The classic Greek epic *Batrachomyomachia* or *The battle of frogs and mice*, for example, was translated and adapted to the actual political situation in Holland several times.²⁸ The frog was commonly used to represent the Dutch in international pamphlet literature. What started about 1665 as French and British mockery of the inhabitants of the wet and swampy Low Countries in so-called fable pamphlets, was turned

Hoe trots was hy van ganck! Wat droeg die gast een uurwerck
In zijnen kop! Hoe ficks, hoe klaer en helder plagh
Hy lant en dorp rontom te wecken voor den dagh! (750–756).

²⁶ *Ibidem*, vol. III 530:

Zoo zaghmen menighmael een kudde wreede wolven,
En felle tigers vlien, voor 't ysselijck geschreeuw
Van aller dieren vorst, den hongerigen leeuw (10–12).

²⁷ The same is true for animals in popular biblical metaphors (Christ as a lamb, the Holy Spirit as a dove), the zodiac, animals in proverbs, heraldry (the Dutch Lion and the allied Dutch Sea Lion; see Frijhoff W. – Spies M., *1650: bevochten eendracht* (The Hague: 1999) 565) and the classical gods' attributive animals (Jove's eagle, Juno's peacock, Venus' swans and doves).

²⁸ Geerars C.M., "Het komische epyllion *Batrachomyomachia* en zijn Nederlandse bewerkingen", in *De nieuwe taalgids* 61 (1968) 361–378.

into the opposite by the Dutch themselves: they started to use ‘frog’ as an honorary title.²⁹ The nightingale also played an important role in literature. Besides being assigned a prominent place in descriptions of nature and love poetry, the nightingale, the poetic bird *par excellence*, like the frog, acquired a specific significance in religious and political pamphlets, representing purity. The nightingale was used as a symbol of Protestantism, and, in reaction, of Catholicism; the animal also represented political integrity.³⁰ Besides frogs and nightingales, other animals could also be used metaphorically; one should therefore always be aware of the use of animals in political texts. The poem in which Jan Vos tells how he was bitten by a vicious dog (‘my arm shows the marks’) appears to be an attack on the English ‘dogs’.³¹

A well known, lengthy animal allegory can be found in *Den byencorf der H. Roomsche kercke* (The beehive of the Roman Catholic Church) by Marnix van St. Aldegonde. The main part of this venomous satire, published in 1569, consists of what is presented as a defence of the Roman Catholic Church. When the matter is “explained”, however, in the last part of the book, it becomes clear that the work must be seen as a sharp attack on Catholicism. The church is represented as a beehive, inhabited by many different dangerous species (of clergymen).³² Marnix’s allegory thus has little to do with real beehives. However, when Petrus Hondius is talking about the real bees he keeps, he seems to follow *Den byencorf*.³³ And finally, a remarkable prose text to add to this very incomplete enumeration is the anonymous *Het leven en bedrijf van Duc D’Albas hondt* (The life and acts of Duke Alba’s dog) from 1658. The dog of the so-called ‘iron duke’ who suppressed the rebellious Netherlands so harshly, records his memoirs in this book, putting the Spanish enemy in a rather unfavourable light.

²⁹ Smith P.J., “Nederland kikkerland: fabel en pamflet in de tweede helft van de zeventiende eeuw. Kikkersymboliek en politieke satire”, *Literatuur* 11 (1994) 26–31.

³⁰ Spies M. “Variaties op een nachtegaal”, in Korthals Altes L. – Schram D. (eds.), *Literatuurwetenschap tussen betrokkenheid en distantie* (Assen: 2000) 61–72.

³¹ Jan Vos, *Alle de gedichten*, 2 vols. (Amsterdam: 1726) vol. II 446; see also Decker J. de, *Oorspronkelijke dichtstukken*, 2 vols. (Amsterdam: 1827) vol. I 188–189.

³² An anthology in: Philip Marnix van St. Aldegonde, *Den byencorf der H. Roomsche Kercke*, ed. Ornée W.A. – Strengholt L. (Zutphen: 1975).

³³ Petrus Hondius, *Dapes inemptae, of de Moufe-schans* (Leiden: 1621) 286–300; Vries, *Wandeling en verhandeling* 102–104.

B. *Animals in Dutch poetry and society**Cattle*

The majority of the animals in Dutch seventeenth-century poetry, we may conclude, tell us very little about the creatures that surrounded people in daily life. Yet, animals were everywhere. Society was still almost exclusively rural, and keeping animals was a common practice both in the countryside and in the cities. It is therefore very unlikely that these animals would be absent from poetry – and indeed they are not. And although the information is sometimes coloured by literary conventions, Dutch poetry still offers an impressive overview of animal life. It shows both the care and even love people felt for their animals, as well as their sometimes ruthless exploitation.³⁴

Poets, like everyone else, kept animals, sometimes for social reasons, but in some cases even as a means of livelihood. Since it was practically impossible to earn one's living by writing poetry alone, Dutch poets practiced different occupations. And even though farmers who wrote seem to have been a rarity, they did exist. The Leiden rhetorician Pieter Cornelisz. van der Mersch earned his living fattening livestock for slaughter; the gentleman-farmers Jacob Cats and Jacob Westerbaen have been mentioned earlier, and Hubert Kornelisz. Poot was also a farmer (however, Poot's best known poem on the country life is an adaptation of Horace's "Beatus ille" that does not give much information about his everyday activities).

To talk about Holland is to talk about cows. Dutch prosperity often was – and still is – symbolized by rich livestock and an abundance of milk and cheese. Dutch cities also offered a market for meat. As early as the seventeenth century there was a major transport industry for cattle.³⁵ Oxen were shipped from Northern Germany and Denmark to Holland. In one of his poems Pieter Cornelisz. van der Mersch describes the cattle market in Enkhuizen. The atmosphere is tense while merchants and farmers wait for the ships to arrive. The number of beasts they supply is disappointing, and the problems have only just begun:

³⁴ Davids, *Dieren en Nederlanders*.

³⁵ Gijsbers W.M., *Kapitale ossen: de internationale handel in slachtvee in Noordwest-Europa 1300–1750* (Hilversum: 1999).

Captains and cattle-droivers demand double wages,
 Or they'll 'lose' a beast when leading it from the stall.
 The buyer has to accept that his beasts are moved
 And many of them are cheated in that way.
 Alas, the graziers are landed with all the expenses,
 Humbly holding their hats, begging 'Please buy, for charity'.
 If I didn't have spiritual land, I wouldn't be a grazier.³⁶

Van der Mersch was wealthy – he probably owned over thirty beasts – and relatively well educated. For this reason he is not representative of Dutch farmers: the latter owned only one or two cows on average. These poor farmers often made their appearance in farces and other comic plays. In several cases, writers of farces obviously drew their inspiration from reality. The peasant at the time was a familiar literary figure, often presented as a simpleton, sometimes as a sly dog. Most farces, by the way, deal with the love-life and marriage affairs of peasants, animals being only sporadically mentioned. Nevertheless, the few farces about animals do tell us something about peasants and their cattle.

In Bredero's *Klucht van de koe* (The farce of the cow) we hear only very little about the beast at the centre of the play. Information is limited to the pride of the owner, who claims that the quality of his beast is unsurpassed:

Where would we be, if we didn't milk a cow from time to time?
 We've got one standing in the yard that is so fat and smooth,
 I bet you a pint, that there's not one to match it about the town.³⁷

The cow guaranteed his economic welfare. When the cow is stolen later on in the play and the thief makes him sell his own property, the farmer is reduced from a proud owner of animals to a typically dull peasant.

³⁶ Leiden, Municipal Archives, Gildenarchieven 1496:

De schippers en dryvers mee dubbelt loon bedyngen
 Oft een is verlooren int uyt leyen vande stal
 De beesten te versetten/den copper moet gehyngen
 En worden zoe bedrogen/by menicht int getal
 Och de vetweyers moeten dragen dese oncosten al
 Met den hoet inde hant//en bidden coomt coopt uyt Minnen
 Had ick geen geestlick lant//zoud weyen niet beginnen.

³⁷ Gerbrand Adriaensz. Bredero, *Kluchten*, ed. J. Daan (Culemborg: 1971) 68:

Hoe souwen wyt maken, molleken wy altemet niet een Koetje?
 Wy hebberder daer after een staen, die so vet en glat, is
 Ick wed om een vaen, datter sulcken Koe niet om de stadt, is (118–120).

Another rather simple farmer appears in the farce of *Meester Hoon en Lippen Slechthoof* (Master Scorn and Lippen Dullhead). This farce was probably written by members of the Hague rhetoricians' chamber, the Coorenbloem, but nowadays only a 1620 copy by their Leiden colleagues is known to us. Lippen is a peasant who is sent to market by his domineering wife with a basket of (hatching) eggs. However, he is very reluctant to leave his farmyard, for his cow Blare and his best laying-hen Tijtgen are both ailing. When he arrives in town, he falls into the hands of a quack who filches the eggs from him, giving him some ointment for his chicken's eye in exchange. Lippen is happy about the bargain:

Although I got no money, what does it matter
If one can help his animals instead?³⁸

The quack promises the farmer a remedy for Blare's lame foot as well, if he will bring him his 'red lion'. The quack believes Lippen owns a golden coin, but the red lion Lippen refers to is his dog. He goes to fetch it, although his wife will be sad to lose the animal:

The creature is always on her mind, early and late,
She likes to have him with her wherever she goes.³⁹

In the end the quack is rendered a loser: he is saddled with a few dozen inedible eggs and an old and wretched dog. Unintentionally the peasant has deceived the deceiver.

The farces show us that farmers were proud of their cattle – Lippen also claims that his cow Blare is the best cow in the neighbourhood of Escamp and Eikenduinen, near The Hague. They named their animals and seem to have felt attached to them. Lippen explicitly states that he would sacrifice anything for his cow and chicken; Lippen and his wife also find it hard to part with their faithful dog. There is little doubt that the author of the play is making fun of the dull peasants' sentimentality, but the image he sketches must have been rooted in reality.

³⁸ Laan N. van der, *Rederijkersspelen naar een handschrift ter bibliotheek van het Leidse gemeentearchief* (The Hague: 1932) 103:

Al ontfang ick geen gelt, wat ist dan,
Alsmen de beesten daer met helpen can? (232–233).

³⁹ *Ibidem* 112:

Hij is altijd in haer gedachte vroeck en laet;
Sij heeft hem gaern bij heur, waer sij gaet (405–406).

De klucht van 't kalf (The farce of the calf) by Joos Klaerbout, published in 1662, also combines realistic elements of affection for an animal and the importance of commerce. In this play, an adaptation of the French *Farce de Maistre Pathelin*, farmer Kees brings his calf to town in order to sell it. His first buyer is a butcher who owes him some money. This is the reason why Kees, instead of delivering the animal at the butcher's shop, secretly sells it for a second time to a cook. He praises his beast and invites the cook repeatedly to feel its fine abdomen. As soon as he strikes the bargain, he takes his leave with the following lines:

Adieu little calf, I won't feed you sweet milk any longer,
 My sweet and cherished little calf, this will cost your young life.
 I have to leave you, I have to go from you, and it is high time.
 How reluctantly I part from my little calf, alas! It's such a pain and such
 a grief,
 To be forced to sell my little calf in order to keep the bailiffs from my
 door.
 Alas, my little calf, alas! My little calf, I must lament my sweet little
 calf.
 How many times it licked my fingers, drank sweet milk out of my
 hands,
 My little calf, my little calf, dearer to me than my most prized possession,
 Good night, little calf, I cannot stay any longer.⁴⁰

One exceptional incident may not remain unmentioned. On August the 29th in the year 1638 in Zaandam a raging bull attacked a farmer and his pregnant wife. During the assault the wife gave birth to a child, and in the end this turned out to be the sole survivor of the bull's rage. The news was immediately put into print [Fig. 5]. Illustrated news-prints described the event; short poems commented on the fate of the protagonists:

⁴⁰ Moerkerken P.H., *Het Nederlandsch kluchtspel in de 17^{de} eeuw* (Sneek: s.a) 434:
 Adieu Kalfje, nu sel ick u geen soete-melck meer te drincken geven:
 Mijn soete gesuyckerde Kalfje, dit sel u kosten u jonge leven,
 Nu moet ick ou verlaten, nu moet ick van ou scheidten, t is al hoogh tijt,
 Hoe noo scheid ic van mijn Kalfje: och! 't Is my sulcken hert-zweer en sulcken
 spijt,
 Dat ic mijn Kalfje verkoopen moet om die Deurwaerders van mijn deur te
 jagen:
 Och! Mijn Kalfje, och! Mijn Kalfje, ick moet mijn soete Kalfje beklagen,
 Hoe menigmael heeft ét gevinger-lect, en soete-melc van mijn hant g'hadt,
 Mijn Kalfje, mijn kalfje, die ick meer als mijn alderbeste pant schat:
 Goen nacht Kalfje, ick en vermach hier niet langer te staen.

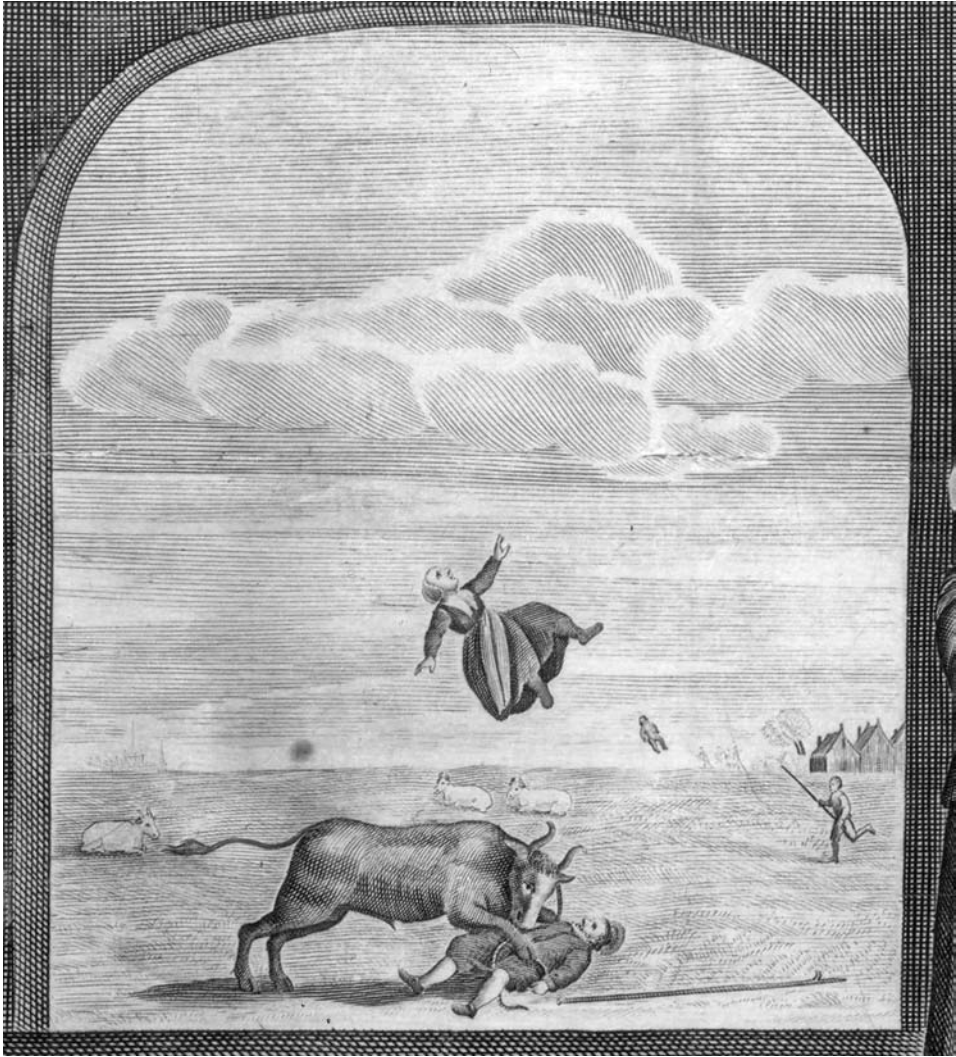


Fig. 5. Anonymous, The raging bull of Zaandam (detail). From *Stiers wreetheyd, gepleegt aan Meester en Vrouw* (Zaandam, W. Willemsz.; Amsterdam, H. Allardt: 1647) plano. Royal Library, The Hague.

Behold what Zaandam-West is mourning for even yet:
 How a mad bull tears his master apart,
 And by his furious anger in blind rage crushes
 The bodies of two, being one [...].⁴¹

The sad and cruel story remained popular for centuries.

Horses

Not only farmers depended on their animals for a living. The same was true for waggoners and other carters. A remarkable passage can be found in Gerrit Hendricxsz. Breughel's *Tafel-spel van een Waech-draegher Kees, ende Marry zijn Wyf* (Play about a Kees, a waggoner, and Marry his wife), published in 1612. In this short play, meant to be performed during dinner, a waggoner enters carrying merchandise on a sledge pulled by a horse. This carter is a drunk and a tormentor of animals. He ill-uses his horse, almost starving and beating it:

I beat you even if it hurts you,
 For you have neither soul nor dignity to lose.
 Take that! and that! I love to hear you snort,
 You shall sneeze lustily. Early tomorrow morning
 It's best that you work and pull the plough,
 While I stay in the inn at my ease –
 Otherwise the limbs of the beast will grow stiff.⁴²

This brutal scene is interrupted by a townsman – the setting of the play is Amsterdam – who, 'noticing what has happened, makes himself the spokesman of the horse':

⁴¹ Honig J., "Stiers wreedheid 1–2" in *De Navorscher* (1869) 131–151; 606–611; esp. 139:

Beschoud wat W estzaardam op heden moet betreuren,
 Hoe een verwoede stier zijn meester gaat verscheuren,
 Die door een felle grim in Dullicheijt, verplet
 De lichamen van twee, een zijnde [...].

⁴² Gerrit Hendricxz. Van Breughel, *De kluchten*, ed. A.J. van Leuvensteijn, 3 vols. (Amsterdam: 1985) vol. II 228:

Ick slaender op, al soudet u doen seer
 Geen ziel noch geen eer, hebby te verliesen
 Her her, ick hoor u geerne briesen
 Lustich suldy niesen, morggen heel vroech
 Tis best dat ghy werct, ende treckt den ploech
 En ick beware den croech, tot mijnen geryven
 De beesten souden anders de leden verstyven (310–316).

What do you think you are doing, you drunken lout,
 Making such a noise in the streets.
 You ignorant animal, control your temper
 And stop beating that horse!

Carrier

Well, well! What's it to do with you?
 Be off with you, I beat what is mine.
 Animals don't feel any pain,
 It must be so, as they have no soul.⁴³

The townsman will not give up his protest. He calls the carter a beast himself and says that if it was in his power, he would imprison the man in the Amsterdam Rasphuis (a house of correction). The carter defends himself by saying he can do what he likes with his own property. The townsman calls him stupid: he explains to the carter that treating the animal the way he does will bring him no luck in the end. It will make the poor animal ill, the horse will lose strength and become useless as a draught animal in the future.

Quite the opposite attitude towards a horse can be found in Samuel Costers *Boere-klucht van Teewis de Boer* (A farmer's farce of Teewis the peasant), written before 1612 and first published in 1627. In this play, equerry Jan Soetelaer states that rubbing down a horse is the best job in this world, although it is dusty and makes you thirsty. He explains that working with horses is highly regarded: princes and members of the nobility own them. Jan does not understand people who own a lot of money and yet do not love the noble quadruped:

My god, if I had their money, I would act differently!
 Away with these folk! All their lives they never get on a living beast.
 Isn't a horse the best thing whatsoever? What else can satisfy our desires?
 And whoever does not agree is not fit to kiss a horse's arse,

⁴³ *Ibidem*:

Hoe gaet ghy dus aen, seght droncken loer
 Makende rumoer; hier langs der straten
 Onwetenden beest ghy mochtet wel laten
 Ende by maten, dat peert soo slaen

Sleper

Wel siet doch wat gaet het u doch aen
 Vwer wegghen wilt gaen, ick slaen het mijne
 De beesten die en gevoelen geen pyne
 Het moet so zyne: want zy hebben gheen ziel. (326–333).

For he doesn't see the nobility of that princely animal.
This beast is braver and nobler than any other work-animal.⁴⁴

Horses gave one prestige. They were not only used as beasts of burden, but also for hunting and warfare. Jacob Westerbaen wrote two poems on troop-horses that were used in a hunt. In "Voor de paerden" ("For the horses") this is initially presented as an abuse: 'This noble team of nerves and muscles, these loins, this back now only serve to beat'. However, in an answer, the poet defends hunting: it keeps the horses fit and they get used to noise:

I love horses as much as any man may do,
Still I would rather see them break their neck and bones
Hunting around Ockenburgh, than fall in battle.⁴⁵

The most eloquent voice celebrating love for the noble horse can be heard in the poem "Paardegraf" ("A horse's grave") by Jan Six van Chandelier. After bringing his old and sick animal to the horse-knacker, the owner is overcome by melancholy. Entering its box he can still see its shimmering eyes, strong withers, slender ankles and long tail. He recalls its devotion:

When I entered the stable, he knew
How to salute his rye-deliverer, happy,
Whinnying and fondling me with friendly licking,
As a fine and grateful swallower.⁴⁶

⁴⁴ Samuel Coster, *Boere-klucht van Teeuwis de boer, en men juffer van Grevelinckhuysen*, ed. F.A. Stoett – N.C.H. Wijngaards (Zutphen: s.a) 48–49:

By get, had ick haer goet, ick waer een aer geest.
Wech met dat volck, sy quamen haer leven op gheen levendighe beest.
Een paert ist immers altemael, waer me soumen sijn lust aers blussen?
En die dat niet looft, is niet waert dat hy een paerd zou voor sijn aers cussen.
Want hy de noblityt niet weet van dat princelijck dier.
Boven al andere arbeys beesten is dit alleen moedigh en fier (664–669).

⁴⁵ Jacob Westerbaen, *Gedichten*, 3 vols. (The Hague: 1672) vol. I 504:

Ick heb de paerden lief, so veel als yemand magh:
Maer liever sagh ick haer den hals en beenen breecken
Ter jaght om Ockenburgh, als vallen in een Slagh.

⁴⁶ Jan Six van Chandelier, *Gedichten*, ed. A.E. Jacobs (Assen – Maastricht: 1991) vol. I 368:

Quam ik op stal, hy wist syn roggengbrokker
Vervroolikt, met gegrinhikik,
Te groeten, en met heusch gelijk
Te streelen, als een goed, en dankbaar slokker (25–28).

The poem ends with the poet's resolve to hire a skinner: by covering a chair with the horse's hide the farmer can keep its memory alive.

Small live stock

The majority of domestic animals were meant for consumption. Several poems provide a kind of catalogue of what could be served. For those who could afford it, beef, pork and mutton were the favourite. Eating a calf's head was a particularly cheerful affair; while drinking beer and singing songs, people roasted the meat over an open fire.⁴⁷ Westerbaen wrote more than once about the sheep he kept. The animals grazed in the dunes around his country seat, Ockenburgh, south of The Hague, and were very tasty, as Constantijn Huygens and Pieter Post could testify:

Here also in my pen I have some long-tailed sheep,
The sort that is wont to find its food upon the heath.
Lord Zuilichem and Post, the famous architect,
Have both inspected them and judged the food delicious.⁴⁸

The popularity of mutton can also be gathered from the next quotation from Cats:

Do you want a leg of lamb?
Or the testicles of a ram?
Do you want a kid or a goat
That's still feeding from its dam?
Do you want the sweetbread of a calf,
Or a shank, whole or half,
Do you want a fat leg of mutton,
To be salted well or smoked?
You don't have to go at all
To the sneering market folk
At butcher's booth or market stall.
Just sent someone to the stable

⁴⁷ See Jan de Regt, "Zang, op het eeten van een kalfskop" (Song on the eating of a calf's head), in Komrij G. (ed.), *De Nederlandse poëzie van de 17de en 18de eeuw in 1000 en enige gedichten* (Amsterdam: 1986) 928–931.

⁴⁸ Jacob Westerbaen, *Gedichten* vol. I 605:
Oock staen hier op mijn hock nog lang-gestaerte schaepen,
Van 't goed, dat op de hey sijn kostje plagh te raepen.
De Heer van Zuylichem, de groote Bouman Post
Die hebbens' hier gekeurt voor uitgelesen kost.

Who can slaughter, kill and skin:
You'll have everything you want.⁴⁹

The poor who could not afford pigs, cows or sheep kept poultry: chickens, ducks, geese and turkeys. These animals were kept both for their eggs and their meat. One particular duck became famous for her, in those days, exceptionally high productivity of one hundred eggs per year. This feathered star was called Sijctghen: she was immortalized in both word and image by Aelbert Cuyp in 1647. At that time Sijctghen had reached the respectable age of twenty years. In a short poem, written on the painting, she addresses the spectator [Fig. 5a]:

I was hatched in Werkendam.
I was young and good when I came here
To the fowls' stronghold. Without mating
I lived for twenty years
And produced a hundred eggs a year:
That's why I have been portrayed.⁵⁰

Sijctghen finally died three years later; the date of her death is recorded on the panel.

Keeping pigeons was also a custom. The pigeon loft provided even the poor people in the countryside with a tasty meal. Jacob Westerbeaen (who was anything but poor) also liked to pick a pigeon. In a

⁴⁹ Jacob Cats, *Alle de werken* vol. I 96:

Wilj' een leetje van een lam?
Of de beyers van een ram?
Wilj' een bockjen, of een geyt,
Die noch by de moeder leyt?
Wilje 't swees'rick van een kalf,
Of een schenkel, heel of half?
Wilj' een vetten schapen bout,
Voor den roock, of voor het zout?
Ghy en hoeft niet eens te gaen
Daer de schamper quanten staen,
't Zy in vlees-kraem of in hal;
Sent maer yemant na den stal,
Die daer slachtet, keelt en vilt,
Ghy hebt alles watje wilt.

⁵⁰ Albert Cuyp, Portret of duck Sijctghen, 1647/1650, Dordrechts Museum:

Ik ben gebroet te werckendam
K'was jonck en goet. Doen ick hier quam
In voogelen borch, sonder te paeren
Heb ick geleeft, wel twintich jaren
Wel hondert eijers tsjaers geleijt
Daerom ben ick geconterfeijt.

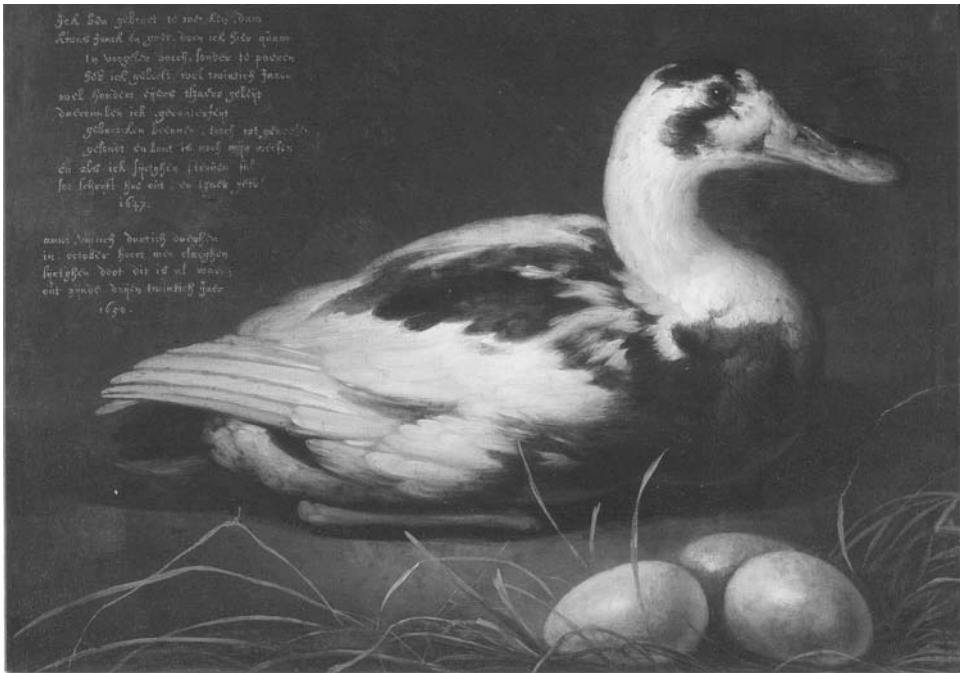


Fig. 5a [COL. PL. XXIX]. Aelbert Cuyp, Portrait of the duck Sijtghen. Oil on panel, ca. 1647, 35 × 41,5 cm. Dordrecht, Dordrechts Museum.

poem he thanked Joan van Paffenrode for sending a basket with six pigeons, and elsewhere he mentions birds as part of the Ockenburgh menu.⁵¹ But these birds were also useful in another way: as homing pigeons. Most famous are undoubtedly those owned by the Speelman brothers in Leiden. The birds were smuggled out of the city during the famous siege, returning with messages from William of Orange. After the siege was raised the birds were killed, stuffed and displayed in Leiden town hall, where they remained for several centuries (they were later lost). Town secretary Jan van Hout wrote his “Opte Duyfkens de blijde tijdinge brengende vant Leytsche ontset” (“On the pigeons, bringing the joyful message of Leiden’s relief”), published in his *Der Stadt Leyden Dienst-bouc* (Service book of the city of Leiden) in 1602. In Van Hout’s mythological imagination it was the goddess Venus who sent the pigeons to the city:

My heart favours Leiden, said she. Come, birds of love,
Spread your swift wings and fly straight there,
Cross the thin air and bring them good tidings
Of salvation. The way’s no longer dangerous
But free.⁵²

Domestic animals were kept for practical purposes. Dogs and cats were no exception: their function was to guard property and to catch mice and rats. Guide-dogs for the blind existed even then, as is shown by an emblem entitled “Die mind, is blind” (He who loves is blind) by Jan Harmensz. Krul [Fig. 6]:

I see a blind man. I see a sightless man.
I see a dog that can show him the way.
I see a blind man looking for subsistence,
Travelling wherever he wants, across all roads.
A dog, a faithful dog guides him on the lead
And this devoted beast teaches our minds.
The dog, most loyal of beasts, instructs our senses,
How faithfulness should be your guide in love,

⁵¹ Jacob Westerbaen, *Gedichten* vol. I 480–483; 605.

⁵² Jan van Hout, *Der stadt Leyden dienst-bouc, innehoudende verclaringe van tweezen ende ghelegentheit vande zelve stadt* (Leiden: 1602) fol. [Ai]v:

Mijn hart gunt LEYDEN goet (sprac zy) tza Duyfkens geyl,
V vlugge vogelkens ontspreyt, en recht daer binnen vliet,
Deursnijt de lichte locht, en draecht hem van haer heyl
Veel blijder tijdingen, u wech is niet onveyl,
Mer onbezet.



Fig. 6. Anonymous, Blind man with guide-dog. From Jan Harmensz. Krul, *Pampiere wereld ofte wereldse oeffeninge* [...] (Amsterdam, Wed. J.J. Schipper: 1681) 209. Library of the Vrije Universiteit, Amsterdam.

The dog, most faithful animal on earth,
Is teaching loyalty to our amorous youth.⁵³

In his lengthy emblematic poem, Krul incorporates a remarkable story about a dog that, like a seventeenth-century ‘Inspector Rex’, unmasks the murderer of his master in an identity parade.

Pet animals

Focussing on the higher social strata, especially in towns, the economic importance of domestic animals decreased, while the social aspect grew. People could be strongly attached to their pets and they were often portrayed with their dog or dogs – the famous humanist Justus Lipsius is a striking example. Love for animals is a phenomenon of all times. The following lines are taken from Vondel’s *Leeuwendaelers*. When Hageroos is reunited with her hound Hazepoot (Hare-foot), she talks to the animal and let it lick her face and hands:

Come here, my refuge, come here and kiss my cheeks,
My lips, mouth and hand. Let me stroke and fondle you,
And take away the dust and sweat. No mole’s skin, no velvet
Is softer than this pelt. Have you found your mistress?⁵⁴

In Cats’s “T’Samen-sangh tusschen Hylas, weyman, en Dorille, wout-nymphé” (“The sung dialogue between Hylas, sportsman, and Dorille, wood-nymph”) the affection between hunter and hound goes even further, which is abhorrent to Dorille:

⁵³ Jan Harmensz. Krul, *Pampiere wereld ofte wereldse oeffeninge, waarin begrepen zijn meest alle de rijmen en werken* (Amsterdam: 1681) 210–211:

Ik zie een blinden mensch, ik zie een zienloos man,
Ik zie dat hem een hond de wegen wijzen kan;
Ik zie den blinden mensch tot nooddrufts winst genegen,
Gaen waer hy wezen wil, gaen over alle wegen;
Een hond, een trouwen hond, die leyd hem aen de band,
En dit getrouwe beest geeft leering voor ’t verstand. [...]
Den hond, het trouwste dier! geeft leering aen de zinnen,
Hoe dat getrouwigheyd u leyden moet in ’t minnen;
Den hond, het trouwste beest dat op der aerden leefd;
Aen de verliefde jeugd getrouwheysd lesse geeft.

⁵⁴ Joost van den Vondel, *Werken* vol. V 317:

Koom hier, mijn toeverlaet: koomt herwaert: kus mijn wangen,
Mijn lippen, mont, en hant: dat ick u strijcke, en streef,
En afwissch’ stof, en zweet. Geen molsvel, geen fluweel
Is zachter dan dit vel. Hebt ghy uw vrouw gevonden? (1120–1123).

You take a dog into your bed at night,
 That lies and wriggles and seems to hunt
 And brings its smell and vermin with it.
 It is disgusting and should be shunned,
 Behaving like a dog has been rued
 By many a married man.

Hylas

Before my heart turned to courting,
 My dog was my most precious property.
 At that time it rested in my lap,
 If I did not have a sweeter love in bed;
 But should my God grant me a real wife,
 My bed, home, soul and body will all
 Be hers, by way of pastime.⁵⁵

Inevitably, this fragment also raises questions about bestiality. There is little doubt it was practised, but it has left no obvious traces in Dutch literature. Matthijs van Merwede van Clootwijk, a notorious libertine, wrote some scurrilous poems. One of them describes the cat that took the place of his beloved on his lap. However, in this poem the animal eliminates rather than enhances his sexual desire.⁵⁶

Poetic testimonies of love for animals were kept decent then. The love for pets could however be very physical. There was a lot of coaxing and cuddling. The “Graftschrift voor Joli” (“Epitaph for Joli”), the dog of an anonymous Miss N.N., finishes with the following lines:

⁵⁵ Jacob Cats, *Alle de werken* vol. I 418:
 Ghy neemt een hont des avonts in het bedt,
 Die leyt en woelt en schijnt oock dan te jagen,
 En brenghet sijn stanck en ongedierte met.
 Dit vind' ick vreemt en dient te zijn geschout;
 Want honts te zijn wanneer men is getrouwt,
 Heeft menigh man berout.

Hylas
 Eer dat mijn hert tot minnen was genegen,
 Toen was mijn hont mijn alderliefste pant,
 Toen heeft het beest in mijnen schoot gelegen,
 Mits ick in 't bedt geen liever lief en vant;
 Maer soo mijn Godt eens gunt een echte wijf,
 Dan sal mijn bedt, huys, ziel, en gansche lijf
 Haer zijn tot tijt-verdrijf.

⁵⁶ M[erwede] v[an] Cl[ootwijk] M. van, *Mintrionfen in Rome*, ed. A.J.G. e.a. (Amsterdam: 2004) 65–66; see also Dekker M., *Lief dier. Over bestialiteit* (Amsterdam – Antwerp: 1998). The anonymous author (Pieter Elzevier [?]) of the pornographic novel *De doornluchtige daden van Jan Stront, opgedragen aan het kakhuis*, ed. I. Leemans (Utrecht: 2000) 65–69, makes fun of some dogs at heat, harassing a young woman.

How often this dear dog was allowed
 To kiss his mistress on the mouth!
 Alas! Had this sweet animal to die?⁵⁷

Jacob Westerbaen wrote a poem on a certain Phillis who had lost her pussy (there is definitely a roguish aspect to this poem), the animal that – together with dog Lobben (‘with his rich fur’) was her main interest:

These friendly animals
 She used to honour and indulge.
 She held them in her lap,
 They shared her bread
 And robbed her of the bits
 She meant to eat herself,
 And instead of being punished,
 They got a kiss to boot.⁵⁸

Westerbaen wonders whether the cat is still alive (sitting on someone else’s lap,) or if the animal has been stolen and its fur sold. Killing cats for their fur was apparently common.

Westerbaen himself was fond of animals as well. He kept hounds for the hunt. On one occasion he kept two of his greyhound puppies alive by letting his lapdog suckle them. He rewarded this lapdog with a velvet collar with silver badge. In an appendix, the dog that suckled the pups explains in person why she received this present:

Because, small though I was, I dared to risk myself
 And with my own blood for the space of thirty days,
 I kept the greyhound’s offspring alive.⁵⁹

⁵⁷ *Gemengelde Parnas-loof: bestaande in verscheidene soort van gedichten; zo ernstige als spot-dichten. Eerste deel* (Amsterdam: 1693) 210:

Hoe vaak mogt deze lieve Hond
 Zijn Juffer zoenen voor haar mond!
 Ach! Most dat zoete beesje sterven?

⁵⁸ Jacob Westerbaen, *Gedichten* vol. I 472–473:

Dese vriendelijcke dieren
 Plagh se t’eeen en te vieren,
 Dese had sy in haer schoot,
 Dese deelden van haer brood
 En ontnamen haer de beetten
 Die se selver dacht te eeten,
 En in plaetse van de roe
 Kregen sy een kusje toe.

⁵⁹ *Ibidem* 442–443:

Om dat, hoe kleyn ick was, ick dorst my selven waegen,

No one, however, surpassed the Leiden bailiff Mr. Willem de Bont when it came to love of dogs.⁶⁰ De Bont was a controversial figure as a merciless prosecutor of the Remonstrants (a group of moderate-minded Protestants). When his dog Tyter died, he buried him with impressive pomp on the 20th of January 1634. The city of Leiden was already of dubious fame as far as dogs were concerned, ever since in 1595 a dog called Provetie (Prophesy) was sentenced to the gallows for mauling a child to death, and now the town was in for a new spectacular dog performance [Fig. 7]. Tyter's corpse was borne along to the tolling of bells. The bier was followed by a maidservant in mourning who carried young dogs, descendants of Tyter, on her arm. The pups wore crêpe bands. More dogs, also in weepers, followed. A cat that was also invited refused to join the procession. After the funeral the children were given a generous treat. This eccentric event inspired Joost van den Vondel – who sympathized with the Remonstrants – to write his satire “Aen alle Honde-slagers en Hondebeuls” (“To all the dog-butchers and dog executioners”):

Bailiff Bont, sitting on the kennel,
 Let all the dog fanciers know
 That Tyter will be buried;
 That he will serve cake and wine
 And with his curs and his scoundrels
 Will water the grave of the dog's soul.⁶¹

Not all dogs were treated with so much love and care: Vondel did not invent the dog-butchers, they really existed. And the following epigram, taken from Hieronymus Sweerts's extensive collection of rhymes for signboards and shop windows, popular poetry and graffiti, shows quite a different, more beastly way to die (of course one can not be sure

En met myn eygen bloed den tyd van Dertigh daegen
 In 't leven heb bewaert 't geslacht van Haesewind.

⁶⁰ Bogendorf Rupprath C. von, *Schout Willem de Bont and His Dog Tyter. Scandal, Satire, Sarcastic Songs and Paintings* (to be published).

⁶¹ Joost van den Vondel, *Werken* vol. III 408–410:

Schout Bondt op 't hondekot gezeten,
 Laat alle honde-melkers weeten,
 Dat Tyter moet begraven zijn,
 Dat hy zal schencken koeck en wijn,
 En met sijn rekels en sijn fielen,
 Begieten 't graf der honde-zielen.

See also Anonymus, *Apologia, ofte tegen-sang: waer in de wettighe begraeffnisse van Tyter (hond van den hooft-officier der Stadt Leyden) met bondige redenen verdedight werd* (Amsterdam: 1634).



Fig. 7. Anonymous, after Jan Miense Molenaer; The funeral of Tyter, the dog of the Leiden bailiff Willem de Bont. From Joost van den Vondel, *Hekeldichten* (Amersfoort, P. Brakman: 1736), after p. 130. Private collection.

whether a poem like this had something to do with reality: the epigram being a classical genre):

On the death of a garden dog.

Here you may find (struck down by death)
The faithful Coridon.
He died of cold and starvation.
He was the best of all dogs.
No neighbour's dog stood by him at the end,
Nor father, nor mother, nor close acquaintance.
Through craving for food he raced to his death,
His master drove him hungry to his den.⁶²

Like dogs, birds were kept for pleasure too. Parrots were known in the Republic during the seventeenth century – Cats wrote an emblem on a parrot [Fig. 8].⁶³ These birds were kept for their company and beauty; other birds were kept for their song. Time and again these caged musicians inspired poets to write about contentment in captivity. Six van Chandelier wrote about his “koddenaartje” (linnet) in this mode:

O linnet, cheerful creature,
Happily chattering, merry-minded
Behind trellis, metal threads,
Sounding through every room and hall,
Although you are suspended high, locked up,
And may not hop with little claws,
On twigs of poplar or lime tree
– Which makes forest birds thrive best –,
Although you have no drink nor food
Besides what is daily given
In your little tray and water bowl,
You live free of solicitude.⁶⁴

⁶² Jeroense J. [= Hieronymus Sweerts], *Koddige en ernstige opschriften, op luyffels, wagens, glazen, wythangborden, en andere tafereelen*, 4 vols. (Amsterdam: 1682–1690) vol. III 18:

Op 't sterven van een Tuin-hond.

Hier word (getroffen van de dood)
De trouwen Coridon gevonden.
Hy sturf van Koud' en Hongersnood,
Het was een puykstuk van de Honden.
Geen Buurhont stond hem by op 't lest,
Noch Vaar, noch Moer, noch goe bekende,
Door broodzucht hold' hy na zyn ende,
Zyn meester joeg hem Hol in 't nest.

⁶³ Jacob Cats, *Sinne- en minnebeelden* vol. I 114.

⁶⁴ Jan Six van Chandelier, *Gedichten* vol. I 398:
O koddenaartje, vrooliek beestje,



Fig. 8. Adriaen van de Venne, Parrot. From Jacob Cats, *Proteus ofte Minne-beelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) embl. no. 14, p. 80. Royal Library, The Hague.

Even the fact that birds were often blinded to stimulate their song was interpreted by Cats in a didactic and religious way. In this world, he says, it is not earthly vision that matters, but the inner eye that is turned towards God.⁶⁵

Birds were playmates for children and women. Mischievous boys robbed nests, but young men in love might also present a nest to their beloved, as is mentioned in Cats's "Harders-clachte" ("Shepherd's complaint"). In 1636 P.C. Hooft wrote two charming poems for his stepdaughter Susanne Bartelotti, alias Oreade, on the sparrow that pecked at her pearl necklace and found the pins that she had dropped. The poem starts as follows:

The little sparrow, my girl's delight,
Plants her claws on the flesh
Of her fair and soft neck,
And it lifts its little beak
To peck at the pearls.⁶⁶

Poems like this one are not exceptional in literature; as a matter of fact we are dealing with a commonplace in classical and Petrarchan love poetry. In this genre lovers express their desire to change places with the pets of their beloved. One of the Dutch poets writing in this tradition, Jan Vos, wrote several poems of this type. Examples are his "Aan Labelle, het hondtje van Juffrouw J. vander Hoeven" ("To Labelle, little dog of Miss J. vander Hoeven"), "Aan de Vink van Juffrouw M.G.V.G."

Soet schaatrende uit een lustigh geestje,
In traaljen, draadjes van metaal,
Deur elk vertrek, en elke saal:
Schoon ghy zoo hooghjes hangt, in slootjes,
En niet meught hupplen, met de pootjes,
Op lindetakjes, of poplier,
Des wildsanghs allerbeste tier:
Schoon ghy noch drankjen hebt, noch aasjen,
Meer dan, in 't bakjen, en in 't glaasjen,
U daagelyks gegeeven is,
Ghy leeft, vry van bekommernis (1-12).

⁶⁵ Jacob Cats, *Alle de werken* vol. II 412.

⁶⁶ Pieter Cornelisz. Hooft, *Lyrische poëzie*, ed. P. Tuynman – G. van der Stroom, 2 vols. (Amsterdam: 1994) vol. I 503:

'T Musje, lusje van mijn mejsje,
Plant zijn' pootjes op het vleyjsje
Van haer blank' en poesle krop;
En het steekt zijn bekjen op,
Om te pikken nae de perlen (1-5).

(“To the finch of Miss M.G.V.G.”), “Een Honingbietje op Lauraas mondt terwyl zy sliep” (“A honey bee on Laura’s lips while she slept”) and even “Kupido, in de gedaante van een Mug, door Laura op haar borst doodt gedrukt” (“Cupid, in the form of a gnat, crushed to death by Laura on her breast”).⁶⁷

Hooft was imitating Catullus when he wrote his poems on the sparrow. However, we know that it was not just a literary game: his stepdaughter owned a sparrow herself. The sparrow of Susanne Bartelotti was not only immortalized in Hooft’s poetry, it also featured in the work of Vondel, Barlaeus and Plemp. In Hooft’s correspondence, we read that on the first day of July the sparrow ‘took off, leaving his mistress utterly distressed’.⁶⁸

The girl would have done well to tie the bird by the leg, as other children did. In his “Kinder-spel” (“Child’s play”), a preliminary poem to his *Houwelijk* (Marriage) (1625) Jacob Cats accompanied this emblematic poem with the following lesson:

The boy that goes out to play
 Holds a sparrow by a thread.
 Whenever the animal flies too far,
 He calls: no higher!
 And although the sparrow resists,
 He pulls her down by the string.
 Why, o man, so very high?
 Where wanders your playful eye?
 Although the sea and fields are open,
 Everybody is bound to his limits.
 And when your rope is at its end,
 It’s useless to run.
 So cut your coat, dear soul,
 According to your cloth.⁶⁹

⁶⁷ Jan Vos, *Alle de gedichten* vol. II 479–480; 484–485; 488; 478–479.

⁶⁸ Pieter Cornelisz. Hooft, *De briefwisseling*, ed. H.W. van Tricht, 3 vols. (Culemborg: 1976–1979) vol. II 810–812. Her sister, Christina Hooft, owned a parakeet, as can be concluded from Jan Vos’s poem “Parketje van Mejuffer Kristinas Hooft, toen zy naar ’s Graavenhaag trok, om Diana, haar hondtje, te haale, &c.” (“Parakeet of Miss Christina Hooft, when she left for The Hague to collect her little dog Diana, etc.”). Jan Vos, *Alle de gedichten* vol. I 495–499.

⁶⁹ Jacob Cats, *Alle de werken* vol. I 189:
 De Jongen die uit spelen gaat
 En heeft een musjen aan een draat,
 Wanneer het dier te verre schiet
 Soo roept hy veerdig: hooger niet,
 En of de musch haar stelt te weer,

Keeping animals also caused annoyance, especially for the neighbours. An instructive passage on that subject can be found in the “Hardersclachte” (“Shepherd’s complaint”) by Jacob Cats, mentioned earlier as a fine example of Dutch pastoral poetry. In this poem, shepherd Daphis sums up the pleasures of the free country life, in contrast to the oppressive city. In town, people are packed so closely together, that one is forced to listen to the cackling of the neighbour’s hen when it lays an egg, and to other animal sounds. And even the much maligned neighbour’s cat that wrecks gardens proves to be age-old:

If there’s a cat in the neighbourhood,
Your garden will be just a path.
If there are herbs or flowers growing,
This vile animal will trample them flat.
Whatever you plant, whatever you sow:
Before it grows it will be mowed.⁷⁰

Cats continues with a passage about the neighbour’s dog that steals meat from the kitchen and says thank you by pissing against the furniture...

Enjoying nature

In our modern perception, which is still strongly influenced by romanticism, nature is one of the main sources of inspiration for the poet. Its wildness and purity are associated with poetic imagination and feeling. But this concept cannot be applied to the past as a matter of course. People of the early modern period enjoyed nature; as a matter of fact

Hy ruktse met het toutjen neer.
Waarheen, o mensch, zoo byster hoog?
Waar heen dog swiert u dertel oog?
Al staat u open zee en veld,
Een ieder is zyn paal gestelt;
En als u lyntjen is ten end,
Dan is het al om niet gerent.
Ey springt noit verder, salig man,
Als daar u stokje reyken kan.

⁷⁰ Jacob Cats, *Alle de werken* vol. I 99:
Isser in de buyrt’ een kat,
Gansch uw hof is maer een pat;
Waster ergens kruyt of blom,
’t Slim gedierte looptet om:
Wat je poot, en watje zaeyt,
Eer het wast, ist al gemaeyt.

they took a growing interest in it, but by far the majority of them preferred the cultivated landscape, designed by man, to the untamed wilderness. Enjoying nature for seventeenth-century Dutch townspeople meant taking a walk along the dykes or through the gardens and fields around the city.

For many centuries, poems have been written that started with the protagonist's leaving town, or with the description of a garden. This so called "Natureingang" is highly stereotypical: it is always spring or summer, the weather is fine, the sun is shining, trees are green, flowers bloom and the birds are singing. During the seventeenth century this tradition was still carried on, especially in love poetry.⁷¹ The natural scenes in these poems often have little to do with real nature: it is merely literary convention. Nevertheless there was a tendency, at least in the work of some authors, towards a more realistic approach. They started to describe what they really saw, and the idealized Garden of Eden was replaced by the landscapes of Holland and Zeeland, including the animals that populated them. Several of the books of Hendrik Laurensz. Spiegel's voluminous epic *Hert-spiegel* (Mirror of the heart), published in 1614, began with such descriptions. They are considered to be the first natural landscapes in Dutch literature. In the second book, "Thaleye", the poet walks along the river Amstel. Winter is past, the ice is melting and the flooded land is drying out again. Fish make way for cattle:

The field that lately seemed a watery lake,
Now showed its bushy borders, and regained its colour.
Where the flounder-fish had sported at will,
Within a few days the milk-rich beasts would graze.
They loathe the musty hay, and yearn greatly for the field,
That's easier turned into fat, melted to grassy milk and cheese.⁷²

Spiegel walked in the neighbourhood of Amsterdam and described not only the rural Gooi area but also the surroundings of Haarlem – parts of the country where nature was conveniently arranged and

⁷¹ King P.K., *Dawn poetry in the Netherlands* (Amsterdam: 1971) 50–88.

⁷² Hendrik Laurensz. Spiegel, *Hert-spiegel*, ed. F. Veenstra (Hilversum: 1992) 37:

Het velt dat korts noch scheen een water-rijke meer
De ruijghe kanten toont, en kreegh haar verwe weer:
Daar langh de spertel-vis na lust had gaan vermeijen
Daar zoumen alle daagh melkrijke beesten wajen,
Dien walght het doffe hoij, en tochten zeer na t'velt,
Dat beter voet tot vet, en grazich zuijvel smelt (15–20).

safe. But the greater part of nature was not safe, ordered and under control. Wild nature was thought to be dangerous – and sometimes it actually was. In order to find a cure for his painful spleen, Jan Six van Chandelier took the waters in Spa in the summer of 1656. During a walk to the Barisart spring:

I stepped, in a field with grass and ferns,
 On the rib cage of a big reddish snake,
 Half-curved around an apple-tree root.
 This dust eater, after some struggling,
 Enraged, with its sharp and poisonous tooth
 In its open mouth, jumped fiercely at me.⁷³

Six managed to kill the adder and escape.

It was therefore preferable to experience the pleasures of nature in safer gardens and at popular country seats. Dutch poets described these estates in – sometimes very extensive – ‘hofdichten’ or country house poetry; the genre became a Dutch speciality. The earliest specimens were *Den Binckhorst* by Philibert van Borselen (1613), the voluminous *Moufeschans* by Petrus Hondius (1621), *Hofwyck* by Constantijn Huygens (1653), *Ockenburgh* by Jacob Westerbaen (1654) and *Ouderdom en Buyten-leven* (Old age and country life) by Jacob Cats (1655).⁷⁴ These and later poems provide a lot of information about the animals concerned, although the amount of attention devoted to them differs widely. Westerbaen, who lived permanently at Ockenburgh, had his own livestock, as was mentioned earlier, and devoted much attention to the animals. Huygens on the other hand did not keep animals at Hofwyck, where he stayed only occasionally. Animals are of little importance at his Hofwyck: birds are mentioned briefly, but only to note that Huygens’s friend Utricia Swann sang better than they did.⁷⁵

⁷³ Jan Six van Chandelier *Gedichten* vol. I 188:
 Zoo stip ik, in een gras, en vaarenplein,
 Op ’t ribbeen van een groote rosse slangh,
 Half krullende om een appelwortel.
 Die stofvraat, naa een krom gesportel,
 Gebeeten, met de spitse gifte tangh,
 Uit synen bek, sprong vinnigh op my toe (8–13).

⁷⁴ De Vries, *Wandelring en verhandelring*.

⁷⁵ Constantijn Huygens, *De gedichten* vol. IV 276–277 (401–426; 1105–1116). In 1681, when birds built a nest in one of the windows of Hofwyck, Huygens wrote a lovely small poem though: “Aen kleine vogeltjens die buijten tuschen mijne vensterramen in quamen nestelen” (“To the small birds that built their nest outside my window-frame”). Constantijn Huygens, *De gedichten* vol. VIII 263.

Birds were much more appreciated by other authors of country house poems. Van Borssele described the swallows that lived on the Binckhorst estate, their swift wings and the ingenious nests they built every year out of straw, mud and water. And he tells us how the flight of the swallow forecasts weather conditions:

Tell, airy tumbler, tell, who swarms here and there,
Who teaches you to foresee the rainy weather,
And how to inform us with your idle glides?
Tell me: is it not because by such a clever invention,
You can more easily catch flies as they fall
And give your hungry brood the food it needs?⁷⁶

In *Ockenburgh* Westerbaen also deals with forest birds at great length. He often listened to the nightingales at West-Escamp, near The Hague, and enjoyed their musical virtuosity. But put to the choice, he loved larks even more. They populated the fields around Ockenburgh by dozens:

Before the dew has dried on the hayfields, on the meadows,
These birds have already built their first nest.
There they are, early and cheerfully, singing,
The females brooding in these dry dunes;
Here are they free and happy day by day
While their lowland comrades sadly tweet.
He who loves the open country will find here what he wants.
There are hundreds of them, soaring and falling,
Now upwards to the ceiling of this mighty space,
Then to the ground again, like a stone from the sky.
And perched back on a clod, this bird's chair of state,
The singing starts again, and one wing and the other
Give a quiver to its song, make a tremble in its fluting,
Like the finger plays the fifth on the lute.⁷⁷

⁷⁶ Philibert van Borssele, *De dichtwerken*, ed. P.E. Muller (Groningen – Batavia: 1937) 85–86:

Seg lochtich Tuymeler, seg Swermer gins en weder,
Wie leeret u vorsien het regenachtich weder?
End met dijn leech geswier ons dat te maken cond?
Seg, ist niet om dat ghy door sulcken cloecken vond
De neergedaelde vliech te beter soudet vangen,
End dijn gretich gebroed sijn noodich voetsel langen? (477–482).

⁷⁷ Jacob Westerbaen, *Gedichten* vol. I 69–70:

Eer 't hoyland, eer de wey noch uyt het waeter raeckt,
Werd van dees vogeltjes haer eerste nest gemaect.
Hier zyn sy vroegh in vreugd en vol-op aen het singen,
Haer wijfjes aen het broen in deese drooge klingen;
Hier zynse vry en bly en vrolick alle daegh

After this song of praise, it comes as a shock to read that during the autumn Westerbaen caught as many larks as he could in order to cook and eat them.⁷⁸

Hunting

This brings us to hunting, and for poetry on that subject Westerbaen again provides us with some interesting material. From early times, hunting had been the privilege of the nobility.⁷⁹ Riding, falconry and shooting were the pastime only of the happy few. Westerbaen witnessed the shooting parties of the Princes of Orange Maurice, Fredrick Henry and William II, and of the Winter King and Queen, Frederick and Elizabeth of Bohemia as well. He describes the royal companies that made the dunes shimmer with gold and silver:

Here I saw Kings and Royal Females
 Driving the fast hare with a hundred beagles,
 With many a noble horse and nobler horsemen.
 Alarm was in the air because of the galloping and barking,
 And Herry's* loud voice, that equals Stentor's jaws,
 They'll follow the hare, not caring for gardens and railings,
 They follow the scent of where a foot has trod.
 What a pleasure blood-lust takes in innocence!⁸⁰
 *game-keeper of the King and Queen of Bohemia

Terwijl haer macker piept van kommer in het laegh.
 Die soet in ruymte vind komm' hier zyn hert ophalen:
 Hier zynder honderden aen 't klimmen en aen 't dalen,
 Dan nae het deksel toe van dese groote Vlucht,
 Dan nae den bodem weer, als steenen uyt de lucht.
 Geraecken s' op een klyt, de pronckstoel van dit veugeltje,
 Het singen vangt weer aen, en 't een en 't ander vleugeltje
 Doet beven wat het singt, doet drillen wat het fluyt,
 Gelijck de vinger doet het quintjen op de Luyt.

⁷⁸ Jacob Westerbaen, *Gedichten* vol. I 156–162.

⁷⁹ Hendrixx J.A., "Jacht als vermaak voor de elite", in Jongste J. de – Roding J. – Thijs B. (eds.), *Vermaak van de elite in de vroegmoderne tijd* (Hilversum: 1999) 137–152.

⁸⁰ Jacob Westerbaen, *Gedichten* vol. I 76:

Hier heb ick Koningen en Coninklijke wyven
 Het vluchtigh Haes gesien met honderd bracken dryven,
 Met menigh edel paerd en edler paerde-volck;
 De lucht was in allarm door 't deurslaen en 't getjolck,
 Door Herrys wyde strot, spijt Stentors holle kaecken,
 Die haes en honden volght in spyt van tuyn' en staecken,
 Die deur gaen op de lucht van een geloopen voet
 Wat vind de moord-lust smaecks in het onnoosel bloed!

But Jacob Westerbaen himself was also a keen sportsman who loved to hunt for small game: hares, rabbits, pheasants [Fig. 9].⁸¹ In several poems he described how he went out with his greyhounds through the Westland fields, but more often he wandered around his own residence Ockenburgh to catch rabbits. A peculiar case is his poem “De wilde jacht” (“The fierce hunt”). Westerbaen describes a shooting party, organized by the dyke-reeve in order to diminish the damage caused by rabbits. In this poem the battle of man against nature is described as a war between two armies: after the army of rabbits has been gloriously defeated, the conquerors are regaled with a celebratory banquet.⁸²

All types of birds were hunted as well. Duck hunting, either with decoys or with dogs and guns, was very popular. A fine fragment can be found in the anonymous poem *De roemster van de Amstel* (The praise-singer of the Amstel) giving an impression of how ducks were caught with the aid of a hound:

But hunting for ducks is found to be the best of all,
 As they do along the river Amstel with hounds.
 The duck, that hunter's beast, outsmarts the beagle
 That for a long time swam in the duck-weed:
 When she notices that he is about to bite
 And gets nearby, she knows how to escape
 By diving under. Then the dog appears
 To get for all his effort nothing in return.
 He twists his head, he has lost the scent,
 Until he sees the duck pop up her head again,
 He pursues her with diligence (with new energy,
 Swimming like he did before) and chases restlessly,
 Until finally the cunning duck is conquered
 By the swift beagle, is caught and grasped.
 It diligently turns to its master with the prize,
 And for a piece of bread presents to him its prey [Fig. 10].⁸³

⁸¹ Westerbaen was made a Knight of the French Order of St. Michel in 1629 and owned the hunting-right since; this right was withdrawn in 1666.

⁸² Jacob Westerbaen, *Gedichten* vol. I 467–471.

⁸³ *De roemster van den Aemstel; off poëtische beschrijvinghe van de riviere Aemstel*, ed. Werkgroep Utrechtse neerlandici (Utrecht: 1973) 112–115:

Maar d'eende-jacht alleen is 't soetst' van al bevonden
 Die in des Aemstels-stroom gepleegt wordt met de honden;
 Den Eendt, dat weyd'-mans dier, die is de Brack te loos
 Wanneer hy langhen tydt gheswommen heeft in 't kroos,
 En dat sy wordt ghewaar, dat hy is op het happen
 Haar kort en na op 't lijf, soo weet sy hem t'ontsnappen,
 En duyckelt na de grondt, dan staat de hondt en siet,

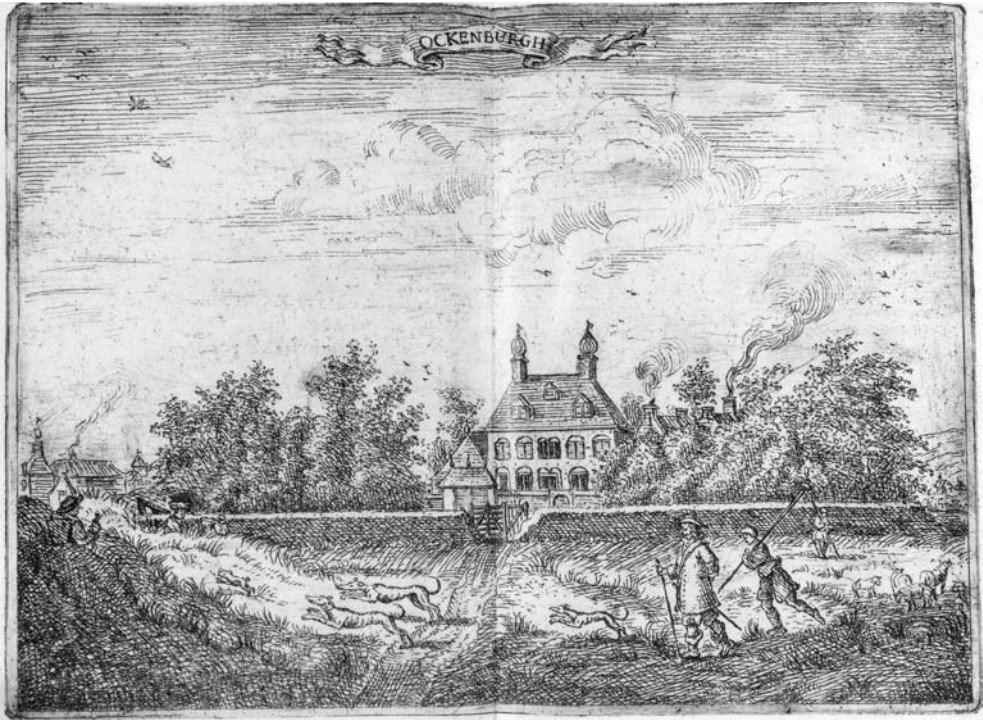


Fig. 9. Anonymous, after Arent Ravensteyn, Hunting scene nearby Ockenburgh. From Jacob Westerbaen, *Ockenburgh* (Delft, Arnold Bon: 1654), after the title page. Royal Library, The Hague.



Fig. 10. Adriaen van de Venne, Hound catching a duck. From Jacob Cats, *Proteus ofte Minne-beelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) embl. no. 32, p. 188. Royal Library, The Hague.

When Kackerlack in Bredero's comedy *Moortje* (The little Moor), published in 1617, walks through the poultry-market, numerous species of ducks and other water-birds are presented to him:

Hey old merchant, why do you pass so swiftly? That won't do,
What are you looking for? For an overseas swan, a brent goose, or a
duck?

I just received from the Kuegel a sledge with drakes and teals, look:
That's a golden-eye, these are widgeon, that duck's called a Johnny,
That's a pin-tail, the noblest beast flying through the air [...] ⁸⁴

Birds we would not expect to find on the dinner table nowadays were also eaten, as can be concluded from the poetic description of some copious banquets, such as that given by Mattheus Gansneb Tengnagel: there sparrows, lapwings, herons and bitterns were on offer. The snipe was – and still is – considered to be a delicacy.⁸⁵ Swans and peacocks were made into pies, which were sometimes decorated with the feathers, wings or tail. Hendrik Snakenburg, who lived in Leiden and worked for Leiden University, loved to go out in stormy weather. He hid in the dunes nearby Katwijk:

This is my ambush, when the tide is rising,
To shoot from a distance the seagulls by surprise,
That, skimming along the dunes and lifted on the air,

Als een die voor sijn moeyt' maar vanght een enckel niet;
Het hoofd gaat gins en weer, het spoor is hem ontweecken,
Tot dat hy d'Eend' van verr' weer siet het hoofd op steecken;
Daer vlytigh achter her (hy we'er met nieuwe lust
Swemm't als hy deed' voorhe'en) en jaaght soo sonder rust,
Tot dat in 't eynd' het Eendt vermeestert in haar grepen,
Wordt van de snelle Brack ghevanghen en ghenepen,
Die vlytigh met de buyt dan na sijn Meester keert,
En willigh hem sijn roof voor een stuck broodts vereert (453–468).

See also Jacob Cats, *Sinne- en minnebeelden* vol. I 222.

⁸⁴ Gerbrand Adriaensz. Bredero, *Moortje* en *Spaanschen Brabander*, ed. E.K. Grootes (Amsterdam: 1999) 58:

Hier ouwe Koopman hoort, wel so verby? Dat mach niet door de bueghel,
Waer nae sieje? Nae een overseesche Swan, een Rotgangs, of nae een Ent-vuegel?
Ick kreech vlus uyt de Kuegel een slee, met Winders en Tayllingen, siet,
Dat zyn Knobben, dat zyn Smienten, dat een vogel die Hans hiet.
Dats een Pyl-start, 'teelste beesje dat by de lucht vlieght [...] (662–666).

⁸⁵ Matthaëus Gansneb Tengnagel, *Verzameld werk*, ed. J.J. Oversteegen (Amsterdam: 1969) 260–261; see also Cats's "Harders-clachte", in idem, *Alle de werken* vol. I 96, and the poem by Jan van Hout, published in: Prinsen J.Lzn., "Bronnen voor de kennis van leven en werken van Jan van Hout I", *Tijdschrift voor Nederlandsche taal- en letterkunde* 22 (1903) (203–239) 227–229.

And drifting in the wind on their heavy-winged flight,
 So secretly shot from the hide with fiery lead,
 Drop like clouds from the sky into the foaming water.
 Their skill in spotting and fleeing the danger
 Furnishes us with the sport to betray them by guile.⁸⁶

It is not very likely that the seagulls he shot were meant for consumption. Westerbaen in any case did not eat them; he only used the feathers.⁸⁷

Fishing

Fishing is another method of hunting. Fishing can be a very tranquil pastime as well as a perilous industry. The first type has been described in country house poetry. Jacob Snouckaert, owner of the Binckhorst (the country seat celebrated by Van Borssele) lured the fish with a bell to feed them.⁸⁸ Westerbaen gives a very lively description of the fishing in his pond, a passage that inspired Johan van Someren when writing his “Wandeling van Nijmegen op Ubbergen” (Walk from Nijmegen to Ubbergen):

Come, place the angling-rod, the bank is somewhat higher here,
 And you, stand over there, it's much dryer there.
 I have a bite already, make your float stand,
 The shaft straight up, yours is going down, pull!
 Draw it in! It's a ruff as big as a roach.⁸⁹

⁸⁶ Gelderblom A.J. (ed.), *'k Wil rijmen wat ik bouw: twee eeuwen topografische poëzie* (Amsterdam: 1994) 113:

Dit is mijn hinderlaag om, als de vloed gaat wassen,
 Van ver met schietgeweer de meeuwen te verrassen
 Die, scherend langs het duin, gedragen op de lucht
 En drijvend tegen wind op zwaar gevlerkte vlucht,
 Zo heim'lijk uit het hol met vurig lood getroffen,
 Als wolken uit de lucht in 't schuimend water ploffen.
 Hun sluwheid om gevaar t'ontdekken en t'ontgaan
 Geeft ons vermaak dit dier door listen te verraên.

⁸⁷ Jacob Westerbaen, *Gedichten* vol. I 165; de Vries, *Wandeling en verhandeling* 188.

⁸⁸ Philibert van Borssele, *De dichtwerken* 86–87 (vs. 517–520).

⁸⁹ Frijhoff – Spies, *1650: bevochten eendracht* 574:

Kom, leg de hengel in, hier is de kant wat hoger,
 En gaat gij ginder staan, daar is het vrij wat droger,
 Ik heb alrede noop, maak dat uw dobber sta,
 Uw schafje overeind, het uw' gaat onder, sla,
 Haal op; het is een pos, zo groot als was't een voorn.

So angling could be a pleasant (party) game, with a tasty morsel as a reward – that is to say if one had a good catch, which was not always the case according to W.G. van Focquenbrochs “Ongelukkighe Vis-Tocht” (“Unfortunate fishing-trip”).⁹⁰ The rich variety of both fresh- and saltwater fish that people ate is again illustrated by descriptions of banquets and market-stalls. The fishing industry, especially the herring catch, was important for the Dutch economy, and the herring was extolled for its taste and wholesomeness in the “Lof van de pekelharing” (“In praise of the salted herring”).⁹¹

Whale hunting was quite a different story [Fig. 11]. The pamphlet *De seldsaame en noit gehoorde wal-vis-vangst, voorgevallen by St. Anna-Land in 't jaar 1682. den 7. October* (The rare and seldom heard-of whale-catch, occurring near St. Annaland in the year 1682 on the 7th of October) gives an almost documentary description of this type of fishing or hunting. After the whale has been successfully shot a tragic death struggle follows:

The rushing and hot blood spouts from different wounds
 Far over neck and head, it's such a blood-letting
 That he won't need each year, when he's had it once,
 He may thresh around, but he is finished [...]
 The sea around the fish is coloured red by blood.
 Now, men, he is dead. Before we start cutting
 And tearing, the fins must first be bound
 Tight to the corpse with ropes.⁹²

Whaling could be dangerous too, since small ships were very vulnerable on the ocean. Compared to this, the dangers of the oyster banks in Colchester were negligible. Six van Chandelier had a great appetite

⁹⁰ Focquenbroch W.G., *Afrikaense Thalia*, ed. J. Helwig (Deventer: 1986) 87.

⁹¹ The original poem was written in Latin by a certain Laurens; Jacob Westerbaen made a translation that can also be seen on a painting by Joseph de Bray, *ibidem* 41–42).

⁹² *De seldsaame en noit gehoorde wal-vis-vangst, voorgevallen by St. Anna-Land in 't jaar 1682. den 7. October* (Leiden: 1684) (Knuttel, *Catalogus van de pamfletten-verzameling berustende in de Koninklijke Bibliotheek*, nr. 12249) 30:

Het bruisend heete bloed, springt uit verscheijde gaten,
 Ver over hals en kop; so dat sulck ader-laten,
 Hij jaarlijks niet behoeft; heeft hij 't eens uitgestaan,
 Hij mag wat spartelen, maar 'tis met hem gedaan [...]
 De See rond om de Vis, werd bloedig rood van k'leuren.
 Nu mannen hij is dood; eer men aan 't snijen, scheuren
 Kan komen, moeten eerst de vinnen vlak op 't lijf,
 Met touwen vast gesord.



Fig. 11. Adriaen van de Venne, Whale hunt. From Jacob Cats, *Proteus ofte Minnebeelden verandert in sinne-beelden* (Rotterdam, P. van Waesberge: 1627) embl. no. 7, p. 14. Royal Library, The Hague.

for them, and the fact that he cuts his hands on the sharp shells does not deter him:

O! Little oyster with green whiskers,
 O! fair, plump and generous mouthful,
 Reward my craving with the scissors,
 Forged on the knife, about the shell's hinge.
 Let now this, and then another finger
 Drop some blood, because of your lancets:
 At the moment I swallow your smooth soul
 I recover my heart and get new courage.⁹³

Vermin

Finally, the undesirable and loathsome sorts must also be mentioned. Poets wrote about mice, mosquitoes and other vermin both seriously and light-heartedly. The enormous mouse plague of 1653 is commemorated in Vondel's *Inweydinge van 't Stadhuis t'Amsterdam* (Inauguration of the Amsterdam Town hall), published in 1655,⁹⁴ and it also inspired Six van Chandelier to write his "Muisenjaar" ("Mice year"):

What stress does Holland not suffer? Land and houses swarm
 – Like the land of the Philistines
 Vexed by the Heavenly Hand –
 With a particular race of noxious mice.
 The cattle grow thin and walk the sickly fields,
 Riddled with holes, with tracks
 Burrowed as by a mole.
 Our dishes we loathe owing to droppings and bites,
 One beats the pest to death, by attacking them
 With cat, with dog, with trap.
 But it is all of no use.⁹⁵

⁹³ Jan Six van Chandelier, *Gedichten* vol. I 765:
 O! oestertjen, met groene baardjes,
 O! blanke bolle, en volle beet,
 Betaal myn snoeplust vry, met schaartjes,
 Aan 't mes, ter schulpknops breuk, gesmeedt.
 Laat nu, en dan een ander vinger,
 Met uwe vliempjes, druppelen bloed,
 Met ik uw zieltjen glad inslinger,
 Zoo krygh ik hart, en nieuwen moed (1724).

⁹⁴ Joost van den Vondel, *Werken* vol. V 871.

⁹⁵ Jan Six van Chandelier, *Gedichten* vol. I 665:
 Wat druk drukt Holland niet? Nu krielen land, en huisen,
 Als Filisteas land,
 Geplaaght van 's Heemels hand,

The comparison between Holland and the land of the Philistines (I *Samuel* 6: 4–5) shows that Six experienced the plague as retribution for human sins. Six also wrote a poem on the mosquitoes that tortured him at night: “Muggejacht” (“The Mosquito hunt”). His thorough investigation of door, walls and ceiling was of little use, just as his attempt to smoke out the pests with tobacco:

Now one of them lands about my cheeks,
Then one sticks its double beak
Viciously through my hair and neck,
Sucking blood before I can catch it.
My own blood stains my hands.⁹⁶

What annoyed Six was a source of wonder to Cats. In his *Hof-gedachten* (Garden thoughts) he describes how he allowed a mosquito to sting his hand, while he had a close look:

I looked at the tiny creature
And let it have its way unhurt.
I saw how its little snout
Went all over my skin,
Until, with its delicate mouth,
It found a little hole there,
A hole the sweat pours from
Or that exudes hot vapours.
There the creature stabbed its thin pin,
There it stabbed its sting
And it thrust it in, I don't know how,
Up to its delicate lips.
And while it went to work,
I saw how a little blood

Door een besonder slacht van schaadelyke muisen. [...]
Het vee vermaagert, en doortreedt de sieke landen,
Van binnen hol, aan hol,
Doorwroet als van de mol:
De schootels walgen ons van keutels, en van tanden.
Men slaat de schaade dood, met even aan te roeren,
Met kat, met hond, met val.
Maar baat al niemendal (1–4; 17–23).

⁹⁶ Jan Six van Chandelier, *Gedichten* vol. I 731–732:
Nu strykt er een, ontrent de wangen,
Dan steekt er een syn dubblen bek
Fenyng, door myn haair, en nek,
En suight al bloed, eer ik kan vangen.
Myn eigen bloed besmeurt myn handen (25–29).

Welled from a tiny wound
Up into the little creature's mouth.⁹⁷

Cats primarily seems to be curious about the animal and shows wonder and admiration for God's Creation rather than annoyance at the mosquito's sting.⁹⁸ In other poems, the nuisance of fleas and the battle against lice is described in a more comical way. Jacob Westerbaen wrote a "Vloeck tegen de vloyen" ("Curse against the fleas") that kept him awake at night in the inn. In his opinion, the fleas are barking up the wrong tree: it is not *he* who disturbs them, but the chamber-maid who makes the bed. Besides which, he says, her blood must be much sweeter than his... This type of poetry is mainly a literary game, inspired by classical and Neo-Latin texts.

C. *Science and curiosity*

During antiquity an enormous quantity of knowledge – from a modern perspective a lot of it being pseudo-knowledge – was collected and compiled in books. Aristotle for example wrote several surveys, such as his *History of the animals*. His work is marked by its structure and systematic plan. Less ordered is the result of Pliny's unequalled mania for collecting, the *Naturalis historia*, an encyclopedia in 37 books. Much

⁹⁷ Jacob Cats, *Alle de werken* vol. II 402:
Ick sach het tanger beesjen aen,
Ick liet'et sonder leet begaen.
Ick sagh, hoe dat sijn kleyne snuyt
Ging op, en aen, en om mijn huyt,
Tot dat'et, met sijn teere mondt,
Aldaer een open gaetjen vont;
Een gaetje daer het sweet door vliet,
Of daer uyt heete waessen schiet.
Daer stack het dier sijn dunne pin,
Daer stack het sijnen angel in;
Die ging'er deur, ick weet niet hoe,
Tot aen sijn teere lippen toe;
En t'wijl het dus sijn dingen doet,
Soo sagh ick, dat er enckel bloet
Quam rijsen uyt een teere wont,
Tot in het diertjens kleyne mont. (II 402).

⁹⁸ Jorink E., *Het Boeck der Natuere. Nederlandse geleerden en de wonderen van Gods Schepping 1575–1715* (Leiden: 2006) chapter 4.

of this collected knowledge was still available during the Middle Ages.⁹⁹ The most influential writing about animals and plants in this period (incorporating sections of the classics) was the *Physiologus*. In this work, written during the second century by an anonymous Christian from Alexandria, biblical animals and plants are presented as vehicles of religious truth.¹⁰⁰ The *Physiologus* was of great influence: the medieval (fable) animal books or bestiaries are based on it. The most comprehensive natural encyclopedia, *Opus de naturum rerum* by Thomas of Cantimpré, was translated into Dutch by Jacob van Maerlant in his *Der naturen bloeme* (The Book of Nature).

During the seventeenth century such voluminous encyclopedic works in verse were no longer written. There are some poems, nevertheless, that can be placed in the bestiary tradition. The best specimen is *Strande* (Beach), published in 1612, by Philibert van Borsselen. In this long poem, numerous sea-creatures and other oceanic treasures are discussed. Van Borsselen used a lot of information drawn from well-known older sources. Shells and fishes are linked to classical and mythological stories and sometimes Christian ethics. The pearl, for example, teaches men to long for heaven (see *Matthew* 13: 46). At the same time, *Strande* announced a new and changing interest in nature, dominated by a more empirical attitude. Van Borsselen still assumed that mussels were formed by some kind of spontaneous natural process at the bottom of the sea, but at the same time it is clear that he himself had had a close look at the places where they grew:

The blue mussel-shell, fruit of our barren beach,
Is born spontaneously in the infertile sand and
Hangs on a pile, that's covered with sea-weed, in heavy bunches,
And gets her salty food from the rough sea.
The whitest are the best, called Dutch oysters.¹⁰¹

⁹⁹ McCulloch F., *Mediaeval Latin and French bestiaries* (Chapel Hill: 1962); Clark W.B. – McMunn M.T. (eds.), *Beasts and birds of the Middle Ages. The bestiary and its legacy* (Philadelphia: 1989).

¹⁰⁰ *Der Physiologus*, tr. O. Seel (Zurich-Munich: 1960); *Christelijke symboliek van dieren, planten en stenen. De Physiologus*, ed. F. Ledegang (Kampen: 1994).

¹⁰¹ Philibert van Borsselen, *De dichtwerken* 57:

De blauwe Mossel-schelp, vrucht van ons dorre strand
Van selfs gheboren wordt, end in't onvruchtbaer zand
Aen een bewierden pael met dicke trossen hanget,
End van de wilde Zee haer soute spijs ontfanget
De witste zijn de best, die m' Hollandsch' Oesters hiet (1576–1580).

The desire for a soundly-based natural science resulted in a growing number of people founding natural history collections, comprising all kinds of natural material. Shells were among the most wanted objects. *Strande* is dedicated to Cornelis van Blyenburch, who owned a shell-collection, and to all 'fellow conchologists'.

A remarkable figure when it comes to knowledge of the sea and its creatures was Adriaen Coenen, a salvager from Scheveningen nearby The Hague who, during the last quarter of the sixteenth century, collected and recorded all the information he could lay hands on in several spectacular, beautifully illustrated manuscripts.¹⁰² In these books we find mermaids and other fabulous creatures as well as very accurate descriptions and depictions of animals brought ashore by fishermen, ranging from herring to sperm whales. Sometimes Coenen also wrote short poems, generally with a moral lesson, like the following text about the 'cramp-fish', that is, the electric ray or torpedo [Fig. 12]. The poem was written after the Scheveningen fisherman Cornelis Stomp caught such a creature. The three men who brought the fish on board were afflicted by paralysis for days.

Often the fisherman experiences real suffering
 When merely touched by the torpedo's antenna,
 For even when this fish lies on the sea-bed according to his whim
 So that he is not touching the naked body,
 Still one sees how he stiffens with his venom
 Whatever comes creeping swiftly near to him.
 Thus many things happen uncensored by God's providence,
 That one cannot understand, no matter how one tries,
 Such as deceit: and that often comes sneaking in
 Just as a snake, hidden in the grass, can fiercely bite.¹⁰³

¹⁰² Egmond F., *Een bekende Scheveninger: Adriaen Coenen en zijn Visboek van 1578* (Scheveningen: 1997); eadem – Mason P. (eds.), *Het walvisboek. Walvissen en andere zeewezens beschreven door Adriaen Coenen in 1585* (Zutphen: 2003); eadem (ed.), *Het visboek: de wereld volgens Adriaen Coenen 1514–1587* (Zutphen: 2005).

¹⁰³ Egmond – Mason, *Het walvisboek* 172:

Dikwijls heeft de visser groot leed moeten bezuren
 welke de torpedo slechts met zijn spriet aanraakt,
 want al ligt deze vis in de zeebodem naar zijn kuren,
 zodat hij geenszins roert de lichamen nakt,
 toch ziet men dat hij ze stijf door zijn venijn maakt,
 dat langs wat het dichtst bij hem komt gekropen snel.
 Zo komen veel dingen door Gods voorzienigheid ongelaaft
 die men niet begrijpen kan hoe men het ook maakt,
 zoals bedrog: en vaak komt dit geslopen wel
 zoals 't serpent in het gras verborgen, kan bijten fel.

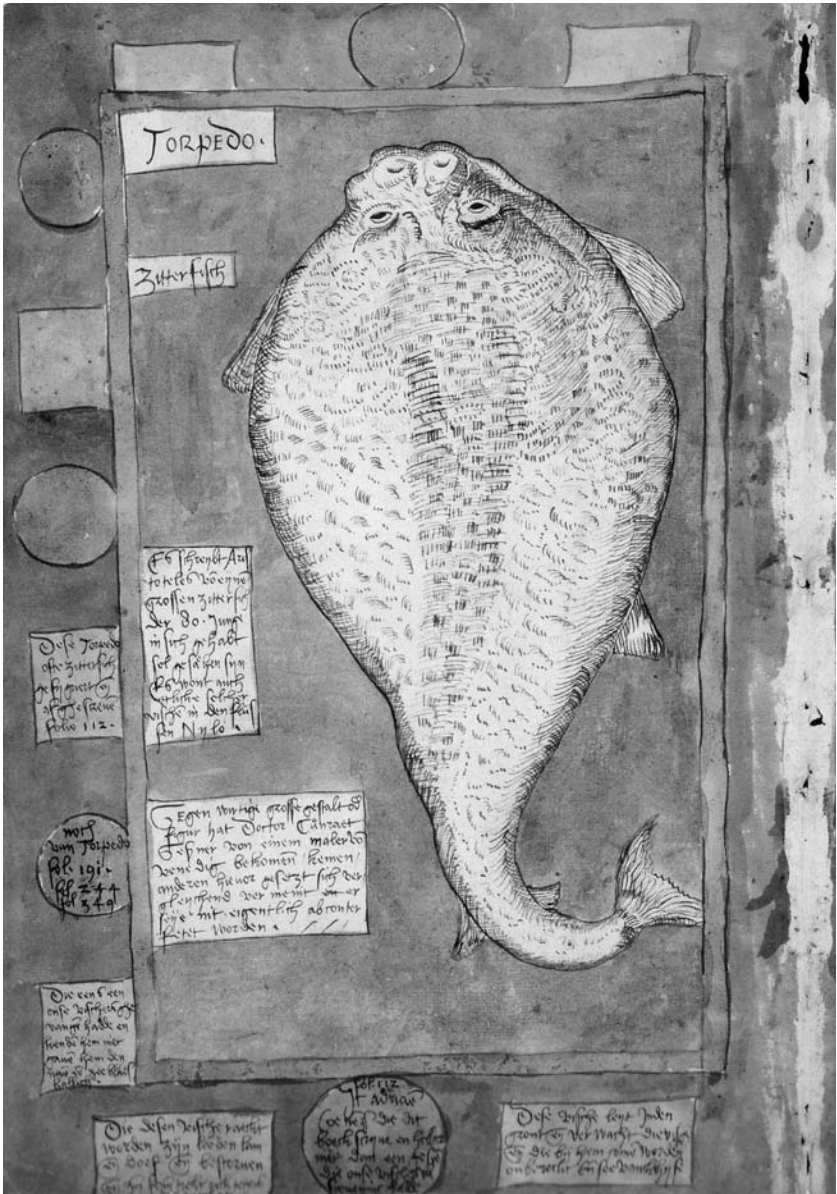


Fig. 12 [COL. PL. XXX]. Adriaen Coenen, Torpedo or electric ray. From Adriaen Coenen, *Visboek*. Royal Library, The Hague, cod. 78 E 54, fol. 323v.

Coenen exhibited his fish-books for a fee at fairs and markets.¹⁰⁴ Others also tried to use animals to make money at fairs. This was a matter of (rather cruel) entertainment. Bear-baiting (organized fights between bears and dogs) and horse-breaking were put on a par with the 'bearded woman', as can be read in these fragments taken from a poem "Van de Amsterdamze Kermis" ("On the Amsterdam fair"):

Over there is the bear-baiting
And a great big girl
With beard and moustache.

The horse that quick as lightning
Jumps through three, four hoops;
The hare that on a drum
Beats till it booms and thunders.¹⁰⁵

The fair could also satisfy the craving for extraordinary and spectacular natural phenomena. The quoted poem not only mentions a calf with five legs that could be seen at the fair, but also an elephant, a dromedary, a leopard, a camel, a wolf, a cassowary, an ostrich, a pelican, a seal and a penguin. This exotic enumeration should make the reader very cautious in interpreting this poem as a more or less realistic impression of the Amsterdam fair. There is little doubt that stuffed animals were exhibited, but we should probably visualize this complete tropical zoo as a painted work – if not a mere poetic fiction.

The animals displayed at the fair were intended to arouse as much sensation among the public as possible. A more academic way to study nature and less familiar animals was to visit a scientific collection of *naturalia*.¹⁰⁶ Leiden university had at its disposal a collection of 'strange animals and vegetation',¹⁰⁷ but there were also private collections. The shell collection of Cornelis van Blyenburch has been already mentioned.

¹⁰⁴ Egmond – Mason (eds.), *Het walvisboek* xii.

¹⁰⁵ *De Olipodrigo, bestaande in vrolyke gezangen*, 3 vols. (Amsterdam: 1654) vol. II 5; 9:
Gints is de Beere-bijt,
En groote Meit
Met baart, en knevels. [...]
Het Paert, dat als een drommel
Door dry vier hoepen sprinkt,
De Haas, die op een Trommel
Slaat dat het dreunt en klinkt.

¹⁰⁶ Jorink, *Het Boeck der Natuere*, chapter 5.

¹⁰⁷ Otterspeer W., *Groepsportret met dame II. De vesting van de macht. De Leidse universiteit 1673–1775* (Amsterdam: 2002) 126–131.

Petrus Hondius also owned a collection that he describes in the eighth book of his country-house poem *Moufê-schans*. Hondius possessed samples of soil, minerals, shells, seeds, stone axes, plants and maps. His most prized exhibit was his mounted ‘herring-king’, presumably the oarfish, besides animal bones, feathers and stuffed exotic birds:

Let us raise our eyes from the fishes
 To the animals that are lifted
 By their wings up in the air,
 Brought home to us from afar:
 With strange and beautiful colours
 Their perfect feathers are displayed
 And give, most of all to the eyes
 A pleasant form of satisfaction.¹⁰⁸

Jan Six van Chandelier visited the collection of ‘skulls and skeletons of beasts’ owned by Doctor Jan Gerritsen Indies, an impressive *memento mori*:

Here a long-necked swan is displayed
 And over there a farcical baboon
 And at the side three human heads
 Are placed, horrifying dolls.¹⁰⁹

Louis de Bills was a famous and disputed anatomist in Rotterdam who prepared human corpses as well as animals, thus creating a “Noah’s Ark”. Laurens Jordaans, a minor poet, wrote a laudatory poem on his anatomical skills [Fig. 13]:

[...] He outrivals nature,
 And in short time makes his ingenious mummy.
 He desiccates the complete corpse, with muscles

¹⁰⁸ Petrus Hondius, *Dapes inemptae, of de Moufê-schans* (Leiden: 1621) 431–432:

Van de vissen slaet ons ooge
 Op t’gedierte, dat de locht
 Met haer wiecken heft om hooge,
 Ons van verre thuis gebrocht:
 Van coleuren vreemt en schoon
 Staen haer pluymen reyn ten thoon,
 En aen d’oogen boven allen
 Geven aengenaem bevallen.

¹⁰⁹ Jan Six van Chandelier, *Gedichten* vol. I 219:

Hier pronckt een langhgehalsden swaan,
 En daar een kluchtge baaviaan,
 En aan de syden staan dry koppen
 Van menschen, schrikkelyke poppen (9–12).

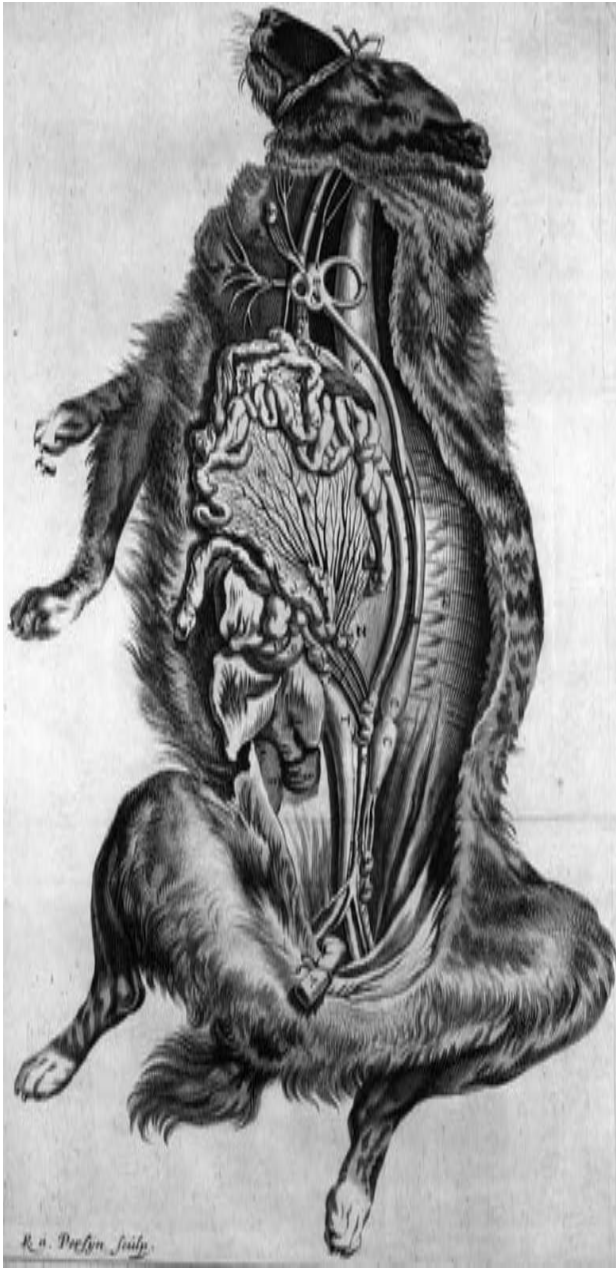


Fig. 13. Reinier van Persijn, A dog dissected by Louis de Bills. From Louis de Bills, *Kort bericht over de waarschouwing van de heer Joan van Horne* (Rotterdam, J. Naeranus: 1660), after p. 12. University Library, University of Amsterdam.

And nerves, he knows how to loosen up the bowels
 And, unharmed and all the elements apart,
 How to show them, together with the heart and entrails.¹¹⁰

There were also living animals to be seen.¹¹¹ Some country houses had a zoological garden. In “De diergaarde op Goudestein” (“The zoo at Goudestein”) Jan Vos welcomed the possibility of watching wild animals in safety, for he hated the dangers of the wilderness:

At Goudestein one finds a safer pleasure-ground
 Here the bold boar shrieks,
 But no one fears the bite of its furious teeth. [...]

Here the deer evades the tooth of the set-on dogs
 The fence of this place
 Protects the spectators from its horns, eager to hurt.¹¹²

Interest in nature was of course strongly stimulated by the fact that a lot of new information became available about newly discovered parts of the world. Travellers to America and Asia collected not only plants, seeds and minerals but also animals. Draughtsmen and painters were sent overseas in order to record tropical vegetation and wildlife. An increasing number of books about the new world saw the light. In Dutch poetry, however, only a few traces of these developments are to be seen; the new knowledge was mainly spread in (illustrated) prose writings. The elephants, dromedaries and other exotic animals mentioned by poets in their work can still be reduced to the classical repertoire of natural science, not to recent findings in the tropics. Newly discovered species were not easily incorporated into poetic and

¹¹⁰ Louis de Bils, *Vertooch van verscheyde anatomische stucken* (Amsterdam: 1655):
 [...] Hy jaeght natuur voorby,

En maeckt in korter tijdt zijn konstige Momy.
 Hy kan het gantsche Lijf opdroogen in sijn Spieren,
 En Senuwen: hy weet soo 't Ingewant te vieren,
 Dat hy dat ongekreuckt, en los van d'andre leën
 Vertoone met het hart, en al 't gewey aen een.

Cf. Grootes E.K., “Laurens Jordaans *Studentenhaver*”, *Literatuur* 13 (1996) 10–17.

¹¹¹ Davids, *Dieren en Nederlanders* 43–45.

¹¹² Jan Vos, *Alle de gedichten* vol. II 477–478:

Men vindt op Goudestein een veiliger waranden.
 Hier gilt het stoute zwyn:
 Maar niemant vreest de beet van zyn verwoede tanden. [...]
 Hier wykt het hart de tant der aangehitste honden.
 De heining van dit oordt,
 Behoedt d'aanschouwers voor zyn hoorens fel in 't wonden.

metaphorical language, although the cochineal had been mentioned by Jan Six van Chandelier in 1649 – but this little insect, source of a costly red pigment, greatly resembled the shell that provided the well known purple dye, and therefore borrowed its connotations.¹¹³

This did not mean at all that the excitement about the new world was completely absent in poetry. A curious example is given in the booklet *Dracht-thoneel* (Costume stage) by Zacharias Heyns, published in 1601. The main part of this book consists of depictions of people from different regions and countries, from Holland to Brazil, accompanied by short poems. It is a kind of catalogue of local costume. The farthest corner of the world to be described is the Magellan Strait. In a kind of supplement, some extra pictures with *curiosa* are added: Roman Catholic clergymen, sea-monsters, a Cyclops, and Peruvian monkeys that walk on their hind-legs with the aid of a stick [Fig. 14]. Finally, the Magellan Strait is represented by a kind of acorn-shell and a penguin, with a rather accurate representation [Fig. 15]:

The Penguin, in the Magellan Strait

These birds, weighing up to sixteen pounds,
Walk as depicted here, erect.
They do not fly, but they are not at a loss
In the sea, for they are used to swimming.¹¹⁴

The borders between science and fantasy, between penguin and sea-monster, were very vague indeed.

A major break-through in the natural sciences, and therefore in zoological knowledge, came with the invention of the microscope. One of the earliest descriptions of the world through the lens can be found in Jacob Westerbaen's *Ockenburgh* (1654). During the cold winter months, when Westerbaen had nothing to do in his garden, he spent most of his time in his library. He read about the miracles of nature and put them to the test by having a look through his magnifying glass himself. He examined mouldy cheese, the carapace of lice, ants and other small

¹¹³ Jan Six van Chandelier, *Gedichten* vol. I 273.

¹¹⁴ Zacharias Heyns, *Dracht-thoneel*, ed. H. Meeus – J.A. van Leuvensteijn (Amsterdam: 1989) 145:

Den Pinguin In de strate magelana
Dees vogels, die wel sesthien ponden wegen,
Op dit fatsoen recht loopen overent,
S'en vliegen niet, doch synse niet verlegen
In zee, want zy het swemmen syn gewent.



Fig. 14. Guillaem van Parijs, Cyclop. From Zacharias Heyns, *Dracht-toneel* (Amsterdam, Z. Heyns: [1601]) 146. Royal Library, The Hague.



Fig. 15. Anonymous, Penguin. From Zacharias Heyns, *Dracht-
 toneel* (Amsterdam, Z. Heyns: [1601]) 145. Royal Library, The
 Hague.

insects with their three pairs of legs.¹¹⁵ He admired the perfection of little creatures such as the midge and pondered on how wonderfully they were created:

One sees and feels and experiences in beasts both great and small
 What stomach and bowels do, what liver, spleen and kidneys;
 How it seethes and foams there, and how the heated blood
 Is transported through the body, where it nourishes every part.
 How the heart gives life when it beats and throbs,
 How the bellows toil to cool it night and day,
 How the brain is housed, how nerves are linked,
 How the male breeds and how the female bears.¹¹⁶

His visual discoveries make him wonder about other natural miracles he does not fully understand, for example the behaviour and characteristics of insects. How can a midge pierce our skin with such a frail drill? And how can he drink blood with that same instrument? There are many similarities with Cats's observations of the midge that stung his hand. What is special about Westerbaen is that he mentions God casually at best, and not in a moral or didactic way. Nature may speak for itself in his work.

D. *Beast, Man, and God*

After the preceding it will be clear that Dutch poets wrote in different ways about almost all kinds of animals. The next question is what their work tells us about the way people thought about fauna during the seventeenth century. According to recent research, the seventeenth century showed an increasing ambiguity. On the one hand the Dutch exploited nature, including their cattle, without much compassion, on the other hand the quotations prove that they loved their pets and felt

¹¹⁵ Jorink, *Het Boeck der Natuere*, chapter 4.

¹¹⁶ Jacob Westerbaen, *Gedichten* vol. I 171:

Men siet, en voelt, en tast in grov' en minder dieren
 Wat maegh en darmen doen, wat lever, mild, en nieren,
 Hoe datmer siet en schuymt, en hoe 't gekoochte bloed
 Werd door het lyf gevoert, daer 't alle deelen voedt;
 Hoe t hert haer leven doet als 't kloppen mag en woelen;
 Hoe dat de blaesbalck gaet die 't nacht en dagh moet koelen;
 Hoe herssens zyn gehuyst, hoe zenuwen gepaert,
 Hoe dat de man hier teelt en hoe het wyfje baert.

a growing concern with animal welfare.¹¹⁷ Apart from the personal affection, two points of view seemed to dominate: animals were either looked at from a didactic (theological or ethical) perspective, or from an economic perspective.

As is generally known, Creation was, in the eyes of the early modern Dutch (but the same is true for the earlier, and at least for certain groups, later centuries) a manifestation of God's almighty power and greatness. God expressed Himself in the universe. There were two ways to obtain knowledge of God: through his work, Creation, and through his book, the Bible. That is why Creation is also referred to as the Book of Nature or the (second) Book of God. The animal kingdom, being part of God's creation, is in this vision an infinite reservoir of holy knowledge.¹¹⁸

The entire universe, including the animal kingdom (both wild animals and cattle, the distinction was made as early as in the first chapter of the *Holy Scripture*, *Genesis* 1: 24–25), was the work of God and therefore good in principle. This “in principle” should be taken very literally in this case, for it is true for the very first period of the existence of the world, according to the Bible. After the sixth day of Creation everything on earth was perfect. As far as animals were concerned, this meant that they lived peacefully together. They all ate herbs, grass and leaves, according to *Genesis* 1: 30. Man was given dominion over Creation, so he ruled over the animals: ‘And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth’ (*Genesis* 1: 26).

In this representation animals were created to serve mankind. There was no need for animals to be frightened of humans at that time, nor was man in any danger from them: everything lived in perfect harmony. Jacob Cats evoked the picture of this ideal, newly-created world in his *Trou-ringh* (Wedding-ring, 1637). All animals rejoice in the alliance between Adam and Eve and their sole desire is to please Eve. The horse, camel, elephant and crocodile even contest with each other over the

¹¹⁷ Davids, *Dieren en Nederlanders* 31–69.

¹¹⁸ Curtius E.R., *Europäische Literatur und lateinisches Mittelalter* (Bern: 1948) 321–327; Jorink, *Het Boeck der Natuere*, chapter 2.

right to carry her [Fig. 16]. Such a concept as ‘vermin’ did not fit in – and so, according to Cats, no vermin existed in these early days:

There were no white cobwebs floating around the trees,
 There was no dirty spider weaving her nets about,
 There was no lazy snail crawling over the herbs,
 No fat-bellied toad was spitting slime;
 There was no sallow mole burrowing about the flowers,
 There was no evil vermin with a hundred wicked feet,
 There was no black fly to sit among the blossoms,
 Here was no noxious caterpillar eating the ripening fruit.¹¹⁹

This ideal situation ended with the Fall of Man. From that moment on, man and beast were mortal. To give nature its (imperfect) features, Creation had to be redesigned. Creatures could kill and be killed. Animals could be used for food (the early days in Paradise must have been vegetarian). Man was exerting his rights when he killed animals. The first animal to be killed in the bible is one of Abel’s sheep, which he sacrifices to God as a burnt-offering – and his gift is accepted by God, in contradistinction to Cain’s vegetable offering. Man’s dominion over the beast is unmistakably repeated and put into words in *Genesis* 9: 2–5, where God gives the earth to Noah and his sons:

And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered. Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things. But flesh with the life thereof, which is the blood thereof, shall ye not eat.

The Bible served as a justification for the dominion of man over animals. This did not mean that man could do whatever he liked. Man was created in God’s image, which meant that he, like God, was responsible for Creation. He was permitted to use animals for food, and as we have seen, for rendering worship to God. But he also had

¹¹⁹ Jacob Cats, *Alle de werken* vol. II 4:
 Daer quam geen witte raegh ontrent de boomen sweven,
 Daer quam geen vuyle spin haer netten over weven,
 Daer quam geen trage sleck gekropen op het kruyt,
 Geen dick-gebuyckte pat en spooger swadder uit.
 Daer quam geen vale mol ontrent de bloemen wroeten
 Daer quam geen boos gerut met hondert slimme voeten,
 Daer quam geen swarte vliegh, die in het bloeyssel sat;
 Hier quam geen boose rups die jonge vruchten at (109–116).



Fig. 16. Crispyn van den Queborn after Adriaen van de Venne, Adam and Eve surrounded by animals. From Jacob Cats, *Trou-ringh* (Dordrecht, H. van Esch: 1637) 30. Private collection.

a clear responsibility for the welfare of the world, including animals, both wild and domestic.

A remarkable fragment dealing with the redesign of Creation and the existence of vermin after the Fall of Man can be found in “Kommerrust”, a country-house poem published in 1663 by Jan Vos. In a mythological narration he describes how the garden around the country house, which was laid out with much care and love, is totally ruined by the hard winter. The personified ‘all-producing Nature’ (Vos did not mention God) interacts in person:

Audacious man, said she, I endowed you with the power
To kill the harmful vermin we are displeased to see alive
With hail, snow and ice at the proper time; [...]
But you abuse your power.¹²⁰

When she next opens up the Earth again (that is to say: brings back the Spring), ‘the caterpillars, worms and flies are deterred by her appearance’.¹²¹ Creation might be perverted, but with the seasons Nature had a new system at her disposal to manage the world.

The new situation after the Fall of Man also meant that God could use animals to punish man, or bless him. He did so in biblical days – remember the plagues of Egypt, with the frogs, midges and stable-flies, Jacob’s fast-growing flocks, and the quails that God sent to feed Israel in the desert. According to seventeenth-century poets, God still acted in this way in their days. Jan Six experienced the mouse plague as a divine punishment. And there were more ways in which God made himself known by means of animals. Stranded whales were seen as divine portents.¹²² God also could punish people through their cattle, as demonstrated by the author of *Gods oordelen over Nederland, in de sterfte van ’t rundvee, den zwaren storm, en hogen waterloed* (God’s judgement on Holland, through the death of cattle, heavy storm and high flood) (1718). Their wealth had made the Dutch proud, they despised God and therefore

¹²⁰ Jan Vos, *Alle de gedichten* vol. I 228:
Vermeetele, sprak zy, ik heb u macht gegeven
Om ’t schadelijk ongediert, dat wy tot leet zien leeven,
Met hagel, sneeuw en ys te moorden op zijn tijdt [...]
Maar gy misbruikt uw macht.

¹²¹ Ibidem 230: ‘De rupsen, worm en vlieg, zijn door haar komst verschrikt’.

¹²² Schama S., *The embarrassment of riches: an interpretation of Dutch culture in the Golden Age* (New York: 1987), chapter 3.1.

they were scourged with disaster. After the Peace of Utrecht in 1716, the happy farmers had driven their cattle out into the fields:

The contented farmer drove his beasts out of the stables;
 That in the fresh air start to graze greedily,
 And frolicking around, trim the field wherever they like
 Unaware of any misery or disaster to come.
 But alas! Innocent cattle, how costly is the joy,
 This zest for living that delighted the farmer?
 An illness never heard of inflames your bowels,
 Causes a burning fire in your lungs and throat,
 Hinders your breathing, make you suffocate
 With great distress and in a few moments
 This pestilence spreads all over the place,
 Infected other countries. The sorrowful moaning and sighing
 And piteous clamour of desperate farmers
 Was disturbing all the countries and even cities.
 The farmer finds himself all of a sudden bereft
 Of his cattle, his treasure.¹²³

The cattle-plague was a national catastrophe – everybody would agree on that point. Mankind could be punished by way of its domestic animals, or by the damage caused by harmful creatures such as the pile-worm, which caused another disaster in the early eighteenth century.

It is not very likely that anyone in Holland could also see the beautiful aspects of the pile-worm. But for a lot of animals generally seen as ‘vermin’, people slowly but surely developed a more positive attitude

¹²³ Centen I., *Gods oordelen over Nederland, in de sterfte van 't rundvee, den zwaren storm, en hogen waterloed* (Amsterdam: 1718) (Knuttel, *Catalogus van de pamfletten-verzameling berustende in de Koninklijke Bibliotheek* nr. 16412) fol. Br:

De blyde Landman dreef zyn beesten uit de stallen,
 Die in die versche lucht met graagte aan 't grazen vallen;
 En jeuchdig springende 't veld scheren waar 't hun lust,
 Van gene droefheid, noch aanstaanden ramp bewust.
 Maar ach! Onnozel Vee, hoe dier staat u die vreuchde,
 Die tierigheid, waar in de Landheer zich verheugde?
 Een nooit gehoorde kwaal ontsteekt uw ingewand,
 Veroorzaakt in uw long en keel een heten brand,
 Belet den vryen tocht des adems, doet u stikken
 Met veel benaauthheid, en in weinig ogenblikken.
 Die Pest verspreidde zich rondtom door 't gantsch' gehucht,
 Stak andre Landen aan: Het naar gekerm, gezucht,
 En jammerlyk misbaar der hopeloze Boeren
 Kon al de Landen en Steden zelfs beroeren.
 De Landman ziet in 't kort zich van zyn Vee, zyn schat,
 Geheel berooft [...].

during the seventeenth and especially the eighteenth century. Annoying and noxious little creatures such as insects appeared to be little miracles of God's Creation. Early examples of this new attitude are the earlier quoted texts by Cats, observing the mosquito on his hand, and Westerbaen, looking through his magnifying glass – although he paid remarkably little attention to God as the Creator of the lice and other creatures he studied. Interest in insects became a hype during the eighteenth century, when numerous persons pinned down, dissected, described and studied the beetles and butterflies they caught, thus documenting the richness of these fauna and providing proof of God's existence – for how could this rich variety come into being, if not by God's power? This way of thinking is known as physico-theology.

Nevertheless for many people it remained hard to appreciate some of the small and harmless creatures, such as spiders, which were traditionally seen as ugly and dirty. Numerous poems on spiders have been written, and the majority is very negative. Spiders were considered dangerous and poisonous, as may be concluded from poems by Adriaen Hoffer (1635), Jacob Zeeus (1721), and Lucas Trip (“De giftige spinnekop, een zinnebeeld der verdorvenheid” – “The poisonous spider, an emblem of depravity”, 1774).¹²⁴ In a children's poem by Pieter 't Hoen dating from the last quarter of the eighteenth century, a child indeed shows enthusiasm when he sees a spider, but his father warns him:

Johnny saw a spider hanging.
 Ooh, he said, what a lovely creature!
 Look daddy, all these colours,
 Neatly arranged! My son,
 Thus the father answered,
 Do not touch that little beast!
 The lovely skin conceals an evil
 That you can't see on the outside.
 It is poisonous, it would hurt you;
 All its beauty is but false veneer.¹²⁵

¹²⁴ All poems can be found in: Komrij (ed.), *De Nederlandse poëzie* 205; 867; 1027.

¹²⁵ Komrij (ed.), *De Nederlandse poëzie* 1119:

Jantje zag een spinkop hangen;
 ô, Riep hij, dat diertje is schoon!
 Zie eens vader; wat al kleuren,
 En zoo net geschikt! Mijn zoon,
 Dus was 't antwoord van den vader,
 Raak toch aan dat diertje niet!
 't Schoone huidje dekt een boosheid,

Cynthia Lenige finally forced herself to overcome her cowardice and study the spider that came across her path:

The speckled fur of skin and legs, foot and mouth,
 The forked weapons, poison-sac, prey-catcher,
 Are terrible, but what an art in the slightest feature!
 The useful microscope ripens our knowledge here.¹²⁶

She also recognizes the usefulness of the spider that catches insects, preventing them from spoiling the ripening fruit (an old theme). Although she still cannot love the animal in the end, she decides to let it have its own place 'Live on, but do not hurt me, then I will learn to tolerate you'.¹²⁷

People found it hard – this much is clear – to look at animals in a strictly rational way: they were often mastered by their emotions. Remarkably enough, by doing so man put himself on the same level as the animals. Reason was the main point of difference between man and beast; Coornhert called men 'reasonable animals'.¹²⁸ This classical opinion had common currency during the seventeenth century, as we saw in the fragment from the comic play by Breughel, where a carter felt entitled to torment the horse that pulled his sledge, as it had no power of reason. The Amsterdam townsman who defended the dray-horse did not deny this. Instead, he tried to make the merciless man change his mind (and conduct), by appealing to economic arguments. The carter was damaging his own interests, he said: whoever treats his animals well will profit from them, while ill-treated animals become ill, die and cause financial loss.¹²⁹

It is plausible to assume a certain kind of compassion with the horse on the part of the townsman, but that is not explicitly stated – for the simple reason that it would not make any impression on the

Die gij niet van buiten ziet.
 't Is vergiftig; 't zou u kwetsen;
 Al zijn schoon is valsch vernis.

¹²⁶ Ibidem 1201–1203, esp. 1202:

't Gespikkeld bont der huid en pooten, klaauw en bek,
 't Getakte wapentuig, giftkooker, prooi aangrijper,
 Is ijslijk; maar wat kunst zweeft in den minsten trek!
 Het nuttig Microscop maakt hier de kennis rijper.

¹²⁷ Ibidem 1203: 'Leef heen, maar schaad mij niet, dan leer ik u verdraagen'.

¹²⁸ Dirck Volckertsz. Coornhert, *Zedekunst, dat is wellevenskunst*, ed. B. Becker (Utrecht: 1982) 8 (I.I.8).

¹²⁹ Gerrit Hendricxsz. Breughel, *De kluchten* 228–230.

carter. People could have warm and loving feelings for animals, however. Where pets were concerned, the owners were allowed to show their feelings. Huygens with his beloved little Silly was no exception. Too much affection, however, gave occasion for ridicule, as in the case of bailiff Bont and his dog's funeral. Cattle were regarded in a more sensible way, and the farmer who talked about his cow with too much tenderness was depicted as a fool. A more appropriate attitude for a Dutch farmer is, according to the poets, pride in the productivity of his cattle, the economic profit they produced and the prosperity they therefore created. Dutch poets, however, never seemed to go as far as René Descartes did. Descartes devaluated and degraded animals to nothing more than simple machines, objects without feelings that could be used by man for profit in any way he chose.¹³⁰

The idea that animals were not reasonable creatures might have been generally accepted, but that did not mean they were without feeling. In several cases, poets acted as spokesmen for the beasts. One example is offered by P.C. Hooft in a poem written in 1607, inspired by Juvenal's satires. In this poem, Hooft describes how a huge fire destroyed an oil-mill at the Amsterdam Hoerenpad (nearby today's Spiegelgracht). Five houses were also consumed by the flames. This of course was a tragedy for the tenants, but even more lamentable was the fate of five cows that burned to death, lowing heartrendingly as if they were trying to say:

Let what has no feeling burn, save our lives first!
Remember that our cheese and butter bring in money!¹³¹

Hooft has the cows refer to their economic value, but in vain. Although nobody can claim not to have understood what the desperate beasts were trying to express (albeit in cow's language), no one helped them and there was no water available to save their doomed lives. The 'compassionate race of mankind' preferred to look after its money and possessions, lifeless objects in other words.

¹³⁰ Thijssen-Schoute C.L., *Nederlands cartesianisme* (Amsterdam: 1954) 44–45; 186–189; 196–199; 205–208; Rosenfield L.C., *From beast-machine to man-machine: animal soul in French letters from Descartes to La Mettrie* (New York: 1968); Wolloch N., "Christiaan Huygens's attitude toward animals", *Journal of the History of Ideas* 61 (2000).

¹³¹ Pieter Cornelisz. Hooft, *Lyrische poëzie* vol. I 114:
Laat branden dat niet voelt en berregt eerst ons leven!
Denk dat van onze kaas en boter komt het geld [...] (14–15).

The poem by Hooft showed how man could speak for the beast. Emotions and thoughts are ascribed to animals. The same thing happened in beast fables, although there is a clear difference. In his poem Hooft tried to project himself onto the animal in order to comment upon the relationship between man and beast, while in beast fables, the creatures are used purely to project and comment upon human behaviour. There are more poems to be found, written on the same lines as that used by Hooft. The most remarkable example to be discussed here is the anonymous "Clachte van de wal-visschen, geschreven onder een kaarte van Groenlandt" ("Complaint of the whales, written underneath a map of Greenland"). This text offers an almost anachronistic sympathy for the hunted whale. The whales complain:

Will the smoke-grimed, resentful race of the Basques,
 Will the prosperous Dutch, looking for profit,
 And the English, who are generally proud and brave,
 Expel us completely from the northern seas?
 Our stock is by nature used to the cold,
 Will it ever manage to survive in warmer regions?
 And shall we not, even near 'High Mountain' island [= Spitzbergen]
 Be free and safe from their wicked tricks?
 Or are they trying to exterminate us down to the very last?
 O grief! O sad grief! O cruel resolve of the gods!
 How many of our kin were straight away
 Killed so tragically around the Spitzbergen land.¹³²

For today's reader, aware of the fact that the whale in the northern seas has been indeed almost exterminated, this poem has a gloomy dimension it probably did not have for its seventeenth-century audience. The fact that we are discussing a literary technique makes this even clearer. To mention two other texts in which animals lament: on the

¹³² The Hague, Royal Library, Ms. 74 G 12, 10–12:

Sal dan 't beroekt geslacht der Basquen wrevelmoechich/
 Zal het baet-soeckend volck der Hollanders voorspoedich/
 En' d' Engels-man/die trots en' stout is in 't gemeen/
 Ons dan verdrijven gansch uijt alle noorder zeen?
 Ons' afkomst die de koud' gewoon is van natueren/
 Zal die ook konnen oojt in warme streken dueren?
 En mochten wij dan self aen 't eijlandt hoogen-berch
 Niet vrij zijn/en' beschermt van hare listen erch?
 Of zoeken zij ons al/tot een toe/uijt te roden?
 O leedt! o droevich leedt! o wreedt besluit der goden!
 Hoe vele zijnder van ons' maechschap rechtevoort
 Aen het spits-berchsche landt zoo jammerlijk vermoort!.

20th of October 1577 Jan van Hout sent a pie to some of his friend at The Hague. On the pie a snipe was standing, holding a poem in his beak. In the poem, the snipe laments his fate and that of his race.¹³³ And in the much later written anonymous “Den haring (voorbereyd als hansjovis) spreek” – “The herring (prepared as an anchovy) speaks”, published in 1729, we hear a herring complain:

What ever can be the cause? What did we do wrong,
That they are killing us so furiously and murderously?¹³⁴

The big difference between these poems and the complaint by the whales, however, is the tone. The snipe finds comfort in the idea that the banquet will end in drunken frolic and loss of honour. The herring is even contented with his fate, as long as he will be eaten with a lot of booze. The whales are not so kind: they literally call for the death of their hunters. They want revenge and are delighted whenever a ship goes to Davy Jones’s locker:

Where shall we find help and comfort?
Not from men. We still have one comfort, though,
That the green ice which – how hard the sun may burn –
Cannot melt, will protect and surround us.
Therefore we thank the Creator of all things for
Providing it so abundantly in our sea,
So that from time to time we can laugh about the sorrow
And misfortune of those who hate us mortally,
When they lose their lives, ships and goods.
Yes, that amuses us in all our misery and pain,
For there is no greater joy than revenge.¹³⁵

¹³³ Published in Prinsen J.Lzn., “Bronnen voor de kennis van leven en werken van Jan van Hout I”, *Tijdschrift voor Nederlandsche taal- en letterkunde* 22 (1903) (203–239) 227–229.

¹³⁴ *Den haring (voorbereyd als hansjovis) spreek* (Gouda: 1729) (Knuttel, *Catalogus van de pamfletten-verzameling berustende in de Koninklijke Bibliotheek* nr. 16784):

Wat mogt dog de oorzaak zyn? Wat hadden wy misdreven,
Dat men ons zoo verwoed, moorddadig bragt om ’t leven?

¹³⁵ The Hague, Royal Library, Ms. 74 G 12, 10–12:

Waer zullen wij dan hulp oft bijstandt soeken mogen?
Daer is geen bij den mensch. Maer een ding ons noch troost/
Dat ons het groene ijs/’t welk/hoe de Son ook roost/
niet smelten kan/ons kan beschutten en’ omringen.
Des zij van ons gedant den schepper aller dingen
Die onse zee daer van soo mildelijck voor-siet/
Dat wij daer door somtijds noch mogen het verdriet
En’ ’t ongeluk van die ons tot der doot toe haten/

The fact that the poet represents the human casualty as the result of divine help to the hunted whale, is remarkable, to say the least. There is little doubt that this results from the fact that the whale was associated with God's almighty power. Stranded whales, as stated earlier, were seen as a sign of God's anger (with or without an explicit reference to the biblical story of Jonah). God might have given mankind Creation to use and explore, but in his confrontation with the biggest creature on earth, the relativity of man's dominion over the kingdom of animals is clearly put forward.

Conclusion

This article brought us from Geckie, Constantijn Huygens's little pet dog that died, to the mighty Greenland whales, laughing when their hunters drown in the coldness of the Northern Seas. Contrary to what Gerard Brom once stated, Dutch seventeenth-century poetry appears to be a rather rich source when it comes to animals. A lot of these poems and other writings are strongly influenced by literary tradition and conventions. Animals are used in poetry to put social, moral or religious lessons into words. The emblematic genre offers plenty of examples. Writings of this type however do not always tell much about reality.

Nevertheless, many poems can be found which contain information about the place and role of animals in daily life. It is not so much the best known poets such as Joost van den Vondel, Pieter Cornelisz. Hooft and Gerbrand Adriaensz. Bredero who offer us useful information. The work of poets writing in a more realistic style, such as Jacob Cats and Jacob Westerbaen, are a far more fruitful source. More generally, country-house poetry offers a rather rich source. The work of Jacob Westerbaen in particular is remarkable. Where Cats used animals almost always in a didactic manner, Jacob Westerbaen is probably one of the first persons in Holland to look at and enjoy nature in a modern way. He loved to hunt for recreation and he loved to listen to the larks in the dunes around his house, feeling no need to attach a moral lesson to his pleasure on all occasions.

Belachen/als zij lijf/schip en' goedt moeten laten.
Ja/dat vermackt [sic] ons noch in alle druk en pijn:
want daer geen meerder vreucht en kan dan wrake zijn.

Dutch poetry also offers information about how people perceived nature. The mainstream during the entire seventeenth century was, and remained, Christian. Nature was seen as the work of God and therefore a source of (moral) knowledge. The influence of modern science, however, was not absent. Animals from the new worlds, both that discovered by seafarers and that discovered under the microscope, left their tracks in poetry. They complete the rich literary world of animals.

Selective Bibliography

- BORSELEN PHILIBERT VAN, *De dichtwerken*, ed. P.E. Muller (Groningen-Batavia: 1937).
- BOUWMAN A.Th. – BESAMUSCA B. (eds.), *Reynaert in tweevoud* (Amsterdam: 2002).
- , “Het dier in de Middelnederlandse letterkunde”, in Idema W.L. – Schipper M. – Schrijvers P.H. (eds.), *Mijn naam is haas. Dierenverhalen in verschillende culturen* (Baarn: 1993) 57–65.
- BREUGHEL GERRIT HENDRICXSZ., *De kluchten*, ed. A.J. van Leuvensteijn, 3 vols. (Amsterdam: 1985).
- BRINK P. VAN DEN (ed.), *Het gedroomde land. Pastorale schilderkunst in de Gouden eeuw* (Zwolle: 1993) 58–75.
- CATS JACOB, *Alle de werken*, ed. W.N. Wolterink, 2 vols. (Dordrecht: 1880).
- , *Sinne- en minnebeelden*, ed. H. Luijten, 3 vols. (The Hague: 1996).
- CLARK W.B. – McMUNN M.T. (eds.), *Beasts and birds of the Middle Ages. The bestiary and its legacy* (Philadelphia: 1989).
- COSTER SAMUEL, *Boere-klucht van Teeuwis de boer, en men juffer van Grevelinckhuysen*, ed. F.A. Stoett – N.C.H. Wijngaards (Zutphen: s.a).
- DAVIDS K., *Dieren en Nederlanders. Zeven eeuwen lief en leed* (Utrecht: 1989).
- DICKE G. – GRUBMÜLLER K., *Die Fabeln des Mittelalters und der frühen Neuzeit. Ein Katalog der deutschen Versionen und ihrer lateinischen Entsprechungen* (Munich: 1987).
- EGMOND F. – MASON P. (eds.), *Het walvisboek. Walwissen en andere zeewezens beschreven door Adriaen Coenen in 1585* (Zutphen: 2003).
- GEERARS C.M., “Het komische epyllion Batrachomyomachia en zijn Nederlandse bewerkingen”, *De nieuwe taalids* 61 (1968) 361–378.
- GEIRNAERT D. – SMITH P.J., “Tussen fabel en embleem: *De warachtighe fabulen der dieren* (1567)”, *Literatuur* 9 (1992) 22–33.
- GRUBMÜLLER K., *Meister Esopus. Untersuchungen zu Geschichte und Funktion der Fabel im Mittelalter* (Munich: 1977).
- GIJSBERS W.M., *Kapitale ossen: de internationale handel in slachtvee in Noordwest-Europa 1300–1750* (Hilversum: 1999).
- HENDRIKX J.A., “Jacht als vermaak voor de elite”, in Jongste J. de – Roding J. – Thijs B. (eds.), *Vermaak van de elite in de vroegmoderne tijd* (Hilversum: 1999) 137–152.
- HONDIUS PETRUS, *Dapes inemptae, of de Mouffe-schans* (Leiden: 1621).
- HOOFT PIETER CORNELISZ., *Lyrische poëzie*, ed. P. Tuynman – G. van der Stroom, 2 vols. (Amsterdam: 1994).
- HUYGENS CONSTANTIJN, *De gedichten*, ed. J.A. Worp, 8 vols. (Groningen: 1892–1899).
- JAUSS H.R., *Untersuchungen zur mittelalterlichen Tierdichtung* (Tübingen: 1959).
- JORINK E., *Het Boeck der Nature. Nederlandse geleerden en de wonderen van Gods Schepping 1575–1715* (Leiden: 2006).
- KLINGENDER F., *Animals in Art and Thought to the End of the Middle Ages* (Cambridge: 1971).
- KNAPP F.P., *Das lateinische Tierpos* (Darmstadt: 1979).
- KOMRIJ G. (ed.), *De Nederlandse poëzie van de 17de en 18de eeuw in 1000 en enige gedichten* (Amsterdam: 1986).
- KOPPENOL J., *Leids heeal. Het Loterijspel (1596) van Jan van Hout* (Hilversum: 1998).
- KRUL JAN HARMENZS., *Pampiere wereld ofte wereldse oeffeninge, waarin begrepen zijn meest alle de rijmen en werken* (Amsterdam: 1681).
- LAAN N. VAN DER, *Rederijkersspelen naar een handschrift ter bibliotheek van het Leidse gemeentearchief* (The Hague: 1932).
- MCCULLOCH F., *Mediaeval Latin and French bestiaries* (Chapel Hill: 1962).
- MEERTENS P.J. – GROOT J.H. DE, *De lof van den boer. De boer in de Noord- en Zuidnederlandse letterkunde van de middeleeuwen tot 1880* (Amsterdam: 1942).
- MOERKERKEN P.H., *Het Nederlandsch kluchtspel in de 17de eeuw* (Sneek: s.a).

- ROSENFELD L.C., *From beast-machine to man-machine: animal soul in French letters from Descartes to La Mettrie* (New York: 1968).
- SABBE M., *Dierkennis en diersage bij Vondel* (Antwerp: 1917).
- SCHIPPERS A., *Middel nederlandse fabels. Genre, collecties, catalogus* (Nijmegen: 1995).
- SELLS A.L., *Animal poetry in French and English literature and the Greek tradition* (Bloomington: 1955).
- SIX VAN CHANDELIER JAN, *Gedichten*, ed. A.E. Jacobs (Assen – Maastricht: 1991).
- SMITH P.J., *Het schouwtoneel der dieren. Embleemfabels in de Nederlanden (1567–ca. 1670)* (Hilversum: 2006).
- , “Nederland kikkerland: fabel en pamflet in de tweede helft van de zeventiende eeuw. Kikkersymboliek en politieke satire”, *Literatuur* 11 (1994) 26–31.
- SMITS-VELDT M.B., “Nederlandse pastorale poëzie in de 17^{de} eeuw: verliefde en wijze herders”, in Brink P. van den (ed.), *Het gedroomde land. Pastorale schilderkunst in de Gouden eeuw* (Zwolle: 1993) 58–75.
- SPIEGEL HENDRIK LAURENSZ., *Hert-spiegel*, ed. F. Veenstra (Hilversum: 1992).
- TENGNAGEL M.G., *Verzameld werk*, ed. J.J. Oversteegen (Amsterdam: 1969).
- TIEMANN B., *Fabel und Emblem. Gilles Corrozet und die französische Renaissance-Fabel* (Munich: 1974).
- VEEN P.A.F. VAN, *De soeticheydt des buyten-levens, vergheselschap met de boucken. Het hofdicht als tak van een georgische litteratuur* (The Hague: 1960).
- VISSCHER ROEMER, *Sinnepoppen*, ed. L. Brummel (’s-Gravenhage: 1949).
- VONDEL JOOST VAN DEN, *Werken*, ed. J.M.F. Sterck e.a., 10 vols. (Amsterdam: 1927–1937).
- VOS JAN, *Alle de gedichten*, 2 vols. (Amsterdam: 1726).
- VRIES W.B. DE, *Wandeling en verhandeling. De ontwikkeling van het Nederlandse hofdicht in de zeventiende eeuw (1613–1710)* (Hilversum: 1998).
- WESTERBAEN JACOB, *Gedichten*, 3 vols. (The Hague: 1672).
- ZAAL W. (ed.), *Een leeuw is eigenlijk iemand. Nederlandse dierenpoëzie* (Amsterdam: 2006).
- ZIOLKOWSKI J.M., *Talking animals. Medieval Latin beast poetry, 750–1150* (Philadelphia: 1993).

OCTOPUSES, FOXES AND HARES:
ANIMALS IN EARLY MODERN LATIN AND
GERMAN PROVERBS

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Proverbs teem with animals: foxes and hares, dogs and cats, midges, elephants, and octopuses. This article analyses the occurrence of animals in four 15th and 16th-century collections of proverbs: the Dutch-Latin *Proverbia communia* (ca. 1480), the *Proverbia Germanica* collected by Heinrich Bebel (1508), the Low German-Latin *Proverbia [...] Germanorum monosticha* by Antonius Tunnicius (1514) and the Latin-German *Germanicorum adagiorum [...] centuriae septem* by Eberhard Tappe (1539). I will show which animals are used in proverbs and why, and what differences can be found between the Latin and the vernacular versions of a proverb.

The *Proverbia communia* is a collection of about 800 Dutch proverbs with Latin translations in hexameters. It was printed several times at the end of the 15th century, not only in the Netherlands, but also twice in Cologne, the Dutch proverbs being replaced by Low German variants. In analysing the *Proverbia communia*, I shall refer to the so-called Delft print (Delft: 1495), as edited by Richard Jente.¹

Heinrich Bebel's *Proverbia Germanica collecta atque in Latinum traducta*² appeared for the first time in 1508 and was reprinted five times until 1526; due to their brevity these proverbs were always printed together with other small works of Bebel. Bebel translated 600 German proverbs into Latin, but unfortunately he did not mention the German proverbs that are the basis of his translations. Nevertheless, in most cases it is possible to reconstruct the German models; identification is made easier by the fact that Bebel did not write Latin verse but prose, which means

¹ *Proverbia Communia. A Fifteenth Century Collection of Dutch Proverbs Together with the Low German Version*, ed. R. Jente, Indiana University Publications, Folklore Series 4 (Bloomington: 1947).

² Heinrich Bebel, *Proverbia Germanica*, ed. W.H.D. Suringar (Leiden: 1879; reprint Hildesheim: 1969).

his translations are probably quite close to the original. Bebel's main source was the *Proverbia communia*.³

In 1514, Antonius Tunnicius, teacher at the Schola Paulina in Münster, published a collection of Low German proverbs, together with translations in Latin hexameters, in Cologne.⁴ He fell back on the *Proverbia communia* for almost half of his 1362 proverbs – though both collectors may have used the same sources.⁵ In any case, Tunnicius's German proverbs are very similar to the *Proverbia communia*, whereas his Latin translations are independent of the Latin hexameters found in the Dutch collection.

Eberhardus Tappe's collection⁶ comprises 700 Latin proverbs and proverbial expressions which are mostly taken from Erasmus's *Adagia*, together with the explanations given by Erasmus. Tappe juxtaposes each Latin proverb with one or more independent German proverbs that quite often correspond only in content.

In all four collections, animals are mentioned in about every sixth proverb. A wide range of animals appear, here listed in order of frequency in the overall corpus of German proverbs: dogs, horses, wolves, cattle, birds (as a general term),⁷ cats, chickens, asses, fish, sheep, pigs, hares, insects, mice, foxes, frogs, and monkeys; only once or twice exotic animals as lions, elephants, camels, and crabs occur.⁸

It is obvious that the animals most often mentioned belong to species that people in rural communities were acquainted with. Those animals most closely related to man, such as dogs and horses, are of crucial importance for proverbs. By comparison with domestic animals, wild animals are under-represented – with one exception: the wolf appears

³ Cf. Suringar W.H.D. (ed.), *Proverbia Germanica* xxxii.

⁴ Antonius Tunnicius, *Die älteste niederdeutsche Sprichwörterammlung* [*Proverbia Germanorum Monosticha*], ed. A.H. Hoffmann von Fallersleben (Berlin: 1870).

⁵ Cf. Hoffmann von Fallersleben (ed.), *Die älteste niederdeutsche Sprichwörterammlung* 5.

⁶ Eberhardus Tappe, *Germanicorum adagiorum cum Latinis ac Graecis collatorum centuriae septem* (Straßburg, Wendelinus Rihelius: 1539; copy at Göttingen, Staats- und Universitätsbibliothek, shelfmark 8 ADAG 3107).

⁷ Certain species of birds used in the proverbs are crows, swallows, magpies, ravens, pigeons, herons, falcons, cuckoos, swans, geese, owls, nightingales, hawks and peacocks.

⁸ Some creatures, such as octopuses, weasels and goats, appear only in the Latin versions.

in Tunnicius's collection almost as often the horse, in Bebel's *Proverbia Germanica* as much as twice as often.⁹

To answer the question why a species is chosen for proverbial expressions, it is necessary to look at its characteristic features as expressed in the proverbs. Two animals leap to mind because of their one-dimensional character: the wolf and the fox. Most proverbs depict the wolf's voraciousness, for example 'Der wolff yst ouch wael ghetzelde schape'¹⁰ (Tunnicius no. 315) or 'De wulf vrit de schape, als de herde dâr nicht by is'¹¹ (Tunnicius no. 1246). The fox represents a cunning person or a thief, as in 'He vischet up dem drogen, de den vos bedreigen wil'¹² (Tunnicius no. 107) or 'De vos kricht wol nije hare, mer he blift al ein deif'¹³ (Tunnicius no. 1257).¹⁴ These two species figure prominently in other literary genres as well – folk tales, fables or animal epic – where the wolf represents the cruel, pitiless and greedy, the fox the sly and crafty.¹⁵ This kind of literature seems to be behind their

⁹ On the whole, my observations about the frequency of animals correspond to those already made by T. Ogishima for Finnish proverbs, A.B. Rooth for Swedish proverbs and A. Krikmann for nearly 40.000 proverbs and proverbial phrases from about 60 nations; with the exception of the wolf and the sheep, the animals appearing on positions 1 to 7 of my list are also found in the 'top seven' of all three authors; Cf. Ogishima T., "The Animals in the Finnish Proverbs", *The Journal of Intercultural Studies*, Extra Series No. 2 (1992) 110–111; Rooth A.B., "Domestic Animals and Wild Animals as Symbols and Referents in Proverbs", *Proverbium* 11 (1968) (286–288) 286; Krikmann A., "Proverbs on Animal Identity: Typological Memoirs", *Folklore. Electronic Journal of Folklore* (<<http://www.folklore.ee/folklore/>>) 17 (2001) (7–84) 12.

¹⁰ 'The wolf eats counted sheep' (Apperson G.L., *English proverbs and proverbial phrases. A historical dictionary* (London: 1929) 702). Proverbs quoted in the footnotes are mainly English equivalents or translations taken from English editions of Latin or Dutch proverbs. If the wording is more important than the content, a literal translation is given.

¹¹ 'Wolves rend sheep when the shepherds fail' (Wilson F.P., *The Oxford Dictionary of English Proverbs* (Oxford: 1970³) 907).

¹² 'He that will deceive the fox must rise betimes' (Tilley M.P., *A Dictionary of the Proverbs in England in the Sixteenth and Seventeenth Centuries: a Collection of Proverbs Found in English Literature and the Dictionaries of the Period* (Ann Arbor, Mich.: 1950) F 644).

¹³ 'A fox may change his hair but not his nature' (Tilley, *Proverbs* W 616).

¹⁴ Piirainen states a complete congruence between the symbolic meaning of the wolf in phraseologisms and cultural knowledge, due to deeply rooted ideas of the wolf's dangerousness and greed; as to the fox, she shows that its symbolic meaning in phraseologisms from six European languages and from Japan is limited to cunning, deception and disguise (Cf. Piirainen E., "Phraseologie und Symbolik", in Wիրrer J. (ed.), *Phraseologismen in Text und Kontext*, Phrasemata 1 (Bielefeld: 1998) (209–228) 218–219).

¹⁵ Cf. the well-known Aesop's fables about wolf and lamb drinking from the same river (Perry B.E. (ed.), *Aesopica*, vol. 1. *Greek and Latin Texts* (Urbana: 1952) no. 152) or fox and raven (no. 124); in animal epic, where wolf and fox are antagonists, the fox takes advantage of the wolf's greed to harm him.

symbolic meaning in proverbs – although it cannot be denied that wolves were feared by man because they killed sheep.¹⁶

Some species appear mainly in combinations with other species, for example sheep with wolves, or mice with cats, as in ‘Als de katte iungen hefft, so vengt sy wal muse’¹⁷ (Tunnicius no. 36) and ‘Catten kinder die muysen ghaerne’¹⁸ (*Proverbia communia* no. 143); both mice and sheep are reduced to their role as prey and rarely mentioned without respect to their predator.¹⁹

The species with the biggest number of specific traits is without a doubt the dog, the animal with the closest relationship to man. Since dogs could be used for hunting or serve as watchdogs, the metaphors are taken mainly from these two areas. Proverbs referring to hunting include ‘Myt vnwylligen hunden ys qwaet yagen’²⁰ (Tunnicius no. 733) and ‘Vele hunde synt des hasen doet’²¹ (Tunnicius no. 1327). ‘Liet de dief sijn stelen die hont liet sijn bassen’²² (*Proverbia communia* no. 455) refers to watchdogs, as does ‘Eyn hundt ys kone vur synem huse’²³ (Tunnicius no. 489).

Only one proverb mentions lapdogs: ‘Melitaeus catulus’²⁴ – ‘Du byüest/als eyn Junffern hündcken’²⁵ (Tappe no. 453, fol. 148v). Tappe’s explanation of this shows that this expression wasn’t friendly at all; after dealing with useful dogs (watchdogs and hounds), he states that lapdogs are quite in fashion although they don’t serve any purpose.²⁶

¹⁶ Piirainen points out that the semiotic wolf (‘semiotisierter Wolf’), that is, the dangerous and aggressive animal, living forth in language, doesn’t correspond to reality (Cf. Piirainen, “Phraseologie und Symbolik” 219); although this may be true nowadays, it certainly wasn’t in early modern times, when wolves still represented a real danger.

¹⁷ ‘When the cat has kittens she learns to catch mice’ (Jente, *Proverbia communia* 24).

¹⁸ ‘That comes of a cat will catch mice’ (Jente, *Proverbia communia* 143).

¹⁹ Only once is the mouse mentioned without the cat: ‘Malum est, murem in pera nutrire’ (Bebel no. 591); in this case, it stands for a hostile person in your close surroundings. There are other proverbs in which sheep occur, but wolves don’t; one of them refers to the herd instinct of sheep (‘Dat eyne schaepe volget dem anderen’; Tunnicius no. 197), others mention traits that don’t change, such as the bleating of sheep (Tunnicius no. 182) or their wool (Tunnicius no. 1352).

²⁰ ‘It is ill hunting with unwilling dogs’ (Jente, *Proverbia communia* 511).

²¹ ‘Many dogs may easily worry one hare’ (Wilson, *Proverbs* 509).

²² ‘If the thief would stop stealing, the dog would stop barking’ (Jente, *Proverbia communia* 455).

²³ ‘Every dog is stout at his own door’ (Tilley, *Proverbs* D 465).

²⁴ ‘A Maltese lapdog’ (Erasmus, *Collected Works*, vol. 34: *Adages II vii 1 to III iii 100*, transl. by R.A.B. Mynors (Toronto: 1992) 306).

²⁵ ‘You are like a lady’s lapdog’.

²⁶ ‘Sunt quorum nullus est usus, nisi ut cum ociosis ac delicatis matronis lusitent, qui nostris quoque temporibus, mirum quam sint in deliciis’ (Tappe, fol. 148v).

Some proverbs deal with the relationship between dog and man. If one takes the proverbs literally, this relationship was marked by cruelty on the part of man, as in ‘Tot quaden hunden horen quade kluppels’²⁷ (Tunnicius no. 874). ‘Als me den hunt slet, so moet he leder hebben geten’²⁸ (Tunnicius no. 1161) illustrates the use of unprovoked violence.

Other proverbs display negative traits of dogs, such as peeing (‘Comparantur a nostris canes et mulieres. Illi, dum volunt, mingunt: haec, dum vult, flet’;²⁹ Bebel no. 4), barking for no reason (‘Ut canis ad lunam latras; id est: frustra conaris et laboras’;³⁰ Bebel no. 145) or breaking things (‘Amabilem te facis, ut canis ollas frangens’;³¹ Bebel no. 147). Surprisingly, the loyalty of a dog towards his master is never mentioned, nor does one find proverbs dealing explicitly with other positive characteristics of dogs. A number of proverbial expressions with general negative associations points in the same direction: ‘ein Hundeleben’, ‘Hundewetter’ or ‘hundsgemein’.³² This may be due to the pessimistic tendency of many proverbs.

As to the animals mentioned, in some cases there are differences between the German and Latin versions of a proverb in the bilingual collections. Since Tappe, unlike the other three collectors, does not work from German texts but from traditional Latin proverbs, which he furnishes with vernacular equivalents instead of translating them, one may find considerable differences between Latin and German versions of a proverb.

Friedrich Seiler, in his study of German loan proverbs, states that there are two tendencies in vernacular versions of antique proverbs: variation and coarsening, especially by using an image instead of an

²⁷ ‘To a bad dog a rough club’ (Jente, *Proverbia communia* 645).

²⁸ ‘When we wish to beat a dog, he is accused of eating leather’ (Jente, *Proverbia communia* 34).

²⁹ ‘Our compatriots compare dogs to women. Dogs piss whenever they want, a woman cries whenever she wants’.

³⁰ ‘The dog barks in vain at the moon’ (Wilson, *Proverbs* 194).

³¹ ‘You ingratiate yourself with others just as a dog that breaks pots’.

³² ‘A dog’s life’. ‘Rotten weather’. ‘Nasty’. Thiele J., “‘Buey viejo, surco derecho’ – ‘Alte Esel wissen viel’ oder: Die Rollenverteilung in der Tiersymbolik in Redensarten und Sprichwörtern”, in Knabe P.-E. – Thiele J. (eds.), *Über Texte. Festschrift für Karl-Ludwig Selig* (Tübingen: 1997) 255–261, states that in general negative behaviour of animals predominates in proverbs (256); he gives a long list of proverbial phrases using the dog as metaphor of the mean, perfidious and subhuman (257).

abstract expression.³³ Similarly, Ulrich M. Meisser sees a tendency towards abstraction in Tappe's Latin and towards the observation of concrete behaviour in the German proverbs by the same author.³⁴ The following examples, however, show that the relationship between the Latin and German versions in Tappe's collection cannot be as easily reduced to a common denominator as Meisser suggests.

It is true that in several cases the Latin proverb is not metaphorical at all whereas in the German version its idea is expressed by a metaphorical phrase: 'Cedendum multitudini'³⁵ (Tappe no. 454, fol. 149) is illustrated by the German proverb 'Vil hund/ ist der hasen todt',³⁶ the same is valid for 'Efficimus pro nostris opibus moenia'³⁷ – 'Kleyne voegel machen kleyne nestlin'³⁸ (Tappe no. 349, fol. 108), 'Corrumpunt mores bonos colloquia prava'³⁹ – 'Wer mit katzen jagt/ der fengt gern meuß'⁴⁰ (Tappe no. 217, fol. 63), 'Fiducia pecunias amisi'⁴¹ – 'Trawe wol/ reitet das pferd hinweg'⁴² (Tappe no. 441, fol. 144), 'Lex et regio'⁴³ – 'Wer bei den woelffen ist/ der muoß mit jnen heulen'⁴⁴ (Tappe no. 171, fol. 49). Yet also the opposite tendency occurs – abstract expressions are used in the German, metaphorical ones in the Latin version:

³³ Cf. Seiler F., *Das deutsche LehnSprichwort 1*, Die Entwicklung der deutschen Kultur im Spiegel des deutschen Lehnworts 5 (Halle: 1921) 32.

³⁴ Cf. Meisser U.M., "Tiersprichwörter und Verhaltensforschung: Zur gegenseitigen Erhellung von didaktischer Literatur und Naturwissenschaft", *Studium Generale* 22 (1969) (861–889) 866. Besides, Meisser notices a discrepancy between the number of animal proverbs in the Latin and German versions (15 vs. 48; *ibidem*). It is impossible to understand which proverbs Meisser has counted and which he has not. More than 80 Latin proverbs dealing with animals can be found in Tappe's collection, and even if you leave out the proverbial sayings such as 'Asinus inter simias' – 'An ass among apes' – (Tappe no. 146, fol. 43v), there are still more than 15 Latin animal proverbs and even quite a few examples of proverbs mentioning animals only in the Latin version.

³⁵ 'You have to follow the crowd'.

³⁶ 'Many dogs may easily worry one hare' (Wilson, *Proverbs* 509).

³⁷ 'We build the walls we can afford' (Erasmus, *Collected Works*, vol. 32: *Adages I vi I to I x 100*, transl. by R.A.B. Mynors (Toronto: 1989) 104).

³⁸ 'A little bird is content with a little nest' (Wilson, *Proverbs* 469).

³⁹ 'Evil communications corrupt good manners' (Erasmus, *Collected Works*, vol. 32, 267).

⁴⁰ 'He who hunts with cats will catch mice too' (Jente, *Proverbia communia* 237).

⁴¹ 'Credulity has cost me money' (Erasmus, *Collected Works*, vol. 34, 299).

⁴² 'Trust rides away the horse'.

⁴³ 'Law and region'. The English equivalent is 'When in Rome, do as the Romans do' (Speake J., *The Oxford Dictionary of Proverbs* (Oxford: 2004) 262).

⁴⁴ 'Who keeps company with the wolf will learn to howl' (Wilson, *Proverbs* 419).

‘Canis festinans caecos parit catulos’⁴⁵ – ‘Von eilen kam nie keyn guot’⁴⁶ (Tappe no. 272, fol. 82v); ‘Taurum tollet, qui vitulum sustulerit’⁴⁷ – ‘Jung gewehnet/ vnd alt gethon’⁴⁸ (Tappe no. 323, fol. 99v); ‘Mus picem gustans’⁴⁹ – ‘Vor gethon vnd nach bedacht/ Hat manchen in groß leyd gebracht’⁵⁰ (Tappe no. 402, fol. 129v); ‘Duos insequens lepores neutrum capit’⁵¹ – ‘Wer zuuil wil haben/ dem wirt offt gar nichts’⁵² (Tappe no. 585, fol. 203v).

In some other proverbs, there are metaphorical expressions in both the Latin and German versions, but only one of them is taken from the animal world: ‘Quandoque bonus dormitat Homerus’⁵³ – ‘Es vertritt sich auch wol eyn pferdt/ das vier fuesse hat/ oder eyn pferdt mit vier fuessen’⁵⁴ (Tappe no. 681, fol. 236v); ‘Cum cane simul et lorum’⁵⁵ – ‘Das kind mit dem bad außschütten’ (Tappe no. 58, fol. 20v)⁵⁶ and ‘Sub omni lapide scorpius dormit’⁵⁷ – ‘Der busch hat oren/das veld hat augen’⁵⁸ (Tappe no. 88, fol. 28v).

In the majority of cases, however, the same species occur in the Latin and German versions, for example ‘Ovem lupo commisisti’ – ‘Dem wolff hast du das schaaff befolhen’⁵⁹ (Tappe no. 168, fol. 48v) or ‘Gallus in suo sterquilinio plurimum potest’ – ‘Eyn hane is vff seinem miste seer kuene’⁶⁰ (Tappe no. 182, fol. 52v).

In other proverbs, the species are not identical, but are used as equivalents, as in ‘Canis digna pabulo’ – ‘Das pferd/ist seins fuoters werdt’⁶¹ (Tappe no. 169, fol. 48v); the *tertium comparationis* for the horse and the dog is their usefulness to man.

⁴⁵ ‘The hasty bitch brings forth blind whelps’ (Tilley, *Proverbs* B 425).

⁴⁶ ‘Haste makes waste’ (Apperson, *Proverbs* 288).

⁴⁷ ‘He may bear a bull that has borne a calf’ (Wilson, *Proverbs* 34).

⁴⁸ ‘Custom is second nature’ (Apperson, *Proverbs* 130).

⁴⁹ ‘A mouse tasting pitch’ (Erasmus, *Collected Works*, vol. 33: *Adages II I i to II vi 100*, transl. by R.A.B. Mynors (Toronto: 1991) 172).

⁵⁰ ‘First acting and then thinking has brought misfortune to many’.

⁵¹ ‘If you run after two hares, you will catch neither’ (Wilson, *Proverbs* 688).

⁵² ‘He who wants too much often gets nothing at all’.

⁵³ ‘Homer sometimes nods’ (Wilson, *Proverbs* 379).

⁵⁴ ‘A horse stumbles that has four legs’ (Apperson, *Proverbs* 311).

⁵⁵ ‘[To lose] the leash along with the dog’.

⁵⁶ ‘To throw out the baby with the bathwater’ (Speake, *Proverbs* 308).

⁵⁷ ‘There sleeps a scorpion under every stone’ (Wilson, *Proverbs* 705).

⁵⁸ ‘Fields have eyes, and woods have ears’ (Wilson, *Proverbs* 255).

⁵⁹ ‘To set the wolf to keep the sheep’ (Wilson, *Proverbs* 907).

⁶⁰ ‘A cock is bold on his own dunghill’ (Wilson, *Proverbs* 130).

⁶¹ ‘The dog is worthy of its dinner’ (Erasmus, *Collected Works* vol. 33, 292).

In some cases, exotic animals of the Latin proverb are replaced in the German version by indigenous ones.⁶² ‘Simia est simia, etiamsi aurea gestet insignia’⁶³ (Tappe no. 83, fol. 27v) could have been translated literally into German; nevertheless, the German version (‘Der vorsch huppert weder in den pol/Wan he ock sethe vp een gulden stol’)⁶⁴ might be more easily understood. ‘Camelus saltat’⁶⁵ – denoting a person who tries to do something but fails shamefully – has the German equivalent ‘Die kuow gehet vff stelten’⁶⁶ (Tappe no. 135, fol. 40v), which is both clearer and more drastic. As to ‘Polypi mentem obtine’⁶⁷ (Tappe no. 368, fol. 117) and ‘Mustelae sebum’⁶⁸ (Tappe no. 66, fol. 22v), it is not surprising that these animals do not appear in the German loan proverb. The weasel’s special liking for tallow would not be understood by 16th-century Germans without a classical education, whereas in antiquity, the weasel was a common domestic animal kept to catch mice, and was known for stealing food.⁶⁹ In late antiquity the cat took over its role, and as a result, the proverb changed as well to ‘Der katzen ist der keß befolhen’,⁷⁰ referring to everyday knowledge. To explain the quality of an octopus that led to its use in ‘Polypi mentem obtine’, Tappe cites a distich by the Greek author Theognis together with its Latin translation: ‘Mentem habeas vafri polypi, qui protinus illa/ Se quibus admorit, saxa colore refert’.⁷¹ According to Theognis, the octopus is able to change its colour according to its surroundings; this ability would be known

⁶² This should not lead to the assumption that exotic animals are prevalent in Latin proverbs; a glance at the thematic index in Otto’s collection of Roman proverbs shows that almost the same animals as in my corpus of texts are most commonly used in Latin proverbs as well (dog, cattle, donkey, horse, pig, mouse, wolf); only the lion appears significantly more often in Latin than in German proverbs (Cf. Otto A., *Die Sprichwörter und sprichwörtlichen Redensarten der Römer* (Leipzig: 1890; reprint Hildesheim: 1962) 384–387).

⁶³ ‘An ape’s an ape, a varlet’s a varlet, though they be clad in silk or scarlet’ (Wilson, *Proverbs* 16).

⁶⁴ ‘Place a frog on a golden stool and he will hop back into the pool’ (Jente, *Proverbia communia* 484).

⁶⁵ ‘The camel dances’.

⁶⁶ ‘The cow goes on stilts’.

⁶⁷ ‘Adopt the outlook of the polyp’ (Erasmus, *Collected Works* vol. 31: *Adages I i 1 to I v 100*, transl. by M.M. Phillips (Toronto: 1982) 133).

⁶⁸ ‘Suet for the weasel’ (Erasmus, *Collected Works* vol. 31, 329).

⁶⁹ Cf. Hünemörder C., “Wiesel”, in *Der Neue Pauly*, vol. XII 2 (Stuttgart: 2002) (510–511) 511, and Steier A., “Mustela”, in *Paulys Real-Encyclopädie der classischen Altertumswissenschaft*, vol. XVI 1 (Stuttgart: 1933) (902–908) 905.

⁷⁰ ‘The cheese is now entrusted to the cat’ (Jente, *Proverbia communia* 555).

⁷¹ ‘Adopt the attitude of the many-coloured polyp; Moving towards a rock, it straightway takes its hue’ (Erasmus, *Collected Works* vol. 31, 133).

by Mediterraneans, but not by Germans. The proverb admonishes us to adapt to the situation ('Quo iubemur pro tempore, alios atque alios mores, alium atque alium vultum sumere').⁷² The German proverb Tappe gives as an equivalent ('Du muost fuchs vnd haaß sein') can be understood this way: You have to behave the way your fellow beings do, like a fox among foxes, like a hare among hares. Nevertheless, it is also open to other interpretations. Bebel explains 'Vulpes est et lepus' (no. 130) as relating to a cunning person who combines the slyness of a fox and the speed of a hare so that he is always able to escape.⁷³

Only twice have I observed the use of a generic term in Latin and a specific animal species in German or the other way round: 'Bestia novit bestiam'⁷⁴ – 'Eyn krae beisset der andern keyn aug auß'⁷⁵ (Tappe no. 74, fol. 25) and 'Graculus graculo semper assidet'⁷⁶ – 'Voegel von eynen federn fliegen gern zusammen'⁷⁷ (Tappe no. 465, fol. 155).

In a few cases, only the idea is the same in both proverbs: 'Piscis primum a capite foetet'⁷⁸ is juxtaposed by 'Wann der hirte irret/so irren auch die schaf'⁷⁹ (Tappe no. 561, fol. 194v); both proverbs express the relationship between a leader and the persons dependent on him.

In the vernacular and Latin versions of the *Proverbia communia*, different species seldomly occur, though may be found more often in Tunnicius's collection. In one case, an exotic species in the Latin text takes the place of an indigenous species in the German proverb: 'Dem hunde is quât dat bedde maken' becomes 'Maximus est sudor dromadi'⁸⁰ sternere lectum'⁸¹ in Latin (no. 1284).

Another example shows a certain desire to display classical education on the part of Tunnicius. The Latin version of no. 860 ('It is ein barmelik dink, als dat ei de henne lêrt' – 'Est perquam miserum,

⁷² 'This recommends us to take up for the time being this or that kind of behaviour, this or that kind of face' (Erasmus, *Collected Works* vol. 31, 133).

⁷³ 'Vulpes est et lepus; dicitur de homine callidissimo et astutissimo, qui astutiam habeat vulpis, velocitatem leporis, egregiamque evadendi artem atque diverticula' (Bebel no. 130).

⁷⁴ The English equivalent does not use a generic term: 'A thief knows a thief, as a wolf knows a wolf' (Apperson, *Proverbs* 624).

⁷⁵ 'Crows will not pick out crows' eyes' (Wilson, *Proverbs* 359).

⁷⁶ 'Jackdaw always sits by jackdaw' (Erasmus, *Collected Works* vol. 31, 169).

⁷⁷ 'Birds of a feather flock together' (Wilson, *Proverbs* 60).

⁷⁸ 'A fish begins to stink at the head' (Wilson, *Proverbs* 263).

⁷⁹ 'When the shepherd goes astray, the flock goes astray' (Jente, *Proverbia communia* 40).

⁸⁰ It is unusual to count the first two syllables in "dromadi" as long syllables.

⁸¹ 'It is a hard matter to make a bed for a dogge' (Tilley, *Proverbs* D 523).

doceat si scrofa Minervam') goes back to the classical Latin proverb 'Sus Minervam [docet]'.⁸²

For the most part, the discrepancies can be explained by the necessities of Latin verse. As Tunnicius writes Latin hexameters and most of the German proverbs are very short, he often has to expand the proverbs in order to fill out the verse. To achieve this, he can replace one species with a similar one, as in no. 469 ('Gehuerde perde maken korte reise' – 'Tendit iter longum pretio conductus asellus')⁸³ or no. 1164 ('Der sint so vele kalfvelle veile als kôvelle' – 'Agnorum pelles ovium quot emuntur ubivis').⁸⁴ Quite often, he adds a second animal or a second pair of animals in the Latin text, as in 'Dat eine schâp volget dem anderen'⁸⁵ – 'Agnus ovem sequitur, capras hoedique petulci'⁸⁶ (no. 197), 'Dem wulve is leide vor de kule'⁸⁷ – 'Antra lupus, laqueos formidat subdola vulpes'⁸⁸ (no. 564) and 'Vor einen hellink kan men neinen ossen kopen'⁸⁹ – 'Non obolo taurus, non venditur attilus asse'⁹⁰ (no. 615). As long as the second animal or pair of animals is similar to the first, this does not affect the meaning. But problems arise when the added second pair does not correspond with the first, as in no. 1311: 'Ein elephant venkt neine mûs'⁹¹ – 'Non elephas murem nec prendit acantida milvus'.⁹² The first pair of animals perfectly expresses the meaning (someone very powerful does not waste his time destroying the weak).⁹³ The kite and the goldfinch, however, although they differ as regards their strength, do not fit the second part of the proverb because kites do feed on small birds.

The observation that Tunnicius sometimes doubles the animals in his proverbs leads to the more general question which strategies he

⁸² 'A sow teaching Minerva' (Wilson, *Proverbs* 757).

⁸³ 'A hired horse (donkey) tired never' (Wilson, *Proverbs* 374).

⁸⁴ 'As many calves' skins come to market as of bulls or kine' (Apperson, *Proverbs* 77)/'As soon goes the young sheep as the old to market' (Apperson, *Proverbs* 588).

⁸⁵ 'One sheep follows another' (Wilson, *Proverbs* 721).

⁸⁶ 'One sheep follows another, the butting rams follow the goats'.

⁸⁷ 'The wolf fears the pitfall'.

⁸⁸ 'The wolf fears the pitfall, the sly fox fears the snare'.

⁸⁹ 'You can't buy an ox for a penny'.

⁹⁰ 'A bull isn't sold for a penny, a very big fish isn't sold for a cent'.

⁹¹ 'The elephant does not catch mice' (Erasmus, *Collected Works* vol. 32, 219).

⁹² 'An elephant doesn't catch a mouse nor a kite a goldfinch'.

⁹³ This interpretation is supported by the corresponding proverb no. 167, in which the second part of the Latin version draws the example from the human world instead of fauna: 'Ein elephant en dodet neine muggen' – 'Non culicem barrus, non perdit Caesar inermem' ('An elephant does not kill midges; Caesar does not kill the defenceless').

uses to fill out the verse. Quite common is the use of a hendiadys that does not concern the animal, as in the proverbs no. 388: 'Wan de katte slept, so springen de muese'⁹⁴ – 'Dum cubat aelurus, mus *gaudet et exilit* omnis'⁹⁵ and no. 490: 'De katte is gêrne dêr man se stryket'⁹⁶ – 'Contrectatur ubi felis, loca *quaerit et optat*'.⁹⁷ In rare cases, Tunnicius appends a complete second proverb that expresses the same idea. 'Nu venkt de krevet den hasen'⁹⁸ (no. 762) stands for something impossible, since crabs are supposed to walk backwards. It is completed by the equally impossible image of a wolf serving the lambs in 'Venantur leporem cancri, servat lupus agnos'.

Sometimes Tunnicius adds only an epithet to one of the animals mentioned, as in no. 855: 'Umme ein klein schult bit de wulf dat schâp'⁹⁹ – 'Crimine vel parvo lupus agnum mordet *agrestis*'¹⁰⁰ or in no. 151: 'As de wulf oldet, so ryden ên de kreien'¹⁰¹ – 'Laeditur annosus lupus a cornice *vetusta*'.¹⁰² The second example shows that by doing so, Tunnicius occasionally spoils the sense of the proverb – this proverb deals with the consequences of aging, so of course the wolf has to be old, but not the crow.

One also finds figurative proverbs with an added interpretation that is meant to complete the Latin verse, as in no. 184: 'Des nachtes sint alle katten grau'¹⁰³ – 'Omnia nocte latent, noctu omnis musio canus'.¹⁰⁴

A comparison with the corresponding Latin versions of the *Proverbia communia* shows that the anonymous collector of the Dutch proverbs has a rather different way of dealing with the problem of filling the hexameter. Instead of a hendiadys or other twin formulae, he uses expletives that do not affect the sense of the proverb, for instance in no. 590 ('Om cleen sake bijt die wolf dat scaep' – '*Saepe* lupi modica fit ovis cibus *undique* causa';¹⁰⁵ cf. above Tunnicius, no. 855) or no. 163

⁹⁴ 'When the cat's away, the mice will play' (Wilson, *Proverbs* 109).

⁹⁵ 'When the cat sleeps, all the mice *are glad and dance*'.

⁹⁶ 'Where the cat is stroked, it likes to be' (Jente, *Proverbia communia* 314).

⁹⁷ 'The cat *tries and wishes* to go to a place where it is stroked'.

⁹⁸ 'The crab catches the hare' (Erasmus, *Collected Works* vol. 33, 229).

⁹⁹ 'For little cause the wolf bites the sheep' (Jente, *Proverbia communia* 590).

¹⁰⁰ 'For little cause the *ferocious* wolf bites the sheep'.

¹⁰¹ 'When the wolf grows old, the crows ride him' (Jente, *Proverbia communia* 102).

¹⁰² 'An old wolf is injured by an *old* crow'.

¹⁰³ 'All cats are grey in the dark' (Speake, *Proverbs* 45).

¹⁰⁴ 'Night hides all; at night all cats are grey'.

¹⁰⁵ '*Often and everywhere*, and for little cause, the wolf bites the sheep'.

(‘Daer een scaep voer gaet volghen dander alle’ – ‘*Hic primam reliquae comitantur oves et ubique*’,¹⁰⁶ cf. above, Tunnicius, no. 197).

Comparing Tunnicius’s and Bebel’s usage of Latin, it is evident that, being humanists, both distance themselves from the translations in leonine hexameters¹⁰⁷ made by the collector of the *Proverbia communia*. Bebel does so by rejecting verse and returning to prose. When he takes over verses from the *Proverbia communia*, he mostly adds a dig at the collector, such as ‘ut quidam barbarissime versificatus est’ or ‘quod ita trivialis versificator ludit’.¹⁰⁸ Tunnicius retains the hexameter form for his translations, though he does not make any effort to write rhymed verse. Rather, he displays a humanistic attitude by alluding to classical antiquity¹⁰⁹ and by using a very elaborate code; his Latin vocabulary is both variable and sophisticated and contains many Greek loanwords. The Latin words for ‘horse’, ‘dog’ and ‘cat’ show this quite impressively. Whereas Bebel gives only the *verba simplicia* ‘equus’, ‘canis’ and ‘feles’ or ‘cattus’, Tunnicius uses five different words for ‘horse’ (equus, mannus, veredus, sonipes and caballus), four for ‘dog’ (canis, catulus, catellus and molossus), and six for ‘cat’ (catus, catulus, felis, musio, murilegus and aelurus). Bebel obviously did not aim at variety but tried to stay close to the German models, which probably did not use many different names for these animals, as can be seen by the extant German versions in the *Proverbia communia* and Tunnicius’s collection (the German proverbs almost exclusively use ‘peerd’/‘pert’, ‘hont’/‘hunt’ and ‘catte’/‘katte’). Some of the names Tunnicius makes use of appear in the *Proverbia communia* as well; it is obvious that the metre demands greater variation in vocabulary than is necessary in prose. Nevertheless, words such as ‘sonipes’ and ‘aelurus’ (the latter having Greek origin) show Tunnicius’s liking for unusual words. Further examples support this thesis. Tunnicius no. 136 (‘Also en quam nicht de katte up dat

¹⁰⁶ ‘*Here and everywhere*, one sheep follows another’.

¹⁰⁷ Leonine hexameters are the most common form for proverbs during the Middle Ages. Thus it is not surprising that humanists regarded them as barbarous; Cf. Liver R., “Humanistisches Interesse an antiken und mittelalterlichen Sprichwörtern”, *Wolfenbütteler Renaissance-Mitteilungen* 3 (1979) (69–74) esp. 73.

¹⁰⁸ Cf. Jente, *Proverbia communia* 34.

¹⁰⁹ Leitzmann A., “Zu den mittelniederdeutschen Sprichwörtersammlungen”, *Beiträge zur Geschichte der deutschen Sprache und Literatur* 45 (1920–1921) 121–130, gives a large number of antique names appearing in Tunnicius’s Latin proverbs (127).

speck'¹¹⁰ – ‘Non pernam catus est [...]’¹¹¹ uses the unusual word ‘perna’ for ‘bacon’; Tunnicius no. 1072 uses the equally rare ‘petaso’ (‘Men jaget de katte to late van dem specke, wan’t al getten is’ – ‘A petasone catus sero depellitur eso’).¹¹² The epithet ‘petulci’ (‘butting’; Tunnicius no. 197, see above) is quite unusual, as is the metaphorical use of ‘polypus’ for a rapacious and avid person (Tunnicius no. 462: ‘Als de gyrige vrolik is, so danset das camêl’ – ‘Dum polypus gaudet, video saltare camelum’).¹¹³ In Tunnicius no. 615 (see above), you can find the word ‘attilus’, which is, according to Pliny, the name for a particularly big fish living in the river Po. Tunnicius translates ‘He is so wol entfangen als de soege in des joden hûs’¹¹⁴ (no. 1035) with ‘Tam gratus populo tristi quam porcus Apellae’;¹¹⁵ the name ‘Apella’ for ‘jew’ goes back to Horace, *Sermones* I, 5, 100 (‘Credat Iudeus Apella’). All these examples show Tunnicius’s erudition.

So far, I have mainly focused on the literal meaning. As the metaphorical meaning is the point of any proverb, I will in conclusion look at proverb types, following the Finnish system developed by Kuusi and Lauhakangas, as represented by animal proverbs.¹¹⁶ The system consists of 13 main themes, each of which is divided into main classes and then again into subgroups containing several proverb types. Since my corpus of 350 proverbs is quite small in relation to the number of subgroups in this system (325), I shall confine myself to examining the main themes and main classes of animal proverbs. Arvo Krikmann already has dealt with the most common theme in animal proverbs – the unchanging identity of an animal – in a lengthy study, and this is the most important typological category in the corpus examined here as well.

The second main theme is ‘social interaction’ (H), its most frequent main class H7, ‘aggression and peaceableness’. Both the comportment of man towards animals (and vice versa) and the behaviour of animals towards each other give the background for proverbs of this

¹¹⁰ ‘The cat didn’t get the bacon that way’ (Jente, *Proverbia communia* 89).

¹¹¹ ‘The cat doesn’t eat the bacon [...]’.

¹¹² ‘It is too late to say “shoo” when the cat has eaten the cheese/bacon’ (Jente, *Proverbia communia* 723).

¹¹³ ‘When the greedy man is happy, the camel dances’.

¹¹⁴ ‘He is as welcome as a pig in a Jew’s house’.

¹¹⁵ ‘As welcome to the sullen as a pig is to Apella [= to a Jew]’.

¹¹⁶ Lauhakangas O., *The Matti Kuusi International Type System of Proverbs*, FF Communications 275 (Helsinki: 2001).

class. ‘Umme ein klein schult bit de wulf dat schâp’¹¹⁷ (Tunnicius no. 855) gives an example for unjustified aggression of one animal towards another, ‘Als me den hunt slet, so moet he leder hebben geten’¹¹⁸ (Tunnicius no. 1161) of man towards animal.

Another frequent theme of animal proverbs is ‘dynamics of need’ (D3). Greed is a common topic in animal proverbs, particularly in proverbs involving wolves and cats, such as ‘He bevelt dat schâp dem wulve’¹¹⁹ (Tunnicius no. 696) or ‘Der katzen ist der keß befolhen’¹²⁰ (Tappe no. 66, fol. 22v).

The last theme is ‘sense of proportion’ (E), and has only one main class, ‘relativity of ranking/the essential unity of things’ (E1). Again, proverbs with quite different animal species are found in this class, for example ‘Des nachtes sint alle katten grau’¹²¹ (Tunnicius no. 184) or ‘Des nachts seind alle schaf schwartz’¹²² (Tappe no. 64, fol. 22).

Thus, it can be concluded that animal proverbs are best suited for expressing basic observations such as the invariability of one’s identity, the relativity of ranking, and human relations. Other ideas, such as communication, time, or faith are seldom put into words using animals.

The philological examination of Latin and vernacular proverbs I have presented strongly suggests that the relationship between the classical proverb and its German counterpart in Tappe’s collection shows contradictory traits. These would need further investigation. The other three collections are more easy to characterise. Whereas the collector of the *Proverbia communia* often swells the Latin text with expletives in order to properly fill the verse scheme, Bebel remains faithful to his (presumptive) source by writing prose. Tunnicius writes verses as well, but fills them primarily by means of hendiadys; his translations display his humanist erudition.

As for the animals figuring in proverbs, for the most part, the proverbs refer to domestic animals. While some animals are suitable for proverbs because of a stereotypical character attributed to them, others offer a

¹¹⁷ ‘For little cause the wolf bites the sheep’ (Jente, *Proverbia communia* 590).

¹¹⁸ ‘When we wish to beat a dog, he is accused of eating leather’ (Jente, *Proverbia communia* 34).

¹¹⁹ ‘To set the wolf to keep the sheep’ (Wilson, *Proverbs* 907).

¹²⁰ ‘The cheese is now entrusted to the cat’ (Jente, *Proverbia communia* 555).

¹²¹ ‘All cats are grey in the dark’ (Speake, *Proverbs* 45).

¹²² ‘All sheep are black in the dark’.

wider range of characteristics (or hardly any at all). Altogether, the large number of animal proverbs allows us to claim that, without animals, proverbs would be unthinkable. It is the behaviour of animals, and also the behaviour of man towards animals, that reflects the human world.

*Selective Bibliography**Sources*

- BEBEL HEINRICH, *Proverbia Germanica*, ed. W.H.D. Suringar (Leiden: 1879; reprint Hildesheim: 1969).
- ERASMUS DESIDERIUS, *Collected Works*, vol. 31: *Adages I i 1 to I v 100*, transl. by M.M. Phillips (Toronto: 1982); vol. 32: *Adages I vi 1 to I x 100*, transl. by R.A.B. Mynors (Toronto: 1989); vol. 33: *Adages II I i to II vi 100*, transl. by R.A.B. Mynors (Toronto: 1991); vol. 34: *Adages II vii 1 to III iii 100*, transl. by R.A.B. Mynors (Toronto: 1992).
- PROVERBIA COMMUNIA. *A fifteenth century collection of Dutch proverbs together with the Low German version*, ed. R. Jente (Bloomington: 1947).
- TAPPE EBERHARDUS, *Germanicorum adagiorum cum Latinis ac Graecis collatorum centuria septem* (Straßburg, Wendelinus Rihelius: 1539; copy at Göttingen, Staats- und Universitätsbibliothek, 8 ADAG 3107).
- TUNNICIUS ANTONIUS, *Die älteste niederdeutsche Sprichwörtersammlung [Proverbia Germanorum Monosticha]*, ed. A.H. Hoffmann von Fallersleben (Berlin: 1870).

Studies

- APPERSON G.L., *English proverbs and proverbial phrases. A historical dictionary* (London: 1929).
- CARL H., "Unsere Haustiere in sprichwörtlichen Redensarten", *Muttersprache* 72 (1962) 333–339.
- DITTRICH L., "Emblematische Weisheit und naturwissenschaftliche Realität", *Jahrbuch für Internationale Germanistik* 13 (1981) 36–60.
- DRÖSCHER V.B., *Mit den Wölfen heulen. "Fabelhafte" Spruchweisheiten aus dem Tierreich* (Düsseldorf: 1978).
- JAROSINSKA E., "Deutsche und niederländische Phraseologismen mit Tierbezeichnungen zur Charakterisierung von menschlichen Eigenschaften", *Neerlandica Wratislaviensia* 5 (1991) 249–258.
- KRIKMANN A., "Proverbs on Animal Identity: Typological Memoirs", *Folklore. Electronic Journal of Folklore* (<<http://www.folklore.ee/folklore/>>) 17 (2001) 7–84.
- KUUSI M., "Ein Vorschlag für die Terminologie der parömiologischen Strukturanalyse", *Proverbium* 5 (1966) 97–104.
- , *Towards an international type-system of proverbs*, FF Communications 211 (Helsinki: 1972), reprinted in *Proverbium* 19 (1972) 699–736.
- LAUHA-KANGAS O., *The Matti Kuusi international type system of proverbs*, FF Communications 275 (Helsinki: 2001).
- LEITZMANN A., "Zu den mittelniederdeutschen Sprichwörtersammlungen", *Beiträge zur Geschichte der deutschen Sprache und Literatur* 45 (1920–1921) 121–130.
- LIVER R., "Humanistisches Interesse an antiken und mittelalterlichen Sprichwörtern", *Wolfenbütteler Renaissance-Mitteilungen* 3 (1979) 69–74.
- LÖFFLER K., "Eberhard Tappe, ein westfälischer Sprichwörtersammler des 16. Jahrhunderts", *Niedersachsen* 19 (1913–1914) 441–442.
- MEISSER U.M., "Tiersprichwörter und Verhaltensforschung", *Studium Generale* 22 (1969) 861–889.
- OGISHIMA T., "The Animals in the Finnish Proverbs", *Journal of Intercultural Studies*, Extra Series 2 (1992) 110–111.
- OTTO A., *Die Sprichwörter und sprichwörtlichen Redensarten der Römer* (Leipzig: 1890; reprint Hildesheim: 1962).

- OTTOW A.M., "Der Einfluss der ältesten niederländischen Sprichwörtersammlung auf die älteren deutschen Sprichwörtersammlungen", *Anzeiger für Kunde der deutschen Vorzeit* 12 (1865) 11–18.
- PIIRAINEN E., "Phraseologie und Symbolik", in Wirrer J. (ed.), *Phraseologismen in Text und Kontext*, Phrasemata 1, (Bielefeld: 1998) 209–228.
- RÖHRICH L., *Lexikon der sprichwörtlichen Redensarten*, 5 vols. (Freiburg: 41999).
- RÖHRICH L. – MIEDER W., *Sprichwort*, Sammlung Metzler 154 (Stuttgart: 1977).
- ROOTH A.B., "Domestic Animals and Wild Animals as Symbols and Referents in the Proverbs", *Proverbium* 11 (1968) 286–288.
- SCHULTE-KEMMINGHAUSEN K., "Eberhard Tappes Sammlung westfälischer und holländischer Sprichwörter", in *Niederdeutsche Studien. Festschrift für Conrad Borchling*, (Neumünster: 1932) 91–112.
- SEILER F. *Das deutsche LehnSprichwort*, 4 vols., Die Entwicklung der deutschen Kultur im Spiegel des deutschen Lehnworts 5–8 (Halle: 1921–1924).
- SPEAKE J., *The Oxford Dictionary of Proverbs* (Oxford: 2004).
- STERNKOPF J., "Tierbezeichnungen in phraseologischen Einheiten", *Muttersprache* 103, 4 (1993) 324–331.
- SURINGAR W.H.D., *Over de proverbia communia, ook Proverbia seriosa geheeten, de oudste verzameling van Nederlandsche Spreekwoorden. Verhandeling* (Leyden: 1864).
- TAYLOR A., *The proverb and an index to "The proverb"* (Hatboro, Pa.: 1962; reprint Bern: 1985).
- THIELE J., "Rollenverteilung in der Tiersymbolik", in Knabe P.-E. – Thiele J. (eds.), *Über Texte. Festschrift für Karl-Ludwig Selig*, Schnittpunkte 1 (Tübingen: 1997) 255–261.
- TILLEY M.P., *A Dictionary of the Proverbs in England in the Sixteenth and Seventeenth Centuries: a Collection of Proverbs Found in English Literature and the Dictionaries of the Period* (Ann Arbor, Mich.: 1950).
- WILSON F.P., *The Oxford Dictionary of English Proverbs* (third edition, Oxford: 1970).

A ZOOLOGICAL EMBLEM BOOK:
WILLEM VAN DER BORCHT'S *SEDIGHE*
SINNE-BEELDEN (1642)

Vincent Buyens

Introduction

Animals were a very popular topic in sixteenth and seventeenth-century emblem books. Their characteristics and behavior, their mythological and Christian connotations all provided ample opportunity for moralizing comments, a prominent part of many an emblem book. In most cases, the animal-based emblems are scattered throughout the emblem book and often the animals in the *picturae* are accompanied by humans, other animals or one or more attributes. Some emblem books, however, focus exclusively on animals. This is the case in Willem van der Borcht's *Sedighe Sinne-beelden op den aerdt der Ghephuynde, Vier-voetighe, Waterighe, Ghekorven, (oft) Bloedeloose Dieren* (*Moral emblems on the nature of feathered, four-footed, aquatic, articulate or bloodless animals*), published in Brussels in 1642 [Fig. 1].¹ In this paper I will argue that, both in structural composition and thematic focus, Van der Borcht's emblem book belongs to the emblematic sub-genre of zoological emblem books. I will then demonstrate how, in writing the *Sedighe Sinne-beelden*, Van der Borcht was inspired by a more scientific, zoological work written some three years before the *Sedighe Sinne-beelden*. In the last part of this paper, I will focus on a number of *picturae* in the *Sedighe Sinne-beelden* which are clearly inspired by the tradition of illustrated fable books.

¹ *Sedighe Sinne-beelden op den aerdt der Ghephuynde, Vier-voetighe, Waterighe, Ghekorven, (oft) Bloedeloose Dieren. Tot Brussel, By Ian Mommaert, achter 't Stadt-huys, in de Druckerye. M.DC. XLIII.* I managed to trace only two copies of this edition: one in the British Library (shelfmark 12305.aa.16.), the other in the Herzog August Library in Wolfenbüttel (shelfmark A: 167.5 Eth.).



Fig. 1. N. De Geyn, frontispiece of Willem van der Borch's *Sedighe Sinne-beelden* [...] (Brussels: 1642).

A zoological emblem book

The *Sedighe Sinne-beelden* is a collection of 75 emblems in sedecimo oblong format. The emblems all feature a woodcut depicting an animal, a title naming the animal, a motto, and two short texts, one in verse and one in prose. They are preceded by two dedications to Willem van Blitterswyck,² an explanation of the frontispiece and a general prologue to the emblems. The book was published in Brussels by Jan Mommaert in 1642.³ The emblems are divided into 4 chapters, each

² Willem van Blitterswyck, a Brussels lawyer, magistrate and writer, was acquainted with Mommaert, who published one of his works. Whether he had introduced Van der Borch to Van Blitterswyck is uncertain, but the fact that they knew each other is beyond any doubt. In one of the dedicatory poems to Van Blitterswyck, Van der Borch presents his work as a new year's present to Van Blitterswyck and thanks him for the 'usual favor in your residence' ('gewoonelycke gunste t'uwen huys'; fol. A6v). On Van Blitterswyck see *Bibliographie Nationale* (Brussels: s.d.) 2 (1868) 481–483.

³ On Jan Mommaert see Vincent J.B., *Le livre, l'estampe, l'édition en Brabant du XV^e au XIX^e siècle* (Gembloux: 1935) 37–38.

chapter corresponding to a certain class of animals. Thus Van der Borcht classifies the ‘feathered’, the ‘four-footed’, the ‘aquatic’ and the ‘articulate or bloodless’ animals.⁴

With its exclusive focus on animals, the *Sedighe Sinne-beelden* is very much reminiscent of the emblematic sub genre of zoological emblem books, in which the characteristics of animals are described and used as a starting point for some sort of moral lesson. What sets these emblem books apart from other collections of emblems containing animals, is their narrow range of material covered: they only contain animals.⁵ This somewhat encyclopedic feature is often stressed by categorizing the various species. In Aneau’s *Decades de la description, forme et vertu naturelle des Animaux, tant raisonnables que brutz*, for example, the emblems are not presented at random, but grouped in six chapters of ten animals (the ‘Decades’; the first one contains just eight emblems) starting with the highest order of living beings (*Decade premiere, de Dieu, et des animaux raisonnables*; fol. A5r) and ending with the lowest (*Decade sixiesme des bestes rampantes, serpentine, ou vivantes es eaues, en terre, dictes en Grec Amphibies*; fol. D6r). The emblems in the *Sedighe Sinne-beelden* are also arranged in categories, in fact these are already mentioned in the title. The order of the chapters seems to imply some sort of hierarchy, starting with the (literally) highest animals (birds) and ending with the lowest: insects

⁴ ‘ghepluynde, vier-voetighe, waterighe, ghekorven, (oft) bloedeloose dieren’ (fol. A2r). The feathered animals make up a collection of twenty-five mostly indigenous birds (eagle, falcon, duck, goose, owl, stork, swan, dove, jackdaw, crane, raven, peacock, quail, rooster and chickens, cuckoo, swallow, pheasant, bat, lark, partridge, sparrow, thrush, magpie, blackbird, parrot). The quadruped chapter, also containing twenty-five emblems, exhibits animals from a wider geographical range, although the majority is indigenous (lion, elephant, camel, horse, donkey, mule, ox, bear, goat, male goat, deer, pig, boar, dog, cat, hare, wolf, fox, sheep, ram, monkey, mice and rats, weasel, mole, eel). The third group, that of the ‘aquatic animals’, consists of five common species of fish (perch, pike, gudgeon, flounder, tench), two crustaceans (lobster and oyster), two amphibians (frog and turtle) and three mammals (otter, seal, hedgehog). The final chapter is comprised of ten insects and other small animals (spider, snail, flies, bees, ants, locust, wood lice, earthworms, lice, and leech) and three reptiles (vipers and snakes, scorpion, lizard).

⁵ The earliest and perhaps most famous examples of this genre are Barthélemy Aneau’s *Decades de la description, forme et vertu naturelle des Animaux, tant raisonnables que brutz* (Lyon: 1549) and Guillaume Guérout’s *Second livre de la description des Animaux, contenant le blason des oyseaux* (Lyon: 1550). Both were used as sources for a number of very similar emblem books that were printed until the mid seventeenth century. On Aneau and Guérout and their afterlife, see: Saunders A., “The evolution of a sixteenth-century emblem book: the *Decades de la description des animaux*, and *Second livre de la description des animaux, contenant le blason des oyseaux*”, *Bibliothèque d’Humanisme et Renaissance* 38 (1976) 437–457.

and reptiles. The intermediate categories are those of the four-footed and the aquatic animals. Within these chapters, there does not seem to be a distinct order, although it might not be a coincidence that the first bird to be discussed is the eagle, while the first four-footed animal is the lion.

These zoological emblem books are not only characterized by the focus on animals, but also by the combination of encyclopedic information and moral instruction. In fact, the zoological information is often explicitly regarded as a means to convey the desired message. As much is asserted by Guillaume Guérout in his *Second Livre de la description*:

Following my plan, I have taken the trouble of depicting and describing in French verse the nature and characteristics of these [birds], praising the good character of some, denouncing the imperfections and vices of others: to urge man to embrace the good and detest the bad.⁶

The *picturae* are then little more than lively illustrations, chiefly meant to provide the *dulce* to the text's *utile*, as Aneau describes in his *Decades*:

We have ordered to be portrayed [...] the images of these animals, both domestic and wild, national and foreign, to compare the nearly living image to the half-dead text: and to delight the corporal eyes in looking at the image: and to learn the spiritual meaning by reading.⁷

In the introduction to the *Sedighe Sinne-beelden*, Van der Borcht strongly emphasizes the moral dimension of his zoological emblems. He claims to have taken as an example the 'laudable contemporary writers' who have published writings on

instructive characteristics of Animals, concealed truths of Stories, saga's, or fables [...] also to reprimand the Animals who are endowed with reason, not as more perfect, but as with some special talents or faults to present their deformities.⁸

⁶ Guillaume Guérout, *Second Livre de la description* fol. a3r: 'Suyvant mon desseing, l'ay pris la hardiesse de blasonner et descrire en vers françoys la nature & propriété d'iceux, louant d'aucuns la generosité, et blasant les imperfections, et vices des autres: pour exciter les homes a embrasser le bien, et abhorrer le mal'.

⁷ Barthélémy Aneau, *Decades* fol. Aij r–Aij v: 'Nous auons fait pourtraitre [...] les figures, d'icelles bestes, taut privees que saulages, paysanes, que estranges, pour comparer l'Image quasi viue, avec la lettre demye morte: et delecter les yeulx corporelz en regardant la peinture: et l'entendement spirituel en apprenant par la lecture'.

⁸ Willem van der Borcht, *Sedighe Sinne-beelden* fol. B4v–B5r: 'loffelycke schrijvers van desen tydt'; 'leersamelycke eygen-schappen der Dieren, overdeckte waer heden van Historien, saghen, ofte fabulen [...] om daer door oock de redelycke en met verstandt

In most of the emblems, either the prose text, the one in verse, or both describe a physical or behavioral characteristic of the animal which is then morally exploited, either by comparison or by opposition, in the rest of the text. The two texts usually develop the same moral tenor without being mere repetitions. As a rule the prose text elaborates on the one in verse, frequently mentioning some sort of authorization of what is being stated.⁹ In the emblem about the swan, for example, both the verse part of the emblem as that in prose seek to explain the motto of the emblem, which reads 'Live steadily, longing for death'.¹⁰ In the verse part the swan addresses the reader,¹¹ presenting itself as an example of the behavior advocated in the motto:

Learn People, learn from me, to live so purely;
 That pale death does not make you tremble with fear,
 That no ill fortune covers you in terror,
 Learn to live steadily, so that you die steadily.
 You know, the more death forces me to die,
 The more beautiful my song becomes:
 Because he who lives to die, to depart happily
 He will exchange sad weeping for a song.¹²

Here the animal characteristic is that of the swan that sings when it feels it is about to die, a common element in animal lore. The moral lesson to be learned is that man should lead a pure and steady life in order to face death without fear. In the prose text, both the conduct of the swan and the lesson to be learnt from it are made more explicit by the narrator:

begaefde Dieren te berispen, niet als vol-maectter, maer als met eenighe besondere gaven ofte feylen hunne mismaecktheden voor-ooghen-stellende'.

⁹ These 'authorities' can be very specific as in 'leert de heylighe Schrifture' (teaches us the Holy Scripture), but are often not particularized at all, as in 'daer soo veele, ende treffelycke boeken mede vervult zyn' (abundantly discussed in so many excellent books) or 'by ghetuyghen van treffelijcke schrijvers' (to which excellent writers testify). Cf. Willem van der Borch, *Sedighe Sinne-beelden* fols. Cv; C4v; C7v.

¹⁰ Willem van der Borch, *Sedighe Sinne-beelden* fol. C5v: 'Leeft ghestaegh, Naer doodts behaegh'.

¹¹ The verse text of the emblems in the *Sedighe Sinne-beelden* is often rendered in direct speech in which either the narrator or the animal itself addresses the reader. The latter case is very much reminiscent of the tradition of (illustrated) fable books.

¹² Willem van der Borch, *Sedighe Sinne-beelden* fol. C5v: 'Leert Menschen, leert door my, soo on-besmet te leven;/Dat u de bleecke doodt niet schrickelyck doet beven,/Dat u gheen on-gheval met ancxe over-verft,/Leert dat ghy even left, op dat ghy even sterft./Ghy weet, hoe meer de doodt my komt tot sterven dwinghen,/Hoe liefelycker ick my voeghe tot het singhen:/Want die tot het sterven leeft, voor't blydelyck gheschey/Sal wiss'len met een liedt het droefelyck gheschrey'.

The swan, (as everybody knows) sings at her own funeral, showing what happiness she experiences in parting from this misery, teaching, that man ought to live in such a manner that dying does not make him sad, to die in such a way that it is a beginning of life.¹³

The constitutive elements of the verse part (the swan sings when dying; this teaches man to live his life in preparation of death) are not merely paraphrased in the prose part, they are also elaborated upon. The animal characteristic has received a form of authorization, which in this case can be described as common knowledge ('as everybody knows'), and is further developed by mentioning the reason why the swan is happy to die ('parting from this misery'). The moral lesson is enriched by adding the Christian idea of a life after death ('a beginning of life').

Thus the animals in the emblems serve as examples, both positive and negative, regarding moral behavior. An important opposition in this respect, and one that features prominently in zoological emblem books, is that between the irrational and the rational animals (man). The paradox is then that it is the irrational animals who often teach man how to behave. Or as Guérout explains: 'the unreasonable animals are presented to him [i.e. man] as a mirror: to encourage him to do good, and to persuade him to take as an example the evil that happens by foolishness'.¹⁴ This rationality topos is also mentioned in Van der Borcht's preliminary poem explaining the title plate [Fig. 1]. In this poem the author makes it clear to the reader that the bow in the top of the engraving is that of the one Van der Borcht calls 'the small archer', meaning Cupid, the son of Venus. The bow finds itself in the firm grip of an eagle, which, still according Van der Borcht, represents the free soul. The allegorical image stands for the idea that only a free soul can conquer its own feelings of lust. In the next lines Van der Borcht elaborates on what he means by a 'free soul'. It is a soul 'no longer bound to the earth' and 'directed towards heaven' that

¹³ Willem van der Borcht, *Sedighe Sinne-beelden* fol. C5v: 'De swaen, (near het ghemeyn ghevoelen) singht haer eyghen uyt-vaert, thoonende wat blyschap sy heft van dese elendigheydt te scheyden, leerende, dat den mensch soo behoort te leven, dat hem het sterven niet en bedroeft, soo sterven, dat het een beghin des levens zy'.

¹⁴ Guillaume Guérout, *Second Livre de la description* fol. a2v: 'les animaux irraisonnables luy sont proposez pour mirouers: affin de l'animer à faire bien, & le persuader à prendre exemple aux maux qui adviennent par imprudence'.

is capable of ‘restraining its own suffering’.¹⁵ The focus then shifts from the eagle in the top of the *pictura* to the person on the left. Van der Borch explains that this person is a hunter accompanied by a dog and a falcon and that the hunter is looking at the ants in the center of the *pictura*. Then the hunter addresses the reader, sighing that he is done hunting in vain. He sends away his dog and falcon, stating that it is his soul that needs nourishing, not his stomach. And to feed his soul, he has to hunt without a net or falcon, using only reason as a tool. Looking at and learning from the conduct of animals will benefit him more than sending his dogs into the woods. At the end of his monologue, the hunter reformulates the passage about the free soul, asserting that one cannot let desires govern reason:

How can a wise hero command his people,
 If his lust mostly escapes his sense of reason
 If his desires themselves can push the restraint of his impulses
 Into the sand, can sweep it away from under his feet?¹⁶

This emphasis on reason and the opposition between rational and irrational animals and behavior is present throughout the *Sedighe Sinne-beelden*. Two examples may suffice. In the emblem about the flounder, for example, Van der Borch exploits the rationality paradox by playing on the name of the fish, in Dutch ‘bot’, which means as much as ‘dim-witted’. He states that ‘the unreasonable animals are sometimes more prone to learning than the dim-witted people that walk on land.’¹⁷ In the emblem about the elephant, Van der Borch states that, unlike man, the elephant does not try to escape from ‘the bridle of reason’ and that this rather plump animal ‘more wise, is easier to turn to moral behavior’, in contrast to man, who frequently disregards ‘law, temperance and reason’.¹⁸

¹⁵ Willem van der Borch, *Sedighe Sinne-beelden* fol. Br: ‘Een vrije ziel alleen, die kan haer lijden dwingen,/[...] een edel ziel ten Hemel op-gevlogen,/Van d’aerde nu ontlast [...]’.

¹⁶ Willem van der Borch, *Sedighe Sinne-beelden* fol. B3r: ‘Hoe kan een cloecken heldt syn menighte gebieden,/Soo syne lusten meest syn reden gaan ontvlieden,/Soo syn begeerten self de thoomen van’t gemoet/Kan drucken in het sant, kan rucken onder voet?’.

¹⁷ Willem van der Borch, *Sedighe Sinne-beelden* fol. I8v: ‘[...] dat de on-redelijcke dieren som-wijl eerder iet zijn toe-vattende als de aerdsche Botten’.

¹⁸ Willem van der Borch, *Sedighe Sinne-beelden* fol. F2v: ‘den breydel van de reden [...] meer verstandiger, lichtelijck tot sedigheydt moght verkeeren [...] wet, maet ende reden’.

The Sedighe Sinne-beelden and the Historia medica

The woodcuts in the *Sedighe Sinne-beelden* were designed by Flemish engraver Jan Christoffel Jegher (1618–1667) and first used in the 1639 medical encyclopedia *Historia medica*,¹⁹ written by the Brussels doctor and scientist Willem van den Bossche and also published by Jan Mommaert.²⁰ This *Historia medica* represents a rich source of ancient and early modern zoological knowledge. It provides information about the animals itself, as well as about their medical applications. The *catalogus auctorum* boasts an impressive list of 138 writers, among them classical authors of zoological and other scientific works such as Plinius, Galenus and Hippocrates, but also contemporary scientists as Gesner and Plateus. The *Historia medica* is, however, more than a scientific work. Many of the authors cited by Van den Bossche are more than physicists, also – or often mainly – displaying literary aspirations.²¹ The likes of Virgil, Aesop, Martial, Plautus and others figure prominently in the *Historia medica*. Together with the visual illustrations, this suggests that the work was intended to be more than just a medical encyclopedia and that it was also meant to be a source of enjoyment for the reader.²² As much is made clear by Van den Bossche in the dedicatory poem to his patron, in which he presents the work as a gift that is not just scientific, but also ‘litterario’ in nature.

The influence of the *Historia medica* on the *Sedighe Sinne-beelden* goes far beyond the re-publishing of woodcuts, a common commercial phenomenon at the time. A close comparison of the two works brings to light that Van der Borcht also used the *Historia medica* as a sort of *genotext* for his *Sedighe Sinne-beelden*. In most emblems, there is a textual similarity to the corresponding chapter in the *Historia medica*, and more

¹⁹ Some of the woodcuts bear the initials ‘I.C.I.’ (Jan Christoffel Jegher), the same initials found in other collections of woodcuts (cf. note 20) which have been ascribed to Jegher.

²⁰ Jegher frequently provided the illustrations for works published by Mommaert. Examples are Balth’s *Historia ludicra* (1656) and De Condé’s *Costuymen ende rechten der stad Brussel* (1657). On Jegher see Hollstein F.W.H., *Dutch and Flemish Etchings, Engravings and Woodcuts. ca. 1450–1700*. (Gouda: 1949–) IX 193–195 and Meyer M., “Een spreekwoordenboek van J.C. Jegher, Antwerpen 1618–1666”, *Volkskunde* 69 (1968) 89–102.

²¹ Nave F. de en Schepper M. de, *De Geneeskunde in de Zuidelijke Nederlanden (1475–1660)* (Antwerp: 1990) 219.

²² Gysel came to the same conclusion in Gysel C., “Willem van den Bossche, zijn *Historia Medica* (1639) en de Tandheekkunde”, *Acta Belgica Historiae Medicinae* 2 (1989) 52.

often than not the elements Van der Borcht ‘borrows’ from Van den Bossche can be found at the beginning of the corresponding chapters in the *Historia medica*. In the very first paragraph of the first chapter of the *Historia medica*, in which the eagle is described, Van den Bossche states that this bird supersedes all others when it comes to flying (‘Omnes aves volatu superat’; Willem van den Bossche, *Historia medica* 2). Van der Borcht translates this phrase almost literally in the prose text of his opening emblem: ‘The eagle, like it surpasses all birds when it comes to flying’.²³ In the emblem about the swallow, Van der Borcht’s description of the bird as ‘sharply-fork-tailed swallow’²⁴ echoes the description in the *Historia medica*, in which the bird is said to have a ‘tail divided as a fork’.²⁵

Another very close resemblance can be found in the emblem about the crane. The passage in the *Historia medica* describes how cranes help each other in flight:

[...] if they notice in flight that one of them is so exhausted that it is falling back, they send it two helpers. They support the tired [bird] or even carry it lifted on their backs.²⁶

In this case the information Van der Borcht extracted from the *Historia medica* is rendered in the verse part of the text:

If in their flight
one of them (maybe) starts to fall back,
Now failing in strength,
Two are sent to her,
Who help her to fly,
And carry her on their backs [...].²⁷

In spite of the versification, the text in the emblem is clearly inspired on the one in Van den Bossche’s medical encyclopedia. This time the

²³ ‘Den Arendt, ghelijck hy alle Voghelen in het vlieghe te boven gaet’ (fol. B8v).

²⁴ ‘spitsch-bevorck-gesteerte swalf’ (fol. Cv).

²⁵ Willem van den Bossche, *Historia medica* 101: ‘cauda in furcam divisa’.

²⁶ Willem van den Bossche, *Historia medica* 98: ‘si quam defatigatam volatu deficere advertunt, ei destinantur duae, quae subsidiaria opera sublevant lassam aut etiam dorso exceptam vehunt’.

²⁷ Willem van der Borcht, *Sedighe Sinne-beelden* fol. Cv: ‘Als in’t vlieghe van hun allen/Een (misschien) komt af te vallen,/Nu ghemissende haer kracht,/Worter hae’r twee toe-gebracht,/Die haer helpen in het waghén,/En op hunnen rugghe dragen [...]’.

lesson advocated in the emblem is that of *caritas*, of people having the moral obligation to help one another.

A case which is very illustrative of Van der Borch's dependence on the *Historia medica* and of the particularities this can produce, is that of the beaver emblem.²⁸ Whereas in animal lore the dominant characteristic attributed to the beaver is that of the animal neutering itself in order to save its life²⁹ – also mentioned in the chapter in the *Historia medica* – Van der Borch focuses on an earlier passage of the chapter in which the beaver's ability to chew through trees is discussed:

He also cuts wood as with an iron axe. In this one can understand the beaver's prudence: always when it hits the tree, it anew makes sure not to trap itself by causing the tree to fall sooner than expected.³⁰

In this case Van der Borch emphasizes the moral quality already explicitly mentioned in the *Historia medica* ('prudentiam') and contrasts it to human behavior:

The seal has this strength in his jaws,
That it fells the mightiest tree with its teeth,
While before the trunk has been cut from the ground,
It makes sure that the fall does not overpower it [the seal]:
However man, being blind, is mostly incautious,
Even though his recklessness brings him grave danger,
Where everyone should understand, how important it is
To cease one's activities without hesitation.³¹

In this emblem, as in many, Van der Borch more than likely drew his inspiration (exclusively) from the *Historia medica*, more precisely from the first part of the chapter. Testimony to this is the fact that Van der Borch mistakenly names the emblem 'Zee-hondt' (seal), in spite of

²⁸ Van der Borch uses the term 'Zee-hondt' (seal), but clearly refers to the same animal as Van den Bossche. I will come back to this in my discussion of the emblem.

²⁹ The self-mutilation is described and moralized in, for example, various editions of Alciato's *Emblematum libellus*, Corrozet's *Fables* (1542), Horapollon's *De sacris Aegyptiorum notis libri duo* (1574) and Aneau's *Decades* (1549). See also Tiemann B., *Fabel und Emblem. Gilles Corrozet und die französische Renaissance-fabel* (Munich: 1974) 112–113.

³⁰ Willem van den Bossche, *Historia medica* 377: 'Etiam ligna quasi ferro secat. In hoc autem advertere licet castoris prudentiam, ut, quoties in excidenda arbore iterat ictum, suspiciat toties, ne opinione citius concidente arbore sibi ipsi decipulam faciat'.

³¹ Willem van der Borch, *Sedighe Sinne-beelden* fol. K5v: 'Den Zee-Hondt heeft dees kracht in synen muyl gheleghen,/Dat hy den stercksten boom met byten neder-velt,/Dan eer den boven-staeck is van den grondt gheseghen,/Voor-siet hy dat den val hem selfs niet over-weldt:/Dan blinden mensch nochtans is meertyds on-voorsichtigh,/Al dreyght syn stoutigheydt het uysterste ghevaer,/Daer elck bevroeden moet, hoe seer het is ghewichtigh/Soo sonder toesicht gants te lossen syn ghebaer'.

his description of what is undeniably beaver behavior. The error, fed by a lack of zoological knowledge, is probably a consequence of the writer's reliance on the *Historia medica*, in which Van den Bossche states that another name for 'castor' is 'Canem ponticum', which in Dutch translation would indeed be 'Zee-hondt'.

In another case, Van der Borcht's use of the *Historia medica* offers a clue on other sources he might have used in his *Sedighe Sinne-beelden*. The chapter on the hedgehog, for example, contains a poem by Schoonhovius, to which Van den Bossche refers as 'carmen Schoonhovii':

The nature of the hedgehog is such, that it endlessly
 Postpones the horrible day of giving birth;
 And in the end, when the pins of its offspring grow,
 It gives birth more painfully.
 The lazy mind of mortal man, not thinking about his heaven,
 Postpones his life day by day,
 Deluding himself, always gathers more evil to the evil
 And, stressed in this way, distrusts himself
 Or frees himself only with the greatest difficulty.³²

This poem by Schoonhovius, published in his *Emblemata*,³³ is used by Van der Borcht in the verse part of his emblem (the italics are mine):

The thoroughly degenerated animal
 After it has copulated,
 And carries so strong a fruit,
 That it is now ready to give birth,
Seeks to delay the woeful day of delivery
As long as it can:
 So it turns out that its sharp-pinned fruit
 Then doubles its pain and woe.
 Thus acts *slow man*
 (most like this foolish animal)
 Who delays the wise day of redemption,

³² Willem van den Bossche, *Historia medica* 314: 'Natura echini talis est, ut in dies/ Differre tentet horridum partus diem;/ Tandemque spinis prolixis excrecentibus;/ Maiore tandem cum dolore parturit./ Ignava mens mortalium et caeli sui/ Oblita, differt in dies vitam suam;/ Sibique semper blandiens, malis mala/ Coacervat et sic pressa diffidit sibi,/ Aut cum labore maximo sese explicat'.

³³ *Emblemata Florentii Schoonhovii I.C. Goudani, Partim Moralia partim etiam civilia. Cum latiori eorundem eiusdem auctoris interpretatione [...]* (Gouda: 1618) 86. On this collection of emblems and its author, see Enenkel K.A.E., "A Leyden Emblem Book: Florentius Schoonhovius's *Emblemata partim moralia, partim etiam civilia*", in Manning I. – Porteman K. – Vaeck M. van (eds.), *The Emblem Tradition and the Low Countries, Imago Figurata*. Studies 1B (Turnhout: 1999) 177–195.

Until he feels a hard violence
 Of his more degenerated nature,
 That steadily gathers him grief,
 And he, with sour reluctance
 Leaves his depraved soul.³⁴

This emblem is also indicative of the difficulty in attributing a specific source to the *Sedighe Sinne-beelden*, especially when Van der Borcht has clearly used the information provided by the *Historia medica*. In the case of the hedgehog, it is hard to establish whether Van der Borcht also made use of the original text by Schoonhovius, although one element of the emblem seems to point in that direction. In the prose text in the *Sedighe Sinne-beelden*, Van der Borcht states that ‘the daily Cras of Augustine’³⁵ could well testify to the fact that many sins go unredeemed for too long. This is a reference to Augustine’s famous adagio ‘Cras cras semper cras/Et sic elabitur aetas’ (‘Tomorrow tomorrow, always tomorrow/and thus time goes by’), which echoes the early Christian idea that the raven, shouting ‘cras cras’, is actually the devil tempting man to delay the redemption of his sins. In the prose part of Schoonhovius’s emblem, the author, though not actually citing the above-mentioned adagio, refers to ‘Bene Augustinus’, who states that worse than the sin itself is the act of not mentioning (as in confessing) it (‘peius omittitur’). This resemblance by no means proves that Van der Borcht read and used Schoonhovius’s book, but it does make it a distinct possibility.

In many other emblems it is even harder to determine if Van der Borcht has used other sources than the *Historia medica*. When the latter, for example, cites Lucrece and Ovid in their praise of geese as the guardians of Rome (Willem van den Bossche, *Historia medica* 31), it is quite possible that Van der Borcht, though mentioning the same in

³⁴ Willem van der Borcht, *Sedighe Sinne-beelden* fol. I5v: ‘Het om-end’-om bedorvend’ beest/ Naer dat’t beslapen is geweest,/ En dat het draecht soo stercke dracht,/ Dat het nu tot het baren tracht,/ Soect barens schroomelycke dag/ So lang uyt-stellen als het mag:/ Dus dat haer scherp-bepinde vrucht/ Dan dobbelt pynen en ghesucht./ Sulcks doet den tragen Mensch (wel meest/ Ghelyck aen dese dwase beest)/ Die bet’ringhs vroeden dagh uyt-stelt,/ Tot dat hy proeft een hardt gheweldt/ Van synen meer bedorven aerdt,/ Die van hem gestage smert vergaert,/ En nu met een vranghe tegenheydt/ Van de verdorven ziele scheidt’. Very telling is Van der Borcht’s homophonic mistranslation of ‘ignava mens (soul) mortalium’ as ‘den tragen mensch (man)’.

³⁵ Willem van der Borcht, *Sedighe Sinne-beelden* fol. I5v: ‘den dagelijckschen Cras van Augustinus’.

his emblem about the goose,³⁶ did not draw his inspiration from any text in particular. The account of the Roman geese can be assumed to have been commonly known at the time. In this respect, it is often a tenuous exercise pinpointing a specific textual source for the emblems in the *Sedighe Sinne-beelden*.

The Sedighe Sinne-beelden and the tradition of illustrated fable books

The same could be said for the *picturae* in the *Sedighe Sinne-beelden*. *Picturae* can be copied in full or partially, they can be isolated from their context or inserted into a new pictorial composition. All this, combined with the particularly strong iconographic tradition in respect to animals, makes it very precarious to indicate the iconographic source for any single woodcut. Some sources can, however, be identified without doubt, as in the case of the *pictura* featuring the 'lutra' (otter). In this case the iconographic source is very likely a *pictura* in Aneau's *Decades*, in which the animal is called 'Chien de Mer' [Figs. 2 and 3]. The doglike *Bildtyp* used here is in fact part of an iconographic tradition stretching all the way back to the illustrated *Physiologus* manuscripts.³⁷

A significant source for the Jegher woodcuts are the famous Gheeraerts etchings, used in the fable books with verses by, among others, De Dene and Vondel.³⁸ The resemblance between some of the Jegher woodcuts and Gheeraerts' *picturae* is so outspoken that there can be no to

³⁶ Willem van der Borch, *Sedighe Sinne-beelden* fol. D2v: 'Met toe-sicht, 't geur-ryck dier, de staghe nacht beermster,/ De langhe Roomsche schand', waer van sy wirdt beschermster,/ Blyft meer-tyds wakende [...] ('With vigilance, the animal with a keen sense of smell,/ the constant screamer in the night/ Rome's lasting shame, of which it became protector,/ Mostly remains vigilant [...]').

³⁷ The *Bildtyp* was later used in Alciato's 1531 Augsburg edition of the *Emblematum libellus* and after that became even more widespread. See Tiemann, *Fabel und Emblem* 112–113.

³⁸ The etchings were made by Gheeraerts for De Dene's *De Warachtighe Fabulen Der Dieren* (1567) and later re-used in the famous *Esbatement moral des animaux* (1578) and Vondel's *Vorstellicke Warande Der Dieren* (1617) while a set of 25 Gheeraert imitations was in use since 1578. See Geirnaert D. – Smith P.J., "Tussen fabel en emblem: *De Warachtighe fabulen der dieren* (1567)", *Literatuur* 9 (1992) 22–33; Geirnaert D. – Smith P.J., "The Sources of the Emblematic Fable Book *De Warachtighe fabulen der dieren* (1567)", in Manning J. – Porteman K. – Vaeck M. van (eds.), *The Emblem Tradition and the Low Countries*, in *Imago Figurata*. Studies 1B (Turnhout: 1999) 23–38; Vaeck M. van, "Sixteenth- and Seventeenth-Century Dutch 'Emblematic' Fable Books from the Gheeraerts Filiation", *Emblematica* 7 (1993) 25–38; Hodnett E., *Marcus Gheeraerts the elder of Bruges, London and Antwerp* (Utrecht: 1971) 31–41.



Fig. 2. Woodcut featuring a 'Chien de Mer'. From Barthélemy Aneau's *Decades de la Description, Forme, et Vertu Naturelle des Animaux, tant raisonnables, que Brutz* (Lyon: 1549) fol. Er.



Fig. 3. Jan Christoffel Jegher, woodcut featuring an otter. From Willem van der Borcht's *Sedighe Sinne-beelden* [...] (Brussels: 1642) fol. K5r.

doubt as to their relationship. At least sixteen of the images are clearly inspired by Gheeraerts' illustrations.³⁹ As these images always represent more than one animal, Jegher zoomed in on the part of the image he needed and copied it, leaving out the other animal(s) and all of the background features. All of these copies are represented in mirror view in the *Historia medica* and in the *Sedighe Sinne-beelden*. Some examples are the elephant [Figs. 4 and 5] and the fox [Figs. 6 and 7].

The *figurae* of the *Sedighe Sinne-beelden* thus unmistakably tie them to the tradition of the illustrated fable books, of which the Gheeraerts group was an important part.⁴⁰ Interestingly, reference to the fable tradition is also made in the prologue of Van der Borcht's emblem book. In the passage from the introduction cited in the first part of this paper, Van der Borcht explicitly mentions 'fables' as one of the forms of contemporary didactic literature using animals to 'reprimand the Animals who are endowed with reason'. However, of the sixteen emblems in which a Gheeraerts *pictura* is used, only three unambiguously refer to the fable tradition. One of these references is more than likely only made indirectly, as the fable elements are also mentioned in the *Historia medica*.⁴¹ In two of the instances (the fox and the frog) Van der Borcht was clearly inspired by the (textual) fable tradition, producing some very peculiar results.

The clearest influence is to be found in the emblem about the fox, in which the fable about the fox and the hare is elaborated to illustrate the moral lesson. The fable by Aesop and most renderings by his epigones tell the story of the shrewd fox praising the delicious flesh of the hare to the dog in order to save his own life, thus endangering his compatriot. When the hare confronts the fox with his questionable

³⁹ Viz. the *picturae* of the eagle, the stork, the pigeon, the crane, the peacock, the lion, the elephant, the bear, the goat, the stag, the hare, the wolf, the fox, the monkey, the weasel and the frog.

⁴⁰ On (illustrated) fable books in general, see Hasubek P., "Erkenntnis und Vergnügen – Fabeldefinitionen", in Küster C.L. (ed.), *Fabula docet. Illustrierte Fabelbücher aus sechs Jahrhunderten* (Wolfenbüttel: 1971) 9–20; on printed fable illustrations in the 15th and 16th centuries: Küster C.L., "Die Gedruckte Fabelillustration im 15. und 16. Jahrhundert", in *Fabula docet. Illustrierte Fabelbücher aus sechs Jahrhunderten* (Wolfenbüttel: 1971) 34–49.

⁴¹ In the emblem about the weasel, the reference to the fable tradition is clearly mediated by the *Historia medica*, in which fable elements are also included. In the fable tradition, the weasel chases off a venomous basilisk with some sort of herb. Van den Bossche also recounts this feat in his *Historia medica*, while Van der Borcht states in his emblem that the weasel uses the herb to drive away what he metonymically refers to as 'venom'. Interestingly, the branch of herb that the weasel carries in the Gheeraerts engraving is left out by Jegher, while it is mentioned in the text by Van den Bossche.



Fig. 4. Marcus Gheeraerts, engraving featuring an elephant and a dragon. From Eduard de Dene's *De Warachtighe Fabulen Der Dieren* (1567) 90.



Fig. 5. Jan Christoffel Jegher, woodcut featuring an elephant. From Willem van der Borch's *Sedighe Sinne-beelden* [...] (Brussels: 1642) fol. F3r.

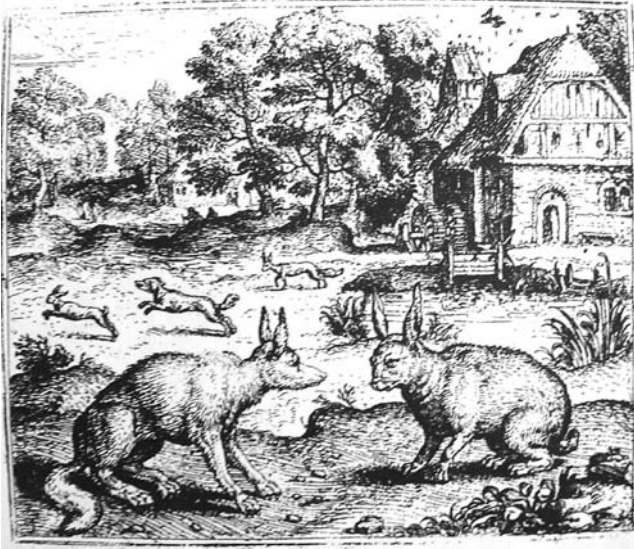


Fig. 6. Marcus Gheeraerts, engraving featuring a fox and a hare. From Eduard de Dene's *De Warachtighe Fabulen Der Dieren* (1567) 128.



Fig. 7. Jan Christoffel Jegher, woodcut featuring a fox. From Willem van der Borch's *Sedighe Sinne-beelden* [...] (Brussels: 1642) fol. H3r.

behavior, the latter maintains that all he has done was praise his friend, and surely that can't be a crime? The moral lesson connected to this fable by, for example, Vondel in his 1617 *Vorstelijcke Warande der Dieren* is that some people will even harm those who are close to them in order to avoid some sort of disadvantage themselves. In Van der Borcht's fox emblem, the writer denounces the conduct of those who play a role in order to win somebody's trust, only to betray them afterwards. He then makes the comparison 'Thus befalls the simple hare because of the fox's acting',⁴² clearly referring to the fable tradition without, however, narrating the corresponding fable, neither in the part in verse, nor that in prose. The fact that the content of the fable is merely hinted at, suggests that Van der Borcht must have supposed that his audience was familiar with it.

This form of superficial intertextuality is even more striking in the case of the emblem about the frog, in which the fable material is used more as a part of the narrative framework than as a constructive element in the moralizing process. In the fable by Aesop (and in the texts by De Dene and Vondel), featuring a frog and an ox, the general theme is that of pride. The frog notices an ox near its pond and recklessly decides to block the ox's path, inflating itself while doing so. The ox warns it to remember its place in the animal hierarchy and to stand down. But the frog ignores the ox and just keeps on inflating until it explodes. In the emblem in the *Sedighe Sinne-beelden*, however, the author does not recount the fable. Instead, he denounces the fickle nature of the frog, forever moving between water and land and thus making itself unpopular. Still, the influence of the fable text is apparent in the fact that in the emblem an ox is suddenly introduced as the authority who criticizes the frog's conduct:

The Ox once addressed the frog:
 Say, naked animal, say you who jumps, how
 Why this hopping up and down,
 At times on land, at times
 Submerged in cold water,
 Then again in the open air?

⁴² Willem van der Borcht, *Sedighe Sinne-beelden* fol. I5v: 'Sulcks kryght den slechten Haes door 't spelen van den Vôs'.

Your immense restlessness (I see) ensures
That you are loathed by all.⁴³

In the fable, the ox is a logical antagonist to the frog protagonist, rebuffing the latter's arrogance with his physical presence. In Van der Borcht's emblem, however, there is no story-internal reason to introduce the ox. Its place could be taken by just about any animal (or human for that matter). Even more than the flash appearance of the hare in the emblem about the fox, the insertion of the ox in that of the frog presents an interesting form of intertextuality. The reason for Van der Borcht's insertion of the ox (and to a lesser extent the hare) seems to be the need to provide the moral lesson with some form of authorization. The ox and the hare then represent the accumulated wisdom of the ancient fable tradition his audience would have been familiar with.

Conclusion

Each emblem in the *Sedighe Sinne-beelden* provides a combination of animal characteristics and moral lessons deduced from them, very much like the sixteenth-century emblem books by Aneau and Guérout. The woodcuts are the same as those in the 1639 *Historia medica*, which also provided much of the zoological information used by Van der Borcht. In this *Historia medica*, reference is often made to both classical and modern sources. Considering Van der Borcht's rather elaborate use of this *genotext*, it is not improbable that his frequent mentioning of 'many excellent books' or 'excellent writers' is in fact a reference to the sources cited in the *Historia medica*. But unlike in this medical encyclopedia, the emphasis in the *Sedighe Sinne-beelden* is not on the cognitive (scientific), but on the moralizing aspect. Its emblematic focus ensures that the zoological information is used as a means of conveying some kind of moral lesson, often derived from the comparison between reasonless animals and rational man.

⁴³ Willem van der Borcht, *Sedighe Sinne-beelden* fol. K3v: 'Den Os die sprack den Puyt eens toe:/ Wel naecte dier, wel springher, Hoe?/ Waer toe dit hup'le op en ne'er,/ Dan eens op d'aerde, dan eens we'er/ Gedoken onder't killigh vocht,/ Dan som wyl in de open locht?/ U groote onrust (sien ick) maect, Dat ghy van ieder zyt gelaect'.

Selective Bibliography

- ANEAU BARTHÉLEMY, *Decades de la Description, Forme, et Vertu Naturelle des Animaux, tant raisonnables, que Brutz* (Lyon: 1549).
- BORCHT WILLEM VAN DER, *Sedighe Sinne-beelden: op den aerdt der Ghepluynde, Vier-Voetighe, Waterighe, Ghekorven, (oft) Bloedeloose Dieren* (Brussels: 1642).
- , *Spiegel der Eyghen-Kennisse, Bestaende in te-saem-ghebonde Mal ende Treur-dichten* (Brussels: 1643).
- BORK G.J. VAN – VERKUIJSSE P.J., *De Nederlandse en Vlaamse auteurs van middeleeuwen tot heden, met inbegrip van de Friese auteurs* (De Haan: 1985).
- BOSSCHE WILLEM VAN DEN, *Historia medica, in qua libris IV animalium natura et eorum medica utilitas exacte et luculenter tractantur, cum iconibus eorum ad vivum delineatis* (Brussels: 1639).
- DENE EDUARD DE, *De Warachtighe Fabulen der Dieren*, ed. Goetinck M. – Le Loup W. (Roeselaare: 1978).
- ENENKEL K.A.E., “A Leyden Emblem Book: Florentius Schoonhovius’s *Emblemata partim moralia, partim etiam civilia*”, in Manning I. – Porteman K. – Vaeck M. Van (eds.), *The Emblem Tradition and the Low Countries*, Imago Figurata. Studies 1B (Turnhout: 1999) 177–195.
- GEIRNAERT D. – SMITH P.J., “Tussen fabel en emblem: *De Warachtighe fabulen der dieren* (1567)” *Literatuur* 9 (1992) 22–33.
- , “The Sources of the Emblematic Fable Book *De Warachtighe fabulen der dieren* (1567)”, in Manning I. – Porteman K. – Vaeck M. Van (eds.), *The Emblem Tradition and the Low Countries*, Imago Figurata. Studies 1B (Turnhout: 1999) 23–38.
- GUÉROULT GUILLAUME, *Second livre de la description des Animaux, contenant le blason des oyseaux* (Lyon: 1550).
- GYSEL C., “Willem van den Bossche, zijn ‘Historia Medica’ (1639) en de Tandheelkunde” *Acta Belgica Historiae Medicinae* 2 (1989) 48–53.
- HASUBEK P., “Erkenntnis und Vergnügen – Fabeldefinitionen”, in Küster C.L. (ed.), *Fabula docet. Illustrierte Fabelbücher aus sechs Jahrhunderten* (Wolfenbüttel: 1971) 9–20.
- HODNETT E., *Marcus Gheeraerts the elder of Bruges, London and Antwerp* (Utrecht: 1971).
- HOLLSTEIN F.W.H., *Dutch and Flemish Etchings, Engravings and Woodcuts. ca. 1450–1700*. (Gouda: 1949–).
- KÜSTER C.L., “Die Gedruckte Fabelillustration im 15. und 16. Jahrhundert”, in idem (ed.), *Fabula docet. Illustrierte Fabelbücher aus sechs Jahrhunderten* (Wolfenbüttel: 1971) 34–49.
- MEYER M. de., “Een spreekwoordenboek van J.C. Jegher, Antwerpen 1618–1666”, *Volkskunde* 69 (1968) 89–102.
- NAVE F. DE – SCHEPPER M. DE, *De Geneeskunde in de Zuidelijke Nederlanden (1475–1660)* (Antwerp: 1990).
- TIEMANN B., *Fabel und Emblem. Gilles Corrozet und die französische Renaissance-Fabel* (Munich: 1974).
- VAECK M. VAN, “Sixteenth- and Seventeenth-Century Dutch ‘Emblematic’ Fable Books from the Gheeraerts Filiation”, *Emblematica* 7 (1993) 25–38.
- VINCENT J.B., *Le livre, l’estampe, l’édition en Brabant du XV^e au XIX^e siècle* (Gembloux: 1935).
- VONDEL JOOST VAN DEN, *Vorstelijke Warande der Dieren*, ed. J. Becker (Soest: 1974).

FAIRE LE BEAU POUR FAIRE LA PAIX:
CONSIDÉRATIONS SUR LES BÊTES DRESSÉES
DE JOSEPH BOILLOT (1592)

Paulette Choné

Le peuple d'Athènes, après avoir bâti l'Hécatompédon, renvoya toutes les bêtes de charge qui avaient travaillé à la construction de l'édifice et les laissa paître en liberté tout le reste de leur vie.

Un de ces animaux vint un jour de lui-même se présenter au travail; il se mit à la tête des bêtes de somme qui traînaient les chariots à la citadelle et, marchant devant elles, il semblait les exhorter et les animer à l'ouvrage. Les Athéniens ordonnèrent par un décret que cet animal serait nourri jusqu'à sa mort aux frais publics.

Plutarque, *Vie de Pélopidas*.

Les égards qu'on a pour les animaux leur confèrent une dignité qui les élève, à leurs propres yeux, à un rang indéfinissable [...] Si à force de délicatesse on invite [l'animal] à entrer dans des sentiments qui le portent au-dessus de son espèce, on surprend dans ses yeux des nuances de générosité si près d'être humaines que la limite est presque franchie qui le sépare de nous et rien n'est plus troublant que cette sorte de métamorphose, j'allais dire, de transfiguration.

Marcel Jouhandeau, *Animaleries* (Paris: 1961),
157-158.

Des quadrupèdes, quelques volatiles unis dans d'étranges enlacements aux créatures, plantes et choses qui leur sont traditionnellement contraires, se sont dressés sur leurs pattes postérieures pour devenir des cariatides, ou «termes brutaux», humanisés parfois non seulement par la station verticale, mais par des harnachements extravagants, des étoffes somptueuses et des bijoux.¹ Page après page, l'enchantement des

¹ Joseph Boillot, *Nouveaux Pourtraits et figures de termes pour user en l'architecture, composez et enrichiz de diversité d'animaux représentez au vray, selon l'antipathie et contrariété naturelle de*

étreintes sauvages se répète, déployant la plaisante diversité des animaux «grans & petitz, domesticqz & sauvages». Aux bêtes colossales, éléphant, rhinocéros, taureau, succèdent les bêtes de l'équitation, de la chasse et de la maison rustique, accompagnés sur la page en regard d'une compilation fantasque de leurs propriétés, telles que les déclinent les naturalistes de l'Antiquité et leurs successeurs.² Un édifice imaginaire se bâtit, à peu près conforme à la hiérarchie des ordres architecturaux,³ couronné par une guenon et son petit. Avec ses *Nouveaux pourtraitsz et figures de termes pour user en l'architecture: Composez & enrichiz de diversité d'animaulz, représentéz au vray, selon l'antipathie & contrariété naturelle d'iceulx,*

chacun d'iceulx, par Joseph Boillot, Lengrois, contrerolleur pour le Roy au magasin et grenier a sel dudict lieu (Langres, Iehan des Prey: 1592). Voir aussi Joseph Boillot, *Nouveaux Pourtraitsz & figures de Termes pour user en l'architecture, composez et enrichiz de diversité d'animaulz representez au vray selon l'antipathie et contrariété de chacun d'iceulx* [...], réédition en fac-similé avec présentation critique, index et glossaire par Paulette Choné et Georges Viard (Paris: 1995). On se reportera en outre à la présentation rédigée par Yves Pauwels pour accompagner la mise en ligne de l'exemplaire de la bibliothèque de l'École Nationale Supérieure des Beaux-Arts (Masson 1068) sur le site du Centre d'Etudes Supérieures de la Renaissance (<http://www.cesr.univ-tours.fr/architectura>).

² Parmi les textes et auteurs anciens le plus souvent cités ou utilisés par Boillot reviennent les écrits zoologiques d'Aristote, l'*Histoire naturelle* de Pline, Élien, Galien, Dioscoride, Oppien, Diodore. Il est possible de reconstituer en partie ses lectures en étudiant sa manière de citer, et d'identifier quelques-unes des traductions dont il fait usage. Par exemple, il est certain qu'il a lu attentivement la traduction partielle par Jacques Amyot de Diodore qui venait de paraître à Paris en 1585. Il a eu entre les mains la *Guerre des Gaules* de Jules César, *l'Inde* d'Arrien, Végèce, Pausanias, Solin, Strabon, Suidas, et connaît assez bien Plutarque et Horace. Il fait allusion aux *Guêpes* d'Aristophane, à *l'Eunuque*, comédie de Térence qui se rapporte justement à la servitude. Ses emprunts aux encyclopédies médiévales et à leurs dérivés sont imperceptibles. Sa bibliothèque moderne, si l'on en juge par les auteurs qu'il cite de façon soigneuse, précise, devait être riche et variée et refléter une culture ouverte sur toutes sortes de préoccupations, sa maîtrise de lectures à la fois divertissantes et au contenu informatif dense. Il a eu recours à l'*Historia animalium* de Conrad Gesner, connaît les *Décades du Nouveau Monde* de Pierre Martyr, les *Décades asiatiques* de Joao de Barros, Mattioli dont les xylographies ont pu lui servir de modèles. Dans ses sources revendiquées figurent aussi les chroniques de Jean Carion, ou encore le *De subtilitate* de Jérôme Cardan. Il a pu être lecteur de Rabelais et, comme nous le montrons ci-après, de Montaigne et de La Boétie.

³ Mais Boillot prend avec la théorie des ordres des libertés extravagantes. Sur l'emploi de l'ordre cariatide à la Renaissance, voir Forssman E., *Säule und Ornament. Studien zur Problem des Manierismus in den nordischen Säulenbücher und Vorlageblättern des 16. und 17. Jahrhunderts* (Stockholm: 1956); Johnson E., *Studies on the Use of Hermes in XVI. Architecture* (Ph.D. New York, Fine Arts: 1963); Schmidt E., *Geschichte der Karyatide* (Würzburg: 1982); Büttner F., «Karyatiden und Perser in der italienischen und französischen Baukunst der Renaissance», dans *Intuition und Darstellung, Festschrift für Hubala* (München: 1985); Pauwels Y., *L'architecture au temps de la Pléiade* (Paris: 2002).

petit in-folio publié à Langres en 1592 par l'imprimeur Jean des Preys,⁴ Joseph Boillot a conçu l'un des plus beaux et singuliers livres illustrés de Renaissance tardive [Fig. 1]. Cet ouvrage, où se mêlent curieusement zoologie, architecture, caprice ornamental, témoigne fidèlement de la sensibilité des élites artisanales de la province française au dernier tiers du XVI^e siècle, de leurs dispositions intellectuelles et même, couvertes sous le voile de la fantaisie, de leur pensée politique. En effet, quelle justification l'inventeur trouve-t-il pour faire tenir les bêtes sur leurs appuis postérieurs, maintien que l'on ne voit ordinairement que chez certains animaux héraldiques, dans l'allégorie satirique et parfois la *grottesque*, au cirque, dans les jouets, les livres pour enfants, les dessins animés et la bande dessinée? Quel sens revêt ce «dressage», dans un ouvrage où le travestissement en caprice architectural donne au discours politique et civil une vigueur inattendue? Pour qui et quoi un animal devrait-il marcher sur deux pattes, se revêtir plus ou moins de costumes ébouriffants et «faire le beau»?

Joseph Boillot est né à Langres entre 1545 et 1550, dans une famille d'artisans du bâtiment. Il dut probablement apprendre le métier de maçon avant d'acquérir au moment des guerres de la Ligue des connaissances pratiques dans le domaine de la fortification, voire une expérience militaire. Les charges qu'il exerça, contrôleur pour le roi au magasin et grenier à sel de Langres, puis au magasin des poudres et salpêtres de la même ville, au-delà des avantages lucratifs qu'en pouvait tirer plus ou moins honnêtement un homme habile, étaient propres à stimuler curiosités et innovations techniques. Il montra son savoir-faire dans le domaine militaire, la poliorcétique, l'aménagement urbain et les décorations éphémères. Le personnage semble avoir joui d'une grande notoriété à Langres, foyer intellectuel et artistique très vivant où ne manquaient pas les figures d'ecclésiastiques érudits, de magistrats poètes et antiquaires, et où la fidélité indéfectible au roi rapprochait du parti des Politiques les milieux cultivés épris de tolérance religieuse. L'accès à l'échevinage, un patrimoine foncier sans cesse augmenté, des liens multiples avec les familles dirigeantes de la cité hissèrent Boillot bien au-dessus de la classe des artisans. Ses amitiés avec les lettrés de Langres, ses talents artistiques et son approche intellectuelle des questions tech-

⁴ Il existe des variantes dans la composition des exemplaires que nous avons consultés. Nous avons par exemple relevé six variantes du cul-de-lampe final gravé sur cuivre, un mascarone en forme de tête féminine.

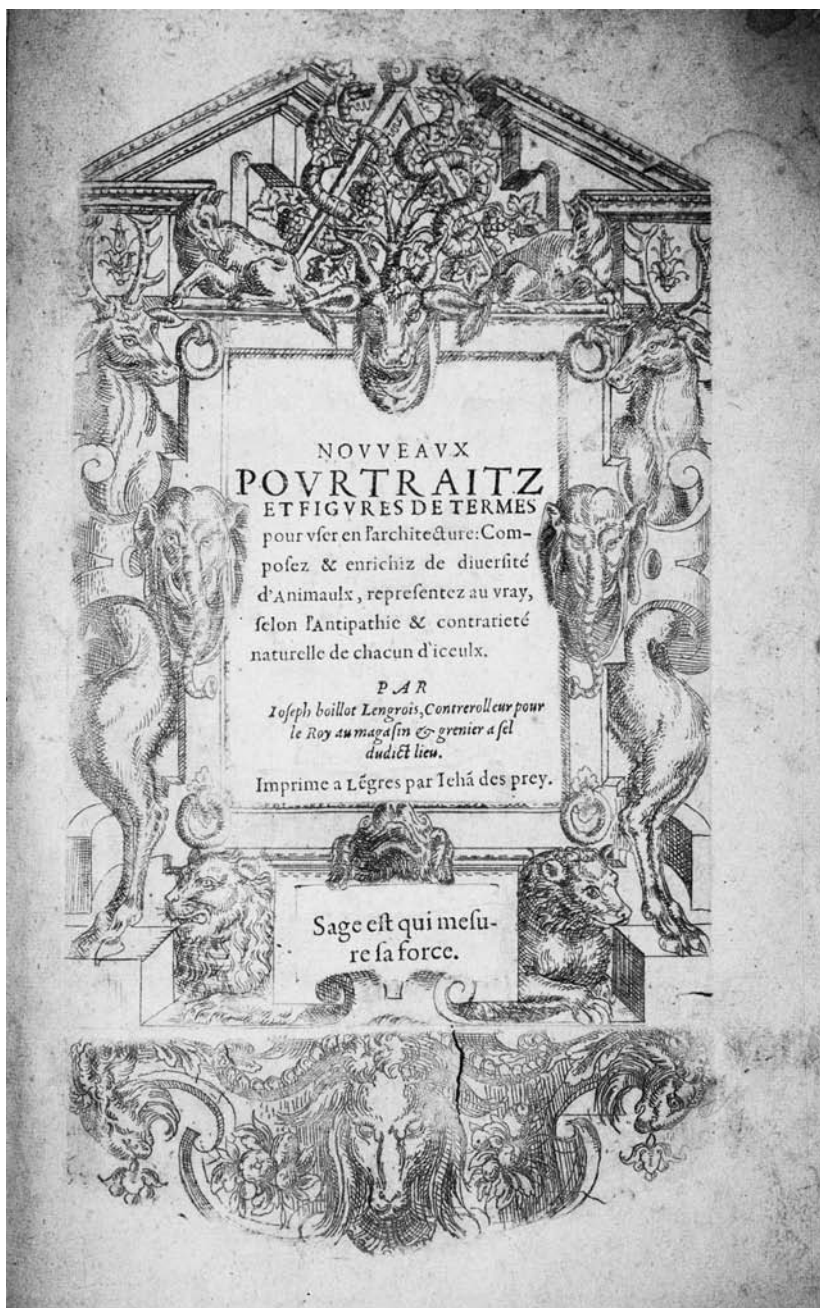


Fig. 1. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592), frontispice, taille-douce, 31.0 × 19.5 cm. Langres, Bibliothèque de la S. H. A. L.

niques transformèrent l'«ingénieur» Boillot en auteur-illustrateur. En 1598, il fit imprimer à Chaumont-en-Bassigny, chez Quentin Mareschal, son second ouvrage, un recueil de machines militaires et d'inventions pyrotechniques, *Modelles, artifices de feu* [...], un ouvrage in-4° orné de gravures à l'eau-forte réalisées par lui-même. Boillot mourut à Langres en 1605. Bien représentatif de la frange des «mécaniques doctes» qui s'était frottée aux bonnes lettres, il s'était montré capable de mobiliser et de mettre en scène ses connaissances dans une compilation originale, témoignant en outre de la fascination exercée par les ressources de l'illustration gravée. Son propos, écrit-il dans les *Modelles, artifices de feu* [...], est d'allier «les ciseaux des ouvriers» aux discours des «doctes & bien disants hystoriens». Son chef-d'œuvre, les *Nouveaux pourtraitz* [...], dédié au jeune Charles de Gonzague, gouverneur de Champagne alors âgé de douze ans constitue avec son appareil de références savantes et ses 55 planches superbement gravées (16 sur bois, 39 en taille-douce)⁵ [Figs. 2 et 3], un document exceptionnel sur l'univers intellectuel⁶ et l'imaginaire du Langrois. La fortune critique de cet ouvrage n'est pas négligeable, puisqu'il eut une traduction – ou plutôt adaptation – en allemand⁷ en 1604 et deux rééditions françaises aux XVII^e et XVIII^e siècles, chez Balthazar Moncornet⁸ et Mariette.⁹

Les *Nouveaux pourtraitz* [...] en dépit de l'apparence de délire graphique qu'ils revêtent aux yeux d'un observateur du XXI^e siècle, relèvent assurément de la tradition de fantaisie décorative parfaitement contrôlée

⁵ Boillot a dû commencer à graver sur bois et ses planches sont très réussies. Il a peut-être continué avec des gravures sur cuivre pour mieux garantir l'expressivité des figures.

⁶ Sur les sources savantes de l'ouvrage et la personnalité de l'auteur, on pourra consulter notre réédition en fac-similé (*op. cit.*) ainsi que le catalogue de l'exposition *Bêtes édifiantes. Le divertissement d'un ingénieur langrois du XVI^e siècle, Joseph Boillot*, Langres, Musée du Breuil Saint-Germain, 1995. Voir aussi Choné P., «*Les Nouveaux Pourtraits et Figures de Termes* de Joseph Boillot, à Langres en 1592», dans *Sebastiano Serlio à Lyon – Architecture et imprimerie*, sous la direction de S. Deswarte Rosa, tom. I (Lyon: 2004) 466–469. Sur l'interprétation de l'ouvrage, voir Bouvrande I., «Les termes zoomorphes de J. Boillot: étude sur le langage hiéroglyphique», *Albertiana* 5 (2002) 165–187 et en dernier lieu notre article: «L'ornement zoomorphe comme signe politique. Le recueil de Boillot (1592) et son temps», *Cahiers de l'Association Internationale des Études Françaises* 57 (2005) 21–46.

⁷ Ioseph Boillot, *New Termis Buch von allerley grossen vierfüssigen Thieren zugerichtet* [...] (s. l.: 1604).

⁸ *Livre de termes d'animaux et leurs antipaties, fort utile pour toutes sortes de personnes se meslants du dessein* (Paris, B. Moncornet: s. d.) 51 pl., In-12. Une autre édition en 1659.

⁹ *Livre de termes d'animaux et leurs antipaties, fort utile pour toutes sortes de personnes se meslants du dessein*, (Paris, P. Mariette: s. d.) 51 pl., In-12.



Fig. 2. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 21r. De l'Asne, bois. Langres, Bibliothèque de la S. H. A. L.



Fig. 3. Joseph Boillot, *Nouveaux Portraits* [...] (Langres: 1592) fol. 22r. Encores de l'Asne, taille-douce. Langres, Bibliothèque de la S. H. A. L.

qui inspire les recueils de termes de la Renaissance tardive,¹⁰ illustrée par Vredeman de Vries, Wendel Dietterlin et, plus près de Langres, par le Dijonnais Hugues Sambin, auteur de l'*Œuvre de la diversité des termes dont on use en architecture, réduit en ordre par maistre Hugues Sambin [...]*.¹¹ Il n'existe aucune preuve d'une rivalité professionnelle entre Boillot et Sambin, mais il est certain que le Langrois n'ignorait pas les réalisations de l'architecte dijonnais, et qu'il lui oppose dans son propre ouvrage une sorte de réplique burlesque, peut-être encouragée par des divergences politiques, puisque Dijon avait été ligueuse, tandis que Langres restait farouchement fidèle au roi.

Tant dans sa dédicace à Charles de Gonzague que dans la «Preface sur l'invention des termes en forme d'Animaulx. Aux Lecteurs», Boillot entreprend de justifier le plus sérieusement du monde la bizarrerie de son livre. Il s'agit, explique-t-il, d'en finir avec l'usage des termes et cariatides anthropomorphes, d'arracher enfin hommes et femmes à l'esclavage humiliant qui les ploie et les ridiculise sous de lourds entablements. Il est temps de faire servir à cela les bêtes brutes, qui ont été créées pour être assujetties à l'homme, comme l'affirme clairement l'Écriture. «Je te sers afin que tu serves celuy qui m'a fait», déclare le monde à l'homme dans *La Theologie naturelle* de Raimond Sebond.¹² Boillot se propose donc d'offrir au public «une petite nouveauté de termes», de «faire essay quelle grace elle pourroit trouver en l'architecture & maçonnerie». Suivant une convention oratoire courante, il assure avoir pris avis auprès de ses amis qui l'ont encouragé : «Et me disoient que ceste invention ou disposition de termes en forme d'animaux seroit pour sa nouveauté plutôt receue et bienvenue, que la facon ordinaire de forme humaine, laquelle quelque enrichissement qu'elle ayt, pour estre trop commune, commencera possible avec le temps d'avoir moins de crédit.» Partant d'une prémisse fort recevable, Boillot va en explorer les ultimes conséquences logiques. Si Vitruve propose de composer les temples à partir des mesures d'«un corps humain parfaitement formé»,¹³ si Sebond rappelle la perfection de la «fabrique» du corps humain, «noble architecture», «beau bastiment» à cause duquel l'homme

¹⁰ Voir *L'Emploi des ordres à la Renaissance*, Actes du colloque de Tours, 1986 (Paris: 1992).

¹¹ (Lyon, Jean Durant: 1572). Petit In-fol.

¹² *La theologie naturelle de Raymon Sebond, traduite nouvellement en françois par messire Michel, Seigneur de Montaigne [...]* (Paris, Guillaume Chaudière: 1581) fol. 99v.

¹³ *De Architectura*, III, 1.

est «tenu à Dieu»,¹⁴ alors il faut développer leurs axiomes jusqu'à la démonstration pratique. Boillot n'ignore pas qu'avec ses «termes brutaux», il contredit une longue et vénérable tradition («j'ay fondé une opinion contraire à la première»). Il s'emploie même à prévenir une objection possible : pourquoi les Anciens ont-ils employé la figure humaine dans les termes et cariatides ? Ce point lui est occasion d'un long passage sur les organes de support et même sur les «piliers sans charge», colonnes d'Hercule, colonnes votives, piloris, dont on trouve mention chez Pline et Pausanias, puis il en vient à une définition toute fonctionnelle : «Mais pour seulement prendre ce qui est de nostre propos, les piliers ou colonnes sont masses de matiere quelconque dressees debout pour soutenir faix.» Les colonnes ont évolué de la fonction à l'«enrichissement», de la force à la grâce, à la symétrie, «aux proportions avec enrichissement de corniches, feuillages, rouleaux, molures & autres petites fantaisies...» Suit alors, d'après Vitruve, l'inévitable passage sur l'origine légendaire des colonnes anthropomorphes, avec l'épisode sur l'esclavage des Perses et des femmes de Carie. Mais «cette façon de charger les figures humaines a pris commencement d'une risée & moquerie»; elle convenait aux païens, mais depuis que la Révélation chrétienne a ouvert un «âge plus humain», nous a affranchis, et que la «servitude, & captivité misérable, n'a plus de lieu entre nous», «je dis», continue Boillot, que l'on devrait cesser de «subjuguier la beauté de l'homme» à porter des fardeaux, qui sont plus convenables aux animaux, tant à cause de leur infériorité, que de leur robustesse naturelles. Si les principes de l'architecture admettent que des êtres vivants puissent être organes de support, il revient à l'architecte, qui a part à l'œuvre de Dieu, de bien les choisir ; or la nature de l'homme, c'est-à-dire à la fois sa faiblesse sur le plan physique, et sa dignité sur le plan ontologique, interdit d'utiliser la figure humaine comme cariatide.

Peu d'auteurs, avant le XVIII^e siècle, ont confronté la sujétion politique des hommes et la sujétion des bêtes.¹⁵ Moins nombreux encore ceux qui ont étendu à la forme architecturale la condamnation de l'oppression. Hegel pourtant, au terme de ses pages fascinantes sur l'architecture «symbolique» et l'emploi des formes organiques, observe comme Boillot que l'«on considère comme un mauvais emploi de la

¹⁴ *La theologie naturelle* [...] fol. 109v.

¹⁵ Voir à ce sujet Baratay E., Hardouin-Fugier E., *Zoos. Histoire des jardins zoologiques en Occident (XVI^e-XX^e siècle)* (Paris: 1998) 206 et *passim*.

forme humaine de l'accabler sous le poids de ces masses. Or, les cariatides offrent ce caractère d'oppression, et leur costume indique l'esclave condamné à porter de pareils fardeaux». ¹⁶

Cependant, l'enjeu du raisonnement du contrôleur Boillot n'est pas d'établir les conditions de la perfection classique en architecture; c'est plutôt, implicitement, la représentation, le simulacre: «Nature nous a créés d'une excellence qui mérite d'être représentée en toute chose exquisite, honorable et digne de son essence». ¹⁷ L'architecture est faite «[...] non pour représenter l'esclave & forcée servitude des hommes aux hommes, mais plus proprement des bestes aux hommes suivant la parole de Dieu, & comme observance entre les chrétiens». ¹⁸ Boillot, pour légitimer son entreprise, s'engage alors dans une réflexion sur la place respective de l'homme et des animaux dans l'ordre de la nature. Dessus ou dessous? ¹⁹ Toute son entreprise va consister à donner une expression visuelle concrète à ce point de l'Écriture. L'assise physique, si l'on peut dire, de la hiérarchie des espèces, reviendra sur le mode burlesque sous la plume de P.-J. Stahl, le complice du Grandville des *Scènes de la vie privée et publique des animaux*, dans le discours ironique du Lièvre:

Vous qui n'avez rien vu encore, vous aurez peine à le croire; mais mon ravisseur était monté sur un Cheval! C'était l'Homme qui était dessus, c'était le Cheval qui était dessous. Cela dépasse la raison animale. Que j'aie obéi plus tard à un Homme, moi, pauvre Lièvre, on le comprend. Mais qu'un Cheval, une créature si grande et si forte, qui a des sabots de corne dure, consente à se faire, comme le Chien, le domestique de l'Homme, et à le porter lâchement, voilà ce qui ferait douter des nobles destinées de l'Animal, si l'espoir d'une vie future ne venait nous soutenir, et si, du reste, le doute changeait quelque chose à l'affaire. ²⁰

Puis Stahl ajoute, pour que la satire politique qui anime tout l'ouvrage reprenne ses droits:

¹⁶ *Esthétique*, III, 1, trad. de Ch. Bénard (Paris: 1997) 57–58.

¹⁷ Joseph Boillot, *Nouveaux portraits et figures de termes* [...] «Preface».

¹⁸ Idem, «A Monseigneur».

¹⁹ Rappelons la permanence dans la langue française des expressions «frères inférieurs» (Michelet) et «frères d'en-bas» (Clémenceau) dont la généalogie est assurément indemne de connotations bibliques. Voir Ferry L. Germé C., *Des animaux et des hommes* (Paris: 1994) IV.

²⁰ *Histoire d'un Lièvre. Scènes de la vie privée et publique des animaux* (Paris: 1842); éd. citée (Paris: 1977) 48.

Mon ravisseur était un des laquais du roi. [...] Chez les Hommes, tout le monde est plus ou moins domestique, il n'y a de différence que dans la façon d'obéir.²¹

Le premier récit de la création, dans la *Genèse*, que Boillot met en valeur dans sa dédicace, donne sans aucune ambivalence la réponse à la question «Dessus ou dessous?» : «[Dieu] dit ensuite : Faisons l'homme à notre image et ressemblance, et qu'il commande aux poissons de la mer, aux oiseaux du ciel, aux bêtes, à toute la terre, et à tous les reptiles qui se remuent sous le ciel».²² Montaigne, dans les *Essais* et plus encore dans l'*Apologie de Raimond Sebond*, destinée à contrarier l'arrogance des théologiens, avait voulu démontrer que l'homme partage la loi de nature avec les autres animaux, capables eux aussi d'intelligence, selon des degrés différents. L'homme doit cesser de s'enorgueillir des prétendues prérogatives de sa raison : «Nous ne sommes ny au-dessus ny au dessous du reste.» C'est ce qu'attestent tant de tours d'habileté, de ruses, d'expédients, de stratagèmes dont les bêtes font montre, rapportés par des centaines d'*exempla* stupéfiants, un grand fatras d'anecdotes souvent savoureuses. L'homme n'a reçu ni plus ni moins que les animaux. Pour soutenir l'équivalence entre toutes les créatures, Montaigne va jusqu'à écarter le motif pessimiste développé par Protagoras, Aristote et Lucrèce de l'homme né abandonné, nu et sans défense sur la terre. Il n'est aucune des capacités humaines que l'animal ne partage d'une manière ou d'une autre, et parmi elles, il faut même ranger, sinon la station érigée, du moins les yeux tournés vers le ciel. «Notre stature droite» ne nous singularise nullement, c'est tout au plus un trait relevé par les poètes, Ovide par exemple.

[...] car il y a plusieurs bestioles qui ont la veüe renversée tout à fait vers le ciel; et l'ancoleure des chameaux et des austruches, je la trouve encore plus relevée et droite que la nostre.

Quels animaux n'ont la face au haut, et ne l'ont devant, et ne regardent vis à vis comme nous, et ne descouvrent en leur juste posture autant du ciel et de la terre que l'homme?²³

Étrangement, les exemples font ici défaut à Montaigne, mais ceux qui lui viennent, d'animaux aux yeux dirigés vers le haut, préfigurent l'une des planches les plus remarquables de Boillot, montrant le cheval qu'enlace son ennemie naturelle l'autruche [Fig. 4]. Car le stratagème

²¹ Ibidem 48–49.

²² I 26. Trad. de Lemaître de Sacy.

²³ Montaigne, *Essais* II 12, dans idem, *Œuvres complètes* (Paris: 1962) vol. II 463.



Fig. 4. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 14r.
Du Cheval, bois. Langres, Bibliothèque de la S. H. A. L.

sceptique qui prétend opposer des histoires de bêtes aux démonstrations rationnelles se rencontre inévitablement avec la doctrine des sympathies et antipathies naturelles, et avec les théories sur la paix et la guerre.

Quant au *Discours de la servitude volontaire* d'Étienne de La Boétie, dont il est vraisemblable que Boillot ne l'a pas ignoré, son propos n'est pas de critiquer la vanité ontologique de l'homme, mais de démontrer que la liberté est naturelle. Son auteur n'avait pas besoin de convoquer autant d'apologues cyniques. Mais il liait de manière encore plus explicite que Montaigne la conscience de l'oppression dans les sociétés humaines et la réflexion philosophique sur la place des animaux dans la hiérarchie des êtres.

Il faudra que [...] je monte par manière de dire les bestes brutes en chaire, pour vous enseigner votre nature et condition. Les bestes ce maïd'Dieu, si les hommes ne font trop les sourds, leur crient, vive liberté.²⁴

Si La Boétie invite lui aussi des *exempla* zoologiques dans sa démonstration, c'est dans un long passage sur la «naturelle franchise» des animaux. Des «dits» merveilleux sur le comportement de l'éléphant, du cheval, du bœuf, des oiseaux, montrent à quel point ils tiennent à leur liberté, même si leur destinée n'est pas dans le libre commerce de la vie sociale, dont le langage offre la possibilité et le modèle.

Boillot, qui ne croit pas en la liberté des bêtes, exhibe au contraire leur vocation de bêtes de charge, manifeste surtout au début de l'ouvrage, lorsque les plus robustes d'entre elles sont associées à l'ordre rustique et à l'ordre toscan, dans une distribution il est vrai un peu aléatoire [Fig. 5]. Seul l'homme est libre; le principe de l'exclusivité de la liberté humaine réside dans la hiérarchie des êtres, voulue par Dieu, et la connaissance de soi et de Dieu s'accroît par la considération des créatures qui sont au-dessous de nous, dont la prodigieuse diversité témoigne de la puissance divine. Les deux auteurs divergent donc là-dessus, mais les résonances du grand livre de La Boétie avec les extravagances plastiques de Boillot sont saisissantes. La métaphore du «grand colosse»²⁵ tenant grâce à de robustes organes de support, qui sert chez La Boétie à représenter le corps social tout entier et sa hiérarchie fondée sur l'humiliation, appelle l'image de soutiens formidables constitués par des bêtes de charge. Or celles-ci, bien que destinées par nature à être au service de l'homme, supporteront-elles sans broncher l'oppression?

²⁴ La Boétie, *Discours de la servitude volontaire*, éd. Clastres, 120.

²⁵ Elle rappelle le songe de Nabuchodonosor du colosse aux pieds d'argile (*Daniel*, II).

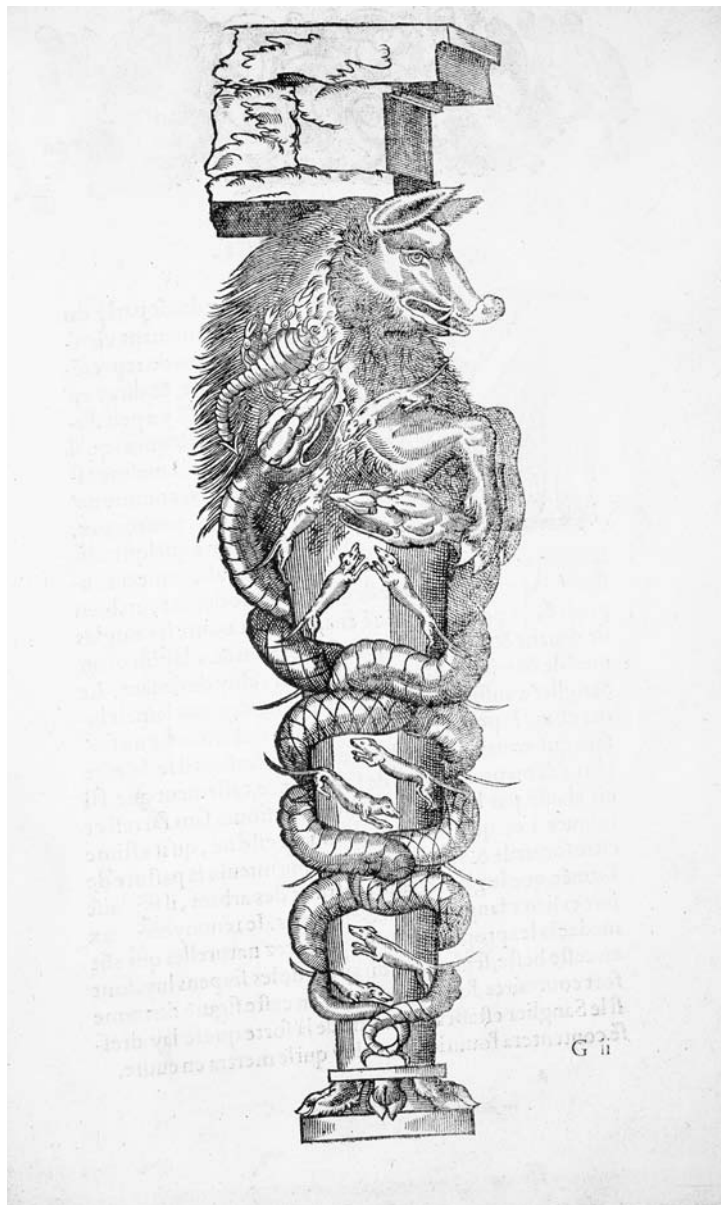


Fig. 5. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 43r.
Du Porc, bois. Langres, Bibliothèque de la S. H. A. L.

[...] et de tant d'indignités que les bestes mesmes ou ne les sentiroient point, ou ne l'endureroient point, vous pouvés vous en delivrer si vous l'essaiés [...] Soiés résolu de ne servir plus, et vous voilà libres; je ne veux pas que vous le poussies ou l'esbranlies, mais seulement ne le soutenés plus, et vous le verrés comme un grand colosse a qui on a desrobé la base, de son pois mesme fondre en bas à se rompre.²⁶

Puisque les bestes, qui ancore sont faites pour le service de l'homme, ne se peuvent accoustumer a servir, qu'avec protestation d'un desir contraire: quel mal rencontre a esté cela, qui a peu tant denaturer l'homme, seul né de vrai, pour vivre franchement; et lui faire perdre la souvenance de son premier estre, et le desir de le reprendre.²⁷

La question de la servitude est à ce point centrale dans l'entreprise de Boillot que le sonnet que lui dédie son ami le magistrat lettré Pierre Constant, placé en tête des *Nouveaux pourtraitz* [...], désigne tout l'ouvrage comme une vaste fabrique de la liberté humaine :

[...] le but de ton estude,
Qui est de retirer l'homme de servitude.

À bonne distance de l'argumentation provocatrice de Montaigne dans l'*Apologie de Raimond Sebond*, Boillot entend bien sauver l'excellence de la nature de l'homme, la dignité de sa condition, sa vocation à vivre en bon compagnon avec ses semblables dans des sociétés organisées par la raison. Dans cette conviction, il estime insupportable non seulement la servitude forcée, mais même sa représentation et ses symboles.²⁸

Les animaux en feront les frais, mais comment? Il ne saurait être question, chez Boillot, de les «libérer», puisque Dieu et la nature les ont voulus inférieurs. L'époque est encore bien lointaine où Balzac, lui aussi associé à Grandville dans les *Scènes de la vie privée et publique des animaux*, assurera avoir commencé à écrire «un traité politique à l'usage des classes ouvrières animales, afin de les engager à ne plus tourner les broches, ni se laisser atteler à de petites charrettes».²⁹ Au contraire, ce sont les bêtes qui vont dans le recueil du Langrois prendre la place des esclaves, eux-mêmes substitués des colonnes, par un mouvement qui est bien, partiellement au moins, celui du «monde à l'envers». Les bêtes, il est vrai, ne sont pas tout à fait à contre-emploi dans l'architecture, qui ne

²⁶ La Boétie, *Discours de la servitude volontaire*, éd. Clastres, 116–117.

²⁷ Ibidem 122.

²⁸ Sur ce point, voir notre article «L'ornement zoomorphe comme signe politique».

²⁹ *Peines de cœur d'une chatte anglaise. Scènes de la vie privée et publique des animaux* 102.

s'est jamais privée des ornements «organiques» empruntés au bestiaire, tels que bucranes, mufles, etc. L'effet de «monde à l'envers», obtenu par le travestissement des bêtes et leur transformation en bipèdes – ou plutôt en bustes engainés de bipèdes –, est ici essentiel à une démarche qui veut surprendre le lecteur et peut-être provoquer sa réflexion sur la liberté. L'animal ne s'humanise pas pour être affranchi, mais pour aider l'homme à penser la condition des êtres libres.

Ce résultat n'est obtenu que grâce à des moyens plastiques extraordinaires. Le plus spectaculaire consiste à donner aux bêtes une contenance dressée. Sur l'effet saisissant qu'elle peut produire en général, le romancier anglais G.K. Chesterton a ce mot à propos d'un cheval attelé soudain effrayé par une ombre : «L'un des chevaux se dressa de toute sa hauteur – la hauteur terrifiante et titanique d'un cheval qui devient un bipède». ³⁰ Les bêtes de Boillot, elles, ne sont jamais terrifiantes ; même les fauves ont quelque chose de débonnaire et d'irrésistiblement drôle. À proprement parler, d'inqualifiable.

Boillot, en choisissant d'ériger magistralement les éléphants, les tigres, les loups, les moutons et bien d'autres, fait montre d'une originalité audacieuse : assumant la servitude à la place de l'homme, l'animal s'empare de la station verticale. La vraie supériorité de l'homme, suivant le sceptique Pierre Charron, réside dans «sa belle et droite forme», ³¹ non dans le fait qu'il commande aux bêtes et qu'elles lui obéissent, tandis que les bêtes n'asservissent jamais les bêtes. La station verticale ne joue pas un rôle de premier plan chez les naturalistes et les philosophes de la nature humaine. Aristote, attaché qu'il est à estomper les discontinuités de l'échelle de nature, n'en fait nullement un moyen de caractérisation de l'homme, et les auteurs chrétiens d'encyclopédies l'ont suivi sur ce point. En mimant ce trait parmi d'autres de l'excellence humaine, les animaux des *Nouveaux Pourtraits* [...] s'approprient une apparence, non une essence. En se dressant comme des bipèdes, en se servant parfois de leurs antérieurs comme de mains, ils ne réalisent pas l'accomplissement de l'essence, mais l'actualisation du possible. Or le possible, dans le monde physique, n'est pas le concevable mais le réalisable. Et la réalisation, dans l'ordre physique, trouvera sa plus haute expression dans l'architecture.

³⁰ *La sagesse du Père Brown*, traduit de l'anglais (Paris: 1954); éd. citée (Paris: 1996) 35.

³¹ Pierre Charron, *De la sagesse* (1606). Cité par Fontenay E. de, *Le silence des bêtes. La philosophie à l'épreuve de l'animalité* (Paris: 1998) 360.

Mais comment contraindre les animaux à adopter la station verticale ? «Je les ai accompagnés de quelque contraire, animal ou plante», répond l'ingénieur langrois. Ce problème «pratique» trouve donc sa réponse dans le principe des antipathies ou dispathies naturelles, essentiel dans la physique et la magie traditionnelles ; c'est lui qui contraindra les bêtes à garder une contenance dressée, ce que Boillot exprime en termes politiques plutôt que physiques : «tenir bon et résister». La manière dont il a construit sa réflexion sur les antipathies mérite quelques observations. Soucieux partout ailleurs d'exhiber ses sources livresques, et parfois de les manipuler habilement, sur ce sujet le Langrois ne mentionne pas une seule fois les grands auteurs du XVI^e siècle qui l'ont longuement médité, ni le médecin Jean Fernel qui commente l'affrontement de la maladie et du remède dans *Les sept livres de la therapeutique universelle*,³² ni le colloque d'Érasme *De amicitia* qui est entièrement consacré aux antipathies, ni les chapitres VIII et IX de la *Magie naturelle* de Giambattista Della Porta, traduit en français en 1557,³³ ni Ambroise Paré qui narre avec vivacité tant de faits pittoresques dans le livre I de ses *Œuvres*, traitant longuement «Des Animaux, & de l'excellence de l'homme».³⁴ Le cas d'Ambroise Paré peut être mis à part, car aucun autre auteur n'a un discours plus voisin de celui des *Nouveaux pourtraitz* [...] Le chapitre 21 du livre II intitulé «De l'Antipathie, & sympathie», qui commence par un hommage explicite au *De Amicitia* d'Érasme, contient une étourdissante énumération de cas pris dans tous les ordres du vivant. Avait-il lu les réflexions du grand médecin sur ce qui fait de ces conflits animaux le plus grand des spectacles ? Paré reconnaît l'émerveillement que procure la vue de ces combats endiablés. Ces phénomènes, par leur occulte raison, sont «choses remarquables [...] cachées desquelles la conjecture et pensée de l'humain entendement ne peut fureter et declarer les causes, ny les comprendre [...] Au moyen dequoy plustot on les doit admirer que rechercher sa confusion :car elles sont seulement conneües de l'incomprehensible puissance de Dieu».³⁵

³² (Paris, Jean Guignard: 1555) 5 (sur les contraires et les opposés).

³³ *La Magie naturelle. Qui est, Les secrets & miracles de Nature, mise en quatre Livres, par Jean Baptiste Porta, Neapolitain* (Paris, Nicolas Loyselet: 1557). Le frontispice des *Nouveaux pourtraitz* [...] s'inspire à l'évidence de celui du *De humana physiognomoniam* (Vico Equensis: 1586) avec ses cuirs encadrant des têtes de quadrupèdes.

³⁴ *Les Œuvres d'Ambroise Paré [...] divisées en 27 livres, avec les figures et portraits, tant de l'anatomie que des instruments de chirurgie, et de plusieurs monstres* (Paris, G. Buon: 1575). In-fol.

³⁵ Ibidem.

Boillot a fort bien pu s'en servir sans le citer, pratique dont il est coutumier. Il semble d'ailleurs avoir préparé la rédaction de son ouvrage au moyen d'un recueil d'une sélection d'*exempla* réunis au cours de ses lectures; derrière le texte définitif, on devine la présence d'un compendium manuscrit où à des citations exactes se sont mêlées des passages controuvés et des souvenirs hétérogènes.

Il semble avoir puisé sans réserve dans le chapitre des «inventions merveilleuses» du *De subtilitate* de Cardan,³⁶ dont il a pu méditer les nombreux exemples et la philosophie, fondée sur une réduction rationaliste de la merveille à sa composante physio-physiologique. Par exemple, si la peau d'une brebis déchirée par le loup provoque un prurit, c'est bien entendu en vertu de la «nature contraire» des deux animaux, mais plus certainement encore à cause de la terreur inspirée à l'homme par le fauve. Mais Boillot a pu s'approprier la mention par Cardan des «cordes des agneaux qui sonnent mal, quand celles du loup sont touchées», l'idée suivant laquelle l'antipathie entre le Loup et le Mouton se manifeste par une dysharmonie s'exerçant à distance [Fig. 6]. Chez Cardan, la preuve du «consens» et de l'«inimitié» des choses est donnée par leurs effets psychosomatiques, dont la notion d'une musique discordante n'est peut-être guère que le symbole, plutôt que par la croyance vraie en la «magie douce» des qualités. Ailleurs, Cardan observe que sympathie et concorde procurent objectivement un surcroît de force; il applique cette remarque à un aspect de la physique des charges qui pouvait intéresser l'ingénieur Boillot: on a plus de force en ayant un homme sur les épaules. Antipathie et discorde au contraire sont débilitantes. À l'inverse, nous avons vu que Boillot croit en la vertu roborative de l'antipathie, principe de résistance et de maintien érigé chez les bêtes. C'est le dissentiment maîtrisé qui fortifie.

Les *Nouveaux pourtraitsz* [...] s'attachent donc à présenter une assez ample compilation des auteurs anciens et modernes qui ont traité des antipathies naturelles. À côté des naturalistes, Boillot n'a pas hésité à convoquer historiens, géographes et voyageurs, poètes, dramaturges et moralistes. Sa collecte faite, il s'est efforcé d'ordonner un ensemble de faits disparates dans de brefs chapitres correspondant chacun à un animal. Son discours hésite entre la narration, la description des planches en regard, la compilation érudite à laquelle il emprunte cependant

³⁶ *Les Livres de Hierome Cardanus medecin milannois, intituléz de la Subtilité, & subtiles inventions* [...] Traduis du Latin en François, par Richard Le Blanc (Paris, Claude Micard: 1566).

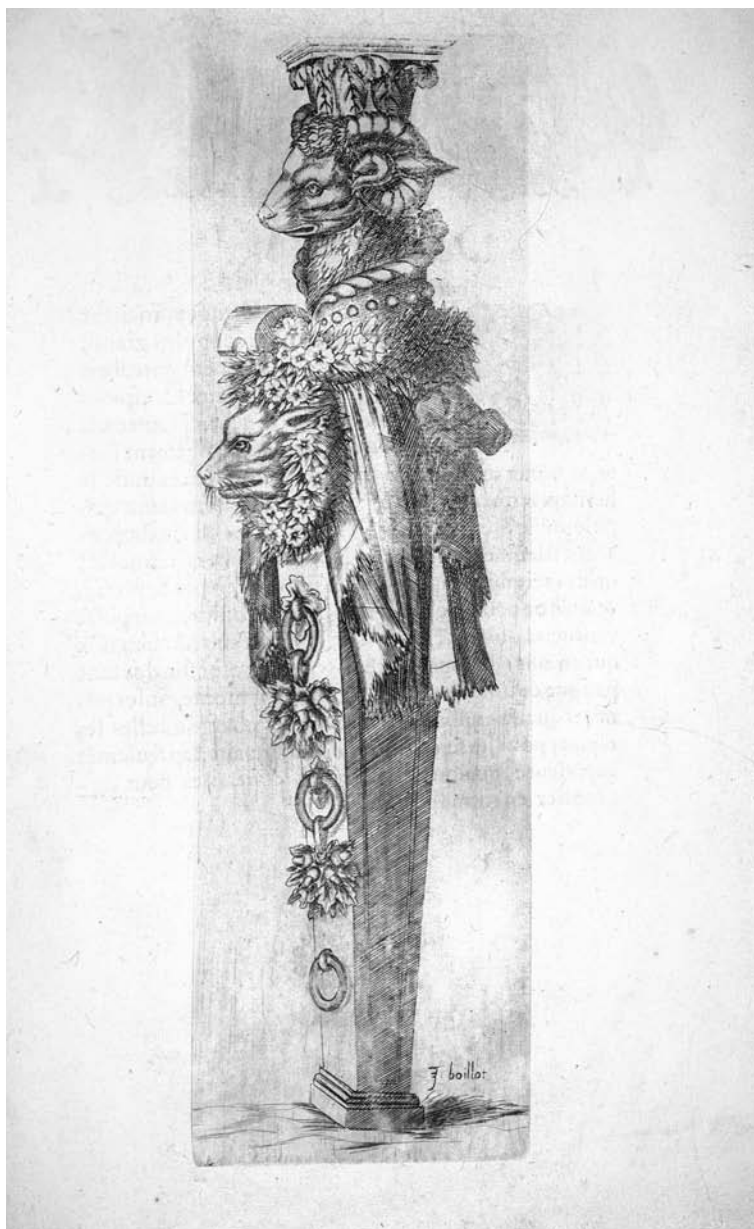


Fig. 6. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 58r.
Du Mouton, taille-douce. Langres, Bibliothèque de la S. H. A. L.

l'usage des références marginales, très abrégées et parfois inexactes, même si l'on fait la part des maladroites typographiques nombreuses de l'imprimeur. Quoi qu'il en soit, on retiendra sa volonté de paraître adosser son travail à un petit appareil de références savantes, volonté qui n'est ni infallible ni constante, puisque par exemple il néglige de mentionner les *Cynégétiques* d'Oppien, le célèbre poème sur la chasse aux quadrupèdes traduit en français en 1575, à propos du passage sur les deux espèces de lynx dont il s'inspire pourtant de très près [Fig. 7].

Son ouvrage confirme l'importance et l'actualité, à la fin du XVI^e siècle, d'un thème dont le succès éclate d'ailleurs dans des pratiques comme celles des combats entre espèces organisés dans les milieux aristocrates et princiers, dont le plus fameux avait été en 1515 celui du rhinocéros et de l'éléphant à Lisbonne devant le roi Manuel de Portugal, que Boillot mentionne [Fig. 8]. Les antipathies naturelles sont aussi omniprésentes dans la zootechnie, l'élevage, les techniques de chasse. Assurément, Boillot les connaît à la fois sur le mode livresque et en propriétaire rural. Le Champenois parle avec simplicité de la fonction prophylactique du Bouc dans les écuries [Fig. 9], des qualités du Chien [Fig. 10], des ruses du Renard [Fig. 11], des mœurs du Sanglier, et s'il lui arrive d'en appeler aux *Hiéroglyphiques* d'Horapollon pour évoquer le Cerf, il n'en est pas moins évident qu'il le représente deux fois [Figs. 12 et 13] avec la familiarité que donne une approche naturaliste. Les images des espèces qui se rencontrent dans nos régions tempérées sont les seules à tenir la promesse du titre, d'une représentation «au vray», car les animaux exotiques sont des interprétations libres de l'iconographie conventionnelle; les illustrations du *De Quadrupedibus viviparis* de Conrad Gesner,³⁷ par exemple, ont procuré des modèles directs à l'auteur des *Nouveaux Pourtraitz* [...].

À sa mesure et avec son bagage de connaissances plus désordonné qu'éclectique, muni de son imagination très visuelle, Boillot donne sa version de la question des «mystérieuses répugnances» partout présentes dans la nature, et la hisse jusqu'à ses implications éthiques et politiques.

Les antipathies naturelles relèvent de la merveille. Boillot n'est pas si éloigné de Pierre Boaistuau qui montrait dans son *Bref Discours de l'Excellence et Dignité de l'Homme* comment la vie animale manifeste

³⁷ (Zurich, Christoffel Froschauer: 1551). Voir en particulier le Chameau et le Porc-Epic.



Fig. 7. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 53r.
Du Lincx, taille-douce. Langres, Bibliothèque de la S. H. A. L.

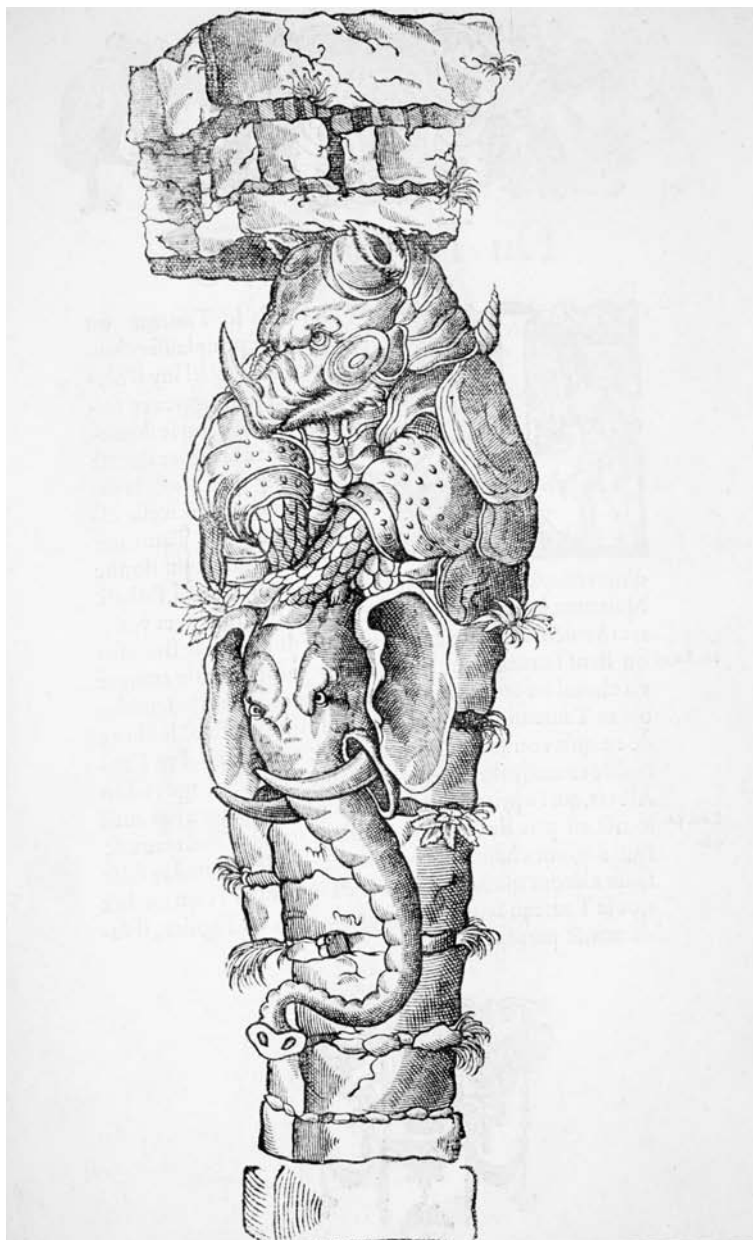


Fig. 8. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 9r.
Du Rhinocerot, bois. Langres, Bibliothèque de la S. H. A. L.

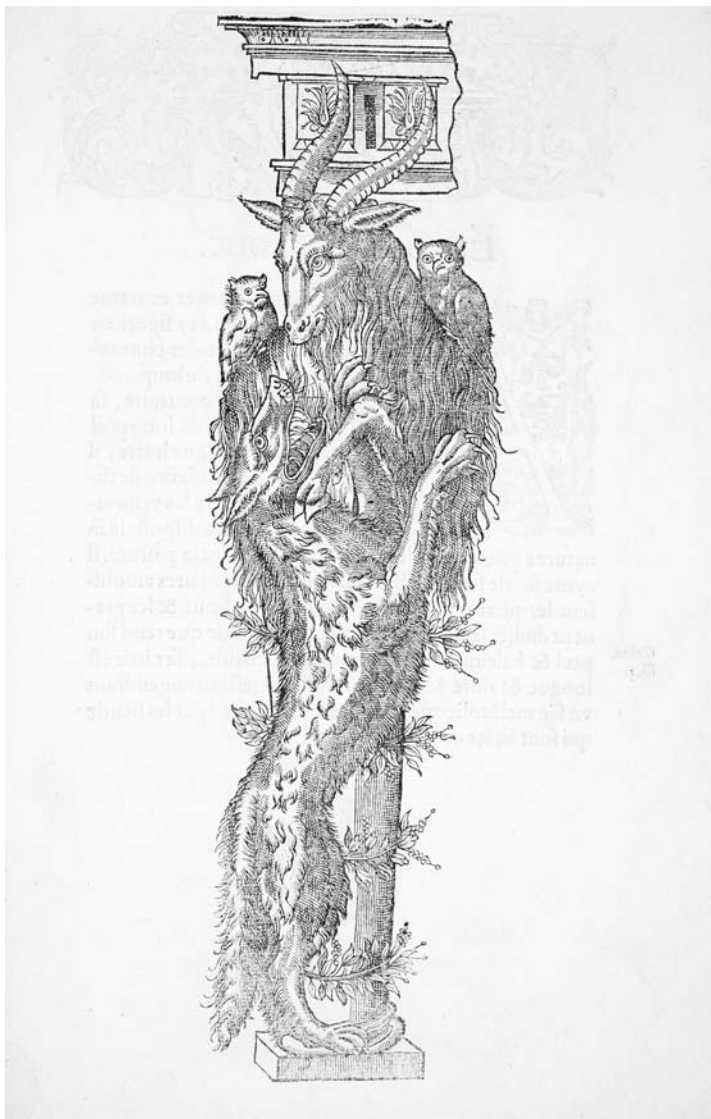


Fig. 9. Joseph Boillot, *Nouveaux Portraits* [...] (Langres: 1592) fol. 45r.
Du Bouc, bois. Langres, Bibliothèque de la S. H. A. L.



Fig. 10. Joseph Boillot, *Nouveaux Portraits* [...] (Langres : 1592) fol. 56r.
Du Chien, taille-douce. Langres, Bibliothèque de la S. H. A. L.

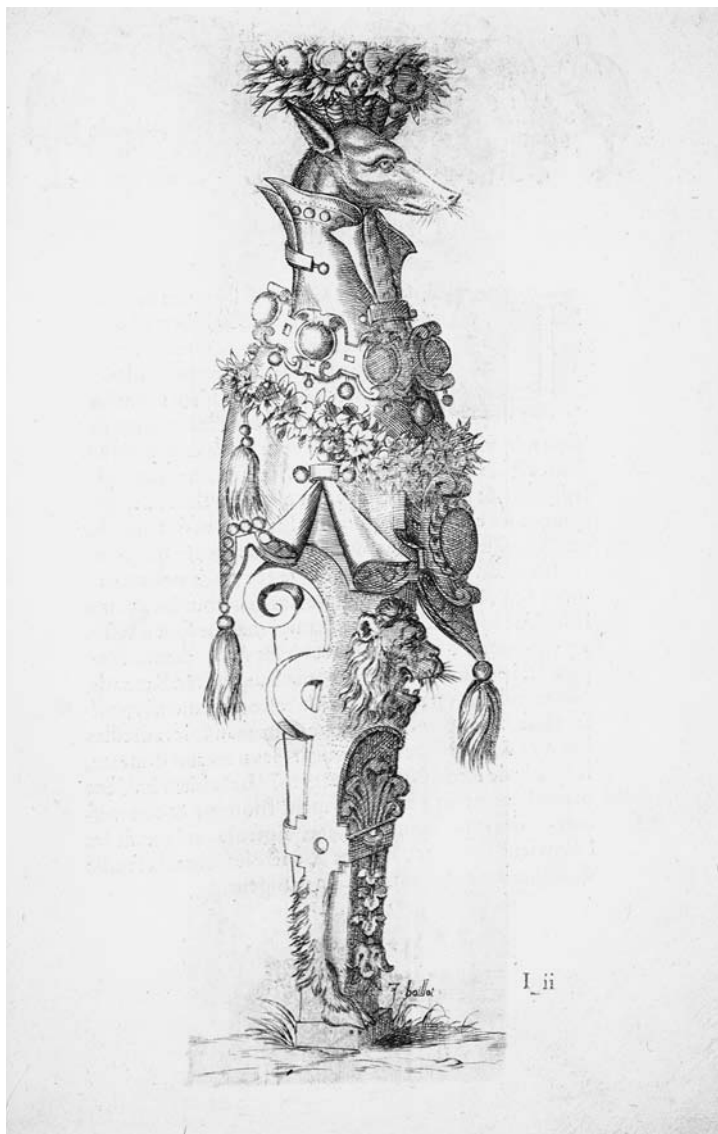


Fig. 11. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 55r.
Du Renard, taille-douce. Langres, Bibliothèque de la S. H. A. L.

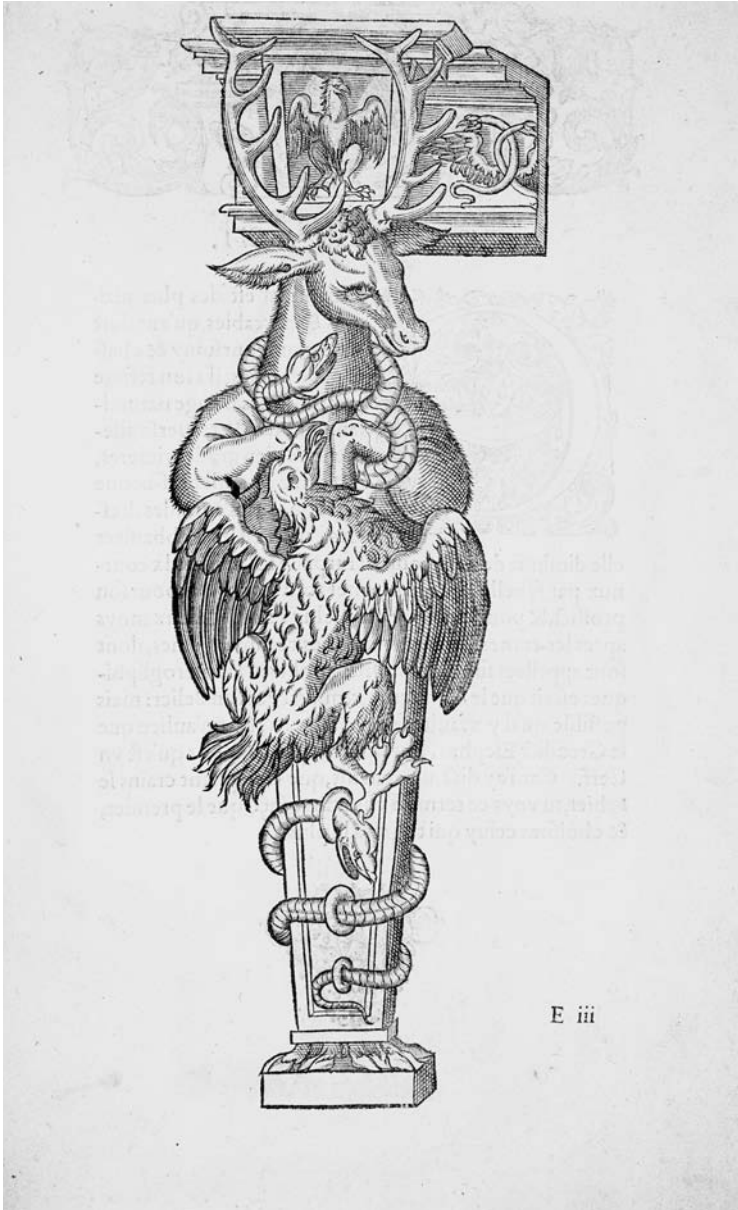


Fig. 12. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 32r.
Du Cerf, bois.

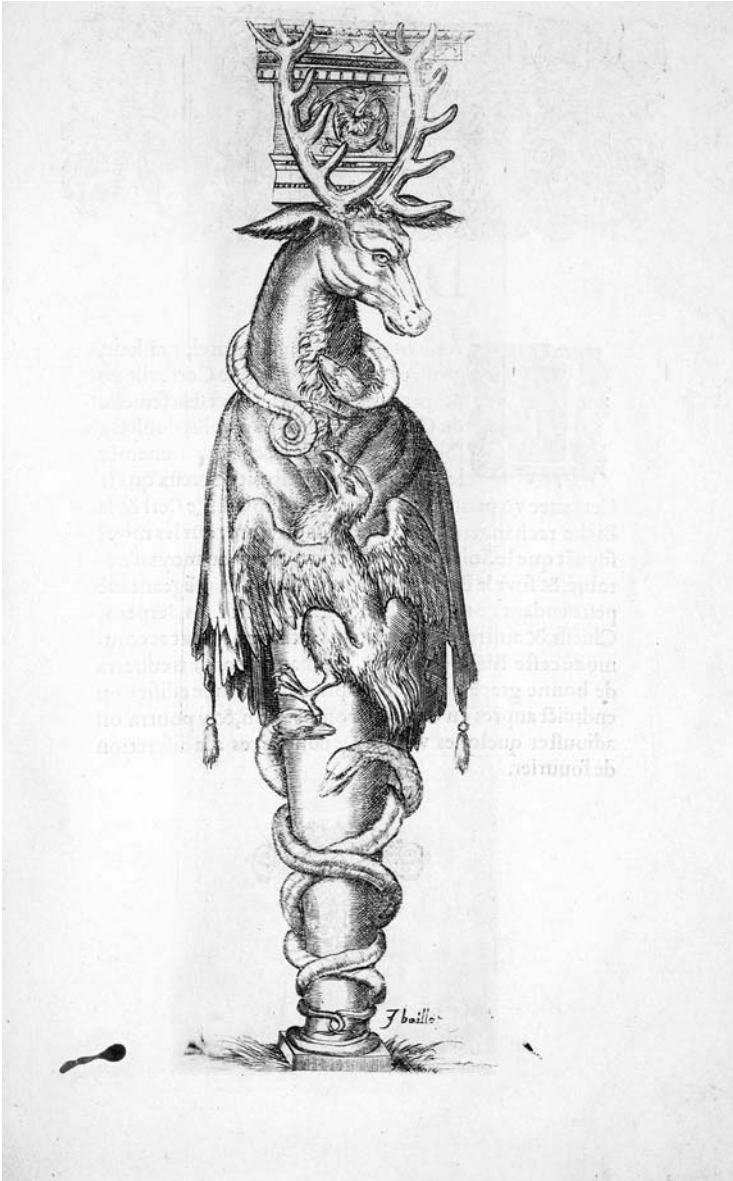


Fig. 13. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 33r. Encores du Cerf, taille-douce. Langres, Bibliothèque de la S. H. A. L.

obscurément les règles dont l'homme avait disposé avant la Chute, lui permettant ainsi de découvrir la discipline morale naturelle cachée au cœur des mœurs et qualités des bêtes jusque dans leurs affrontements. La contemplation de leurs «mœurs et actions» et des quelques «parties de vertu qu'ils exercent» peut permettre à l'homme d'accéder à la connaissance de soi. Il est tentant d'attribuer à Boillot une intention didactique radicalement profane, car sa considération des antipathies élimine toute référence aux similitudes tirées de l'Écriture. La planche par laquelle se clôt le recueil, *Du Singe*, exhibe une guenon tenant étroitement son petit – elle annonce curieusement certaines inventions de Picasso –, au-dessus d'un croissant de lune et d'un linge où est imprimée la face d'un lion; les raisons alléguées pour justifier ces deux motifs sont empruntées aux naturalistes, qui assurent que le singe est mélancolique lorsque la lune décroît, et que sa chair est bonne pour le lion quand il est malade [Fig. 14]. Cependant, cette représentation du Singe ne laisse pas de causer un étrange malaise, car il est impossible de n'y pas voir une parodie de l'image de la Vierge à l'Enfant, tandis que le croissant de lune évoque l'Immaculée Conception et que l'effigie léonine transforme et transgresse la Sainte Face. Cette dernière planche est la plus énigmatique du recueil. Elle invite à se souvenir que Boillot, dans sa *Preface*, prie les lecteurs de «prendre patience de lire jusques au bout», et de se méfier des passions qui interfèrent dans la sérénité du jugement que l'on porte sur un ouvrage. Certes, c'est une convention rhétorique qui amène un auteur à prévenir la sévérité des censeurs, mais cette formulation ne visait-elle pas à attirer l'attention sur le dernier chapitre, où la subversion des icônes les plus vénérées de la foi catholique s'étale, exorbitante et tranquille, en regard de cette ultime dénégation :

La subtilité & gaillardise des ouvriers suppléera a ce qui est du deffault tant en ce terme que aux aultres, n'estant icy mon intention de représenter rien davantage qu'[u]ne nouveauté & diversité de termes affin d'esteindre & oster la façon vielle qui asservissoit l'homme a porter telz faix & charges laquelle ne luy appartient, mais plus proprement aux bestes brutes.

Éphorin et Jean, les deux personnages mis en scène par Érasme dans le *De Amicitia*, ne trouvaient dans le spectacle des dispathies naturelles qu'une règle en vue d'une vie bonne : «Ne se lier qu'avec ceux pour qui on est pris d'une affection intuitive.» Boillot va beaucoup plus loin. Il se souvient peut-être de la *Complainte de la Paix* dans laquelle l'humaniste bâlois invitait le chrétien à méditer sur les luttes animales : les



Fig. 14. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 61r. Du Singe, taille-douce. Langres, Bibliothèque de la S. H. A. L.

guerres animales entre espèces différentes sont conformes à la volonté divine; dans les luttes pour la survie le monde animal obéit à Dieu et les animaux ont pour unique refuge la parole divine, garantie de paix. Tandis que l'homme se plaît à dénigrer chez eux les instincts de la brute, ils manifestent en réalité l'équilibre naturel conforme au dessein divin. Alors qu'il se divertit des animaux serfs, l'homme s'est lui-même privé de la liberté des enfants de Dieu en cherchant à transgresser ses propres limites. Le recueil de termes de Boillot devient donc l'occasion d'une méditation sur la borne, le *terminus*, à propos duquel on ne manquera pas de se souvenir de la devise d'Érasme. Les animaux dressés sur leurs pattes postérieures s'aventurent jusqu'aux frontières de leurs possibilités physiques, en explorent les virtualités dans leur maintien et leurs déguisements, sans les transgresser par la monstruosité ou l'assemblage fantastique.

Dans la vision de Boillot, la considération de l'harmonie des contraires qui régit le règne animal est source de sagesse pour l'homme. L'édifice qu'il bâtit, supporté tout entier par des bêtes brutes affrontées, est un bâtiment de paix. Affrontements ou à l'inverse étreintes, intimes mixtions? De ces conflits émane curieusement le grand secret de l'union des contraires, de la *concordia discors*.

Le Taureau sauvage assailli à la fois par le Crocodile et le Lion, environné des feuilles de figuier qui l'«adoucissent» et lui font «perdre sa férocité», garde une mine imperturbable, voire teintée de bénignité [Fig. 15]. Le Cheval, connivent, glisse son encolure près de celle du bienveillant Chameau [Fig. 16]. Le Bouc semble vouloir poursuivre avec le Loup féroce une conversation pacifique, tandis que deux petites chouettes, pourtant «a luy fort contraires», se sont perchées aimablement sur ses épaules, et que des feuilles de basilic s'enroulent autour de la gaine [Fig. 9]. Parfois, l'animal, la plante ou la substance contraire n'est figurée qu'allusivement, ou sur le mode ornemental, ou encore redoublée avec humour, sous la forme d'une épaulière, d'un mascarón, d'une guirlande [Fig. 17]. L'usage de procédés relevant d'une rhétorique raffinée des images, qui contraste si fort avec les planches les plus chargées de poésie sauvage, tient assurément à la lenteur d'une réalisation qui avait été interrompue, Boillot le rappelle, par les guerres de la Ligue. Certaines planches en taille-douce, où le parti «architectural» est à peine un souvenir, trahissent peut-être ici et là une fatigue de l'inspiration de l'auteur, confronté à la nécessité de maintenir son énumération des principaux quadrupèdes et de diversifier son invention à l'intention des «ouvriers». Mais la présence de délicats motifs

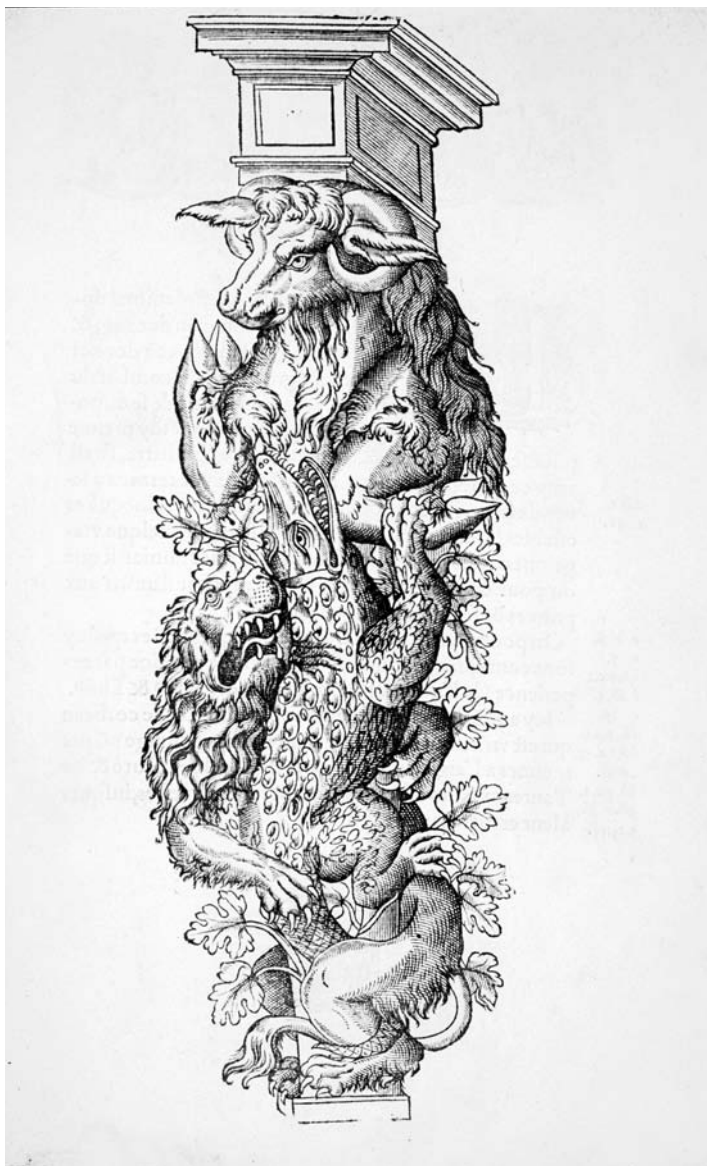


Fig. 15. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592)
fol. 10r. Du Taureau sauvage, bois. Langres, Bibliothèque de la
S. H. A. L.

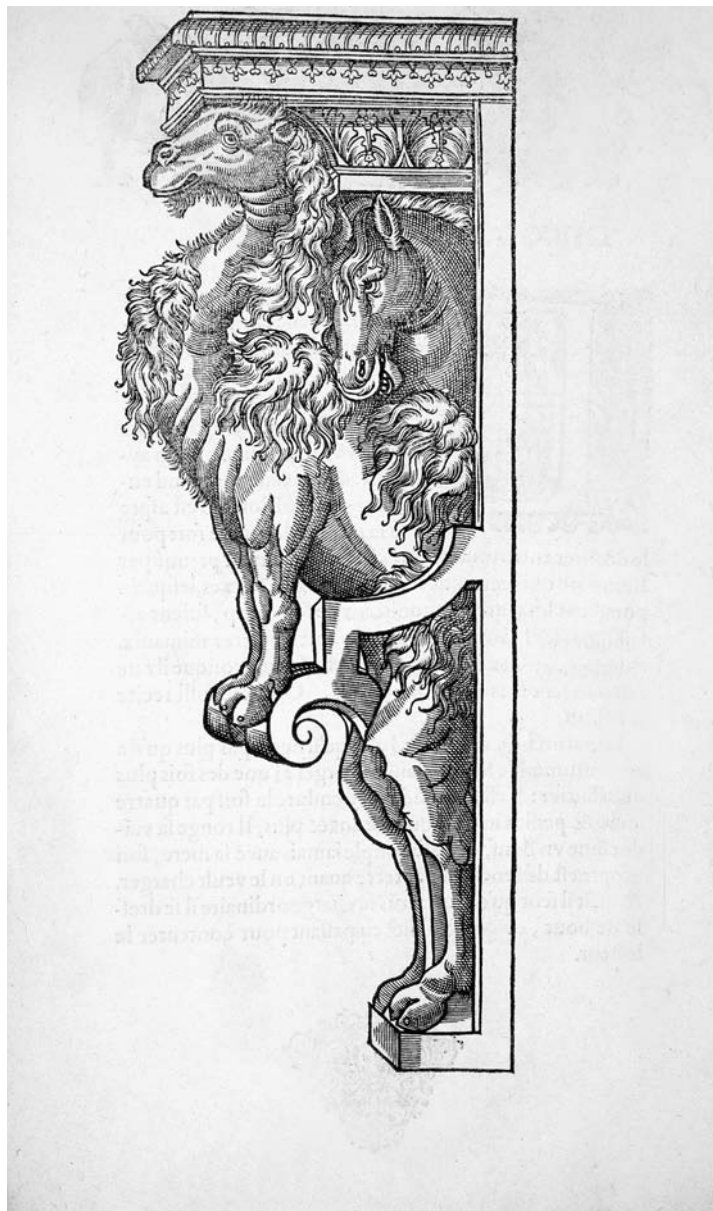


Fig. 16. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 16r.
Du Chameau, bois. Langres, Bibliothèque de la S. H. A. L.



Fig. 17. Joseph Boillot, *Nouveaux Pourtraits* [...] (Langres: 1592) fol. 26r.
Du Lion, bois. Langres, Bibliothèque de la S. H. A. L.

végétaux traduit aussi un sentiment fort vif des puissances agissantes de la magie naturelle, répandues dans les sèves, les sucs, les parfums, les qualités occultes de toutes choses.

La révélation des vertus de l'affrontement des contraires devient un principe de la tolérance. Au-delà de ses qualités expressives, de son atmosphère onirique et bucolique, l'ouvrage déborde le cadre du recueil d'ornements ou du bestiaire de fantaisie et délivre un message de paix : catholiques et protestants vont désormais devoir unir leurs forces, fussent-elles opposées dans leurs idéaux, pour soutenir Henri IV en vue de la restauration de l'autorité royale, tous ses sujets aspirant à retrouver leur dignité dans l'élan d'une nouvelle concorde civile.

Bibliographie sélective

- BOILLOT JOSEPH, *Nouveaux Pourtraitz et figures de termes pour user en l'architecture, composez et enrichiz de diversité d'animaulx représentez au vray, selon l'antipathie et contrariété naturelle de chacun d'iceulx, par Joseph Boillot, Lengrois, contrerolleur pour le Roy au magasin et grenier a sel dudict lieu* (Langres, Jehan des Preys: 1592).
- , *Nouveaux Pourtraitz & figures de Termes pour user en l'architecture, composez et enrichiz de diversité d'animaulz représentez au vray selon l'antipathie et contrariété de chacun d'iceulx [...]*, réédition en fac-similé avec présentation critique, index et glossaire par Paulette Choné et Georges Viard (Paris: 1995).
- CHONÉ P., «L'ornement zoomorphe comme signe politique. Le recueil de Boillot (1592) et son temps», *Cahiers de l'Association Internationale des Études Françaises* 57 (2005) 21–46.
- FONTENAY É. DE, *Le silence des bêtes. La philosophie à l'épreuve de l'animalité* (Paris: 1998).
- FORSSMAN E., *Säule und Ornament. Studien zur Problem des Manierismus in den nordischen Säulenbücher und Vörlageblättern des 16. und 17. Jahrhunderts* (Stockholm: 1956).
- PAUWELS Y., *L'architecture au temps de la Pléiade* (Paris: 2002).

LIFE AND DEATH IN THE NORTHERN EUROPEAN GAME PIECE

Sarah R. Cohen

Death, a central theme in early Netherlandish figural painting, found a new venue in the late sixteenth century: the animal. The overall decline in the market for devotional paintings featuring the bodies of Christ, Mary, and the saints, and the evacuation of such paintings from all of the churches and many of the homes in the northern Netherlands, was compensated by the development of secular subjects featuring aspects of daily life. Among these, animals figured prominently, and special place was given to the portrayal of animals that had just been killed, their bodies still furred and feathered, and their postures ranging from sleeplike quietude to dynamic twists and thrusts suggesting fatal struggle [Figs. 1, 3, 5, 6].¹ Dead animals first appeared in kitchen and market scenes by Pieter Aertsen and Joachim Beuckelaer, who worked, respectively, in Amsterdam and Antwerp; they pictured various stages of preparing creatures for human consumption, from freshly killed bodies to skinned, plucked, and butchered meat. By the early seventeenth century animals recently dead began to take precedence over meat, especially in the dynamic paintings of markets, larders and woodland hunts produced by Frans Snyders in Antwerp. Snyders and his Flemish pupils and followers, among whom Jan Fyt was the most accomplished, responded to the eager market for animal paintings with ever more subtle and inventive depictions of animal death. Live animals almost always figure in these paintings as well, acting as guards, attackers, marauders, imminent victims, and even wordless commentators on their dead fellow creatures. The hunt, an aristocratic theme initiated by Snyders, soon became implicit in still lives of dead game presented as a 'trophy' from a hunter's catch. This genre was refined by artists such as Jan-Baptist Weenix around the middle of the seventeenth century,

¹ Sullivan S.A., *The Dutch Gamepiece* (Woodbridge – Suffolk – Totowa, NJ – Montclair, NJ: 1984); Schneider N., *Still Life: Still Life Painting in the Early Modern Period*, trans. H. Beyer (Cologne: 2003) 39–63.

and found particular popularity in the Dutch Republic. Often intimate in scale, and reflective in tone, they emphasize intricate detail, textural nuance, and compelling postures and interrelationships among the dead animal bodies. Live creatures are often sidelined in these works, leaving the viewer to contemplate the animal death on display.

What kind of contemplation would this be? How were these portrayals of animal death perceived? Part of their appeal must have lain in the way the painters made art out of ‘everyday’ subject matter. While dead animals were a common enough spectacle in the early modern home and marketplace, painters such as Snyder, Fyt, and Weenix made one see the animal body as an object of interest in its own right, much as empiricism was concurrently elevating the material world as a key source of scientific knowledge. What distinguished the dead animal from other objects of the natural and artificial world, of course, was the fact that these were *bodies* with structures and features akin to those of the human – another fact that science, especially anatomy, was emphasizing during this era.² Although at first artists must have had practical reasons for representing animals in the stillness of death rather than alive, their complex and evocative treatment of the theme quickly progressed far beyond exactitude. They called attention to the death and, by implication, the life of animals through devices ranging from active dramatization to exquisite understatement. They also took considerable liberty with the ‘reality’ they portrayed, as in featuring in market and larder scenes animals not commonly eaten, or creating impossible combinations of game in a hunter’s catch. Arresting settings and props, such as the stone steps and black cloth in Weenix’s *Dead Swan* [Fig. 6], stimulate contemplation. Above all, the artists made these deaths beautiful, by limiting their depictions of wounds and blood to selectively dramatic details, and by rendering the bodies of the creatures with all of their visual glory intact – fur, feathers, color, texture, and bodily structures that a viewer could intimately, even viscerally, grasp.

² See, e.g., Rupp J.C.C., “Matters of Life and Death: The Social and Cultural Conditions of the Rise of Anatomical Theatres, with Special Reference to Seventeenth-Century Holland”, *History of Science* 28 (1990) 263–287; Carlino A., *Books of the Body: Anatomical Ritual and Renaissance Learning*, trans. J. Tedeschi – A.C. Tedeschi (Chicago – London: 1999); Guerrini A., *Experimenting with Humans and Animals From Galen to Animal Rights* (Baltimore – London: 2003) 23–47; cf. René Descartes, *Discourse on the Method*, in *Discourse on the Method and Meditations on First Philosophy*, trans. E.S. Haldane – G.R.T. Ross, ed. D. Weissman (New Haven – London: 1996) 29–36.

Art historians, noting these suggestive qualities, have proposed meanings for the dead animal paintings that go beyond description and manipulation of the everyday world. Most of these interpretations are anthropocentric – that is, they consider what imagined value the painted dead animals would have had to their human viewers. One set of interpretations is moralizing: the animal is perceived as a metaphor of human fleshly desires, as an emblem of death's inevitability, or as a warning against material covetousness.³ More recently, the market paintings of Snyder have been interpreted as ideal embodiments of the Antwerp marketplace, promoting commercial enterprise and making nature's bounty appear seductively available for consumption.⁴ The implicit status of game hunting, an activity restricted to the nobility throughout the Netherlands, has led some scholars to interpret the hunting and dead game paintings as aristocratic showpieces. These might have appealed especially to a wealthy, middle-class clientele denied the right to hunt but desirous of owning a precious token of it.⁵

When considered from a less anthropocentric perspective, however, the paintings raise other questions that encompass the Netherlandish interest in the wider natural world. Scholars in the past twenty-five years have taken a new look at Netherlandish artistic 'naturalism,' noting how deeply embedded it was in other cultural practices that favored picturing the natural world as a means of understanding it.⁶ Netherlandish scientists and artists, alike concerned with the objective study of nature, were particularly receptive to the empiricism coming to dominate natural philosophy throughout Europe during the seventeenth

³ Sullivan, *Dutch Game Piece* 6; 73–7; Schneider, *Still Life* 40–41.

⁴ Koslow S., *Frans Snyders: The Noble Estate; Seventeenth-Century Still-Life and Animal Painting in the Southern Netherlands* (Antwerp: 1995) 57–185; Honig E.A., *Painting and the Market in Early Modern Antwerp* (New Haven – London: 1998) 151–169.

⁵ Sullivan, *Dutch Game Piece* 33–45; Koslow, *The Noble Estate* 89–96.

⁶ See, e.g., Alpers S., *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago – London: 1983) 1–118; Brusati C., *Artifice and Illusion: The Art and Writing of Samuel van Hoogstraten* (Chicago – London: 1995) 1–15; Brusati C., "Natural Artifice and Material Values in Dutch Still Life", in Franits W. (ed.), *Looking at Seventeenth-Century Dutch Art: Realism Reconsidered* (Cambridge – New York: 1997) 144–157; 233–234; Freedberg D., "Science, Commerce, and Art: Neglected Topics at the Juncture of History and Art History", in Freedberg D. – de Vries J. (eds.), *Art in history/History in art: Studies in seventeenth-century Dutch culture* (Santa Monica, CA: 1991) 376–428; Hendrix M.L., "Of Hirsutes and Insects: Joris Hoefnagel and the Art of the Wondrous", *Word and Image* 11 (1995) 373–390; Honig E.A., *Painting and the Market* 29–39; Smith P.H., *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago – London: 2004) 30–55; 154–181.

century. The paintings of dead animals, while surely appealing to the self-interest of Netherlandish consumers, also demanded that their viewers consider in depth the creatures that they were raising, purchasing, hunting, killing, and eating – not necessarily with any altruistic goals toward the animals, but, on an epistemological level, to explore what constituted animal existence in itself. Representing a creature, whether animal or human, as just having died, inevitably asks one to reflect upon the nature of the life just ended.⁷ The animal painters encouraged such reflection by imparting to the dead bodies vivid signs of the creatures' previous vitality. It is as if they were asking, through their own, repeated investigations of animal death in art, what one might make of animal life and death as a basic force in the natural world.

In the rest of this essay, I shall address the ways in which Netherlandish artists explored this question of animal life and death through a close analysis of four paintings. I shall consider how the animal is assessed on an artistic level by comparing the paintings with the ideas expressed in a group of early modern philosophical texts that argue in favor of the existence of animal soul. For the Netherlandish dead animal paintings appeared at precisely the time that the status of the animal was being heatedly debated in European philosophy.⁸ The debate was encouraged by the widespread development of empiricism, which sought to answer questions of material cause and effect through observations of natural systems rather than through received theory or spiritual belief. Its principal catalyst was Descartes's radical contention, in the *Discourse on the Method* of 1637, that the animal was no more and no less than its own body, an infinitely complex 'machine' that functioned independently of

⁷ For example, anatomy theaters and published illustrations of anatomy in the sixteenth and seventeenth centuries often featured moral references to the transience of life in their presentation of corpses. Tomb sculptures similarly prompted reflection upon life in their representation of the deceased. See, e.g., Ariès P., *The Hour of Our Death*, trans. H. Weaver (New York: 1981) chapter 5; Andreas Vesalius, *De humani corporis fabrica* (Basel: 1543) title page; Book I, pl. 22, 23; Cazort M. – Kornell M. – Roberts K.B. (eds.), *The Ingenious Machine of Nature: Four Centuries of Art and Anatomy* (Ottawa: 1996) 208; Rupp, "Matters of Life and Death" 278.

⁸ See Boas G., *The Happy Beast in French Thought of the Seventeenth Century* (Baltimore: 1933); Fontenay E de, *Le Silence des bêtes: La philosophie à l'épreuve de l'animalité* (Paris: 1998) 265–451; Harrison P., "The Virtues of Animals in Seventeenth-Century Thought", *Journal of the History of Ideas* 59 (1998) 463–484; Hastings H., *Man and Beast in French Thought of the Eighteenth Century* (Baltimore, MD: 1936); Rosenfield L.C., *From Beast-Machine to Man-Machine: Animal Soul in French Letters from Descartes to La Mettrie* (New York: 1940).

any spiritual, soulful agent.⁹ A number of the philosophers who objected to this reduction of the animal to a natural mechanism used the Aristotelian concept of the ‘sensitive’ animal soul¹⁰ to argue in favor of a material but vital force that governed the life of the animal and gave it conscious agency. While in the first half of the seventeenth century this textual debate was carried out principally in France, its key issues were known in the Netherlands, where Descartes himself lived for most of his productive life, and where his theory of the bodily ‘machine,’ was the topic of considerable public controversy.¹¹ Animals moreover formed a principal object of Netherlandish scientific inquiry in the form of anatomical and medical research, as well as natural history.¹² I shall argue that the philosophical question of animal soul, although not taken up at length by Netherlandish scientists,¹³ was profoundly addressed in the paintings of animals, whose visual language matches and at times exceeds the French texts in subtlety and eloquence.

In a ground-breaking essay of 1999, Nathaniel Wolloch first raised the possibility that the Netherlandish paintings of dead animals constituted a pictorial response to the debate over the status of animals in European culture of the seventeenth century.¹⁴ Observing the notoriety

⁹ René Descartes, *Discourse on the Method* 34–37; see also Morris K., “Bêtes-machines”, in Gaukroger S. – Schuster J. – Sutton J. (eds.), *Descartes’ Natural Philosophy* (London – New York: 2000) 401–419.

¹⁰ Aristotle, *De anima*, in *The Works of Aristotle*, trans. and ed. W.D. Ross. 12 vols. (Oxford: 1963) III.

¹¹ See, e.g., Cook, H.J., “The New Philosophy in the Low Countries”, in Porter R. – Teich M. (eds.), *The Scientific Revolution in National Context* (Cambridge – New York: 1992) 115–149; French R.K., “Harvey in Holland: Circulation and the Calvinists”, in French R.K. – Wear A. (eds.), *The Medical Revolution of the Seventeenth Century* (Cambridge – New York: 1989) 46–86; Verbeek Th., *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637–1650* (Carbondale – Edwardsville: 1992); Wilson C., “Descartes and the Corporeal Mind: Some Implications of the Regius Affair”, in Gaukroger – Schuster – Sutton (eds.), *Descartes’ Natural Philosophy* 659–679.

¹² See Herman Boerhaave, “Life of Swammerdam” (1735), in Jan Swammerdam, *The Book of Nature, or, The History of Insects*, trans. T. Floyd, rev. and ed. J. Hill, 2 vols. in 1 (London: 1758) i–xviii; Cook, “The New Philosophy in the Low Countries”; Freedberg, “Science, Commerce, and Art”; Struik D.J., *The Land of Steven and Huygens: A Sketch of Science and Technology in the Dutch Republic During the Golden Age* (London – Boston: 1981) 114–127.

¹³ Two of the most important proponents of animal soul around the turn of the eighteenth century, however, were French Protestants residing in the Dutch Republic: Pierre Bayle and David Boullier.

¹⁴ Wolloch N., “Dead Animals and the Beast-Machine: seventeenth-century Netherlandish paintings of dead animals, as anti-Cartesian statements”, *Art History* 22 (1999) 705–727. See also Wolloch N., *Subjugated Animals: Animals and Anthropocentrism in Early Modern European Culture* (Amherst: 2006) 151–76.

of Descartes's controversial theory of the animal-machine, Wolloch argued that Netherlandish artists implicitly engaged the issue through the subject matter of their paintings. Wolloch's principal concern was to determine to what extent the Netherlandish artists might have encouraged sympathy with the animals over the violence of their deaths – sympathy that would have been irrelevant to anyone who believed that the animal was a machine. His conclusion was ambivalent. On the one hand, the intense beauty of the paintings and their dramatization of death might stimulate the viewer's compassion, but such imaginary sympathy, based as was upon a painting, also could have served as a useful antidote for any compunctions one might have had in actually purchasing, killing, eating or wearing the animal body.

Sympathy, however, is only one kind of response that these paintings can elicit. Wolloch characterized the representations of animal death generally as 'tragic',¹⁵ but the very complexity of these works suggests other ways in which one might consider their articulation of animal worth. For those seventeenth-century philosophers who theorized most strongly in favor of the concept of animal soul, the key issue at stake was not how humans treated animals, but what constituted the animal as a vital entity. Was the animal a function of natural processes that acted through it, in the manner of the working parts of a machine, or did the animal have a conscious perspective of its own? Did the vital agents that gave the animal a living body also give the animal some kind of essence that transcended, or inspired, its worldly actions? While no serious philosopher in the seventeenth century would have argued that the animal soul was equal in value to the soul of a human, which was universally understood to be immortal,¹⁶ the idea of a soul that governed the *life*, and made that life meaningful, could be, and was, applied to the animal. Of all pictorial specialists, painters of animals would have had the greatest vested interest in how important and complex the animal was deemed to be as a potential artistic 'character.' In my examination of the paintings below, I shall argue that while the

¹⁵ Wolloch, "Dead Animals" 718.

¹⁶ Henry More and Ralph Cudworth were alone among seventeenth-century philosophers in arguing that the souls of animals were immortal, although inferior to human souls. See Cohen L.D., "Descartes and Henry More on the Beast-machine – A Translation of their Correspondence Pertaining to Animal Automatism", *Annals of Science* 1,1 (1936) 48–61; Henry J., "The matter of souls: medical theory and theology in seventeenth-century England", in French – Wear (eds.), *The Medical Revolution of the Seventeenth Century* 87–113.

artists' motivations were visual rather than theoretical, like the philosophers they capitalized upon the material qualities of the animal body as a means of demonstrating their intrinsic worth. In the process, they probed, questioned, and diversely shaped a pictorial version of the sensitive animal soul.

The display of dead animals in Netherlandish painting originated in the material context of the marketplace and the kitchen. Ranged in the foreground of Aertsen's and Beuckelaer's bustling scenes of food commerce and preparation, dead fish, fowl, rabbits and other small animals share a crowded stage with hunks of butchered meat, colorful produce, and workers or sellers who sometimes look out toward the viewer while holding up a dead animal for our inspection. Glimpses of stories and legends from the New Testament often appeared in the backgrounds of these paintings. Like homages to the devotional imagery now on the decline in the Netherlandish art market, these miniature religious scenes may have implied the necessity for moral vigilance in the face of material abundance – a warning that was often almost swallowed by the riot of matter in the foreground.¹⁷ When the marketplace genre was advanced in the later sixteenth century both in northern Italy and in the Netherlands, the religious scenes began to cede the stage entirely to the produce, the dead animal bodies, and the workers who tend to them. Scholars divide over the extent to which these paintings, when divested of overt religious references, still contained specific warnings against the temptations of the flesh, but their elevation of material life as a subject of scrutiny is unquestionable. The dead animal, in such a context, posed a double challenge, for it could be seen both as a tempting embodiment of material consumption and as a surrogate for the consumer's own, inevitable death.

The suggestive potential of the dead animal body became a central theme in the huge market, kitchen, and woodland scenes produced by

¹⁷ For various interpretations see, e.g., Craig K., "*Pars Ergo Marthae Transit*: Pieter Aertsen's 'Inverted' Paintings of Christ in the House of Martha and Mary", *Oud Holland* 97 (1983) 25–39; idem, "Pieter Aertsen and the Meat Stall", *Oud Holland* 96 (1982) 1–15; Honig, *Painting and the Market* 19–99; Houghton C., "This Was Tomorrow: Pieter Aertsen's *Meat Stall* as Contemporary Art", *Art Bulletin* 86 (2004) 277–300; Moxey K.P.F., "The 'Humanist' Market Scenes of Joachim Beuckelaer: Moralizing Exempla or 'Slices of Life'?", *Jaarboek van het Koninklijk Museum voor Schone kunsten te Antwerpen* (1969) 109–187; Moxey K.P.F., "Interpreting Pieter Aertsen: the Problem of 'Hidden Symbolism'" in *Pieter Aertsen. Nederlands Kunsthistorisch Jaarboek* 40 (1989) 29–39; Sullivan, *The Dutch Gamepiece* 6.

Frans Snyders in the first half of the seventeenth century in Antwerp. An animal painter *par excellence*, and a formative influence on Netherlandish animal painting of the entire seventeenth century, Snyders made a spectacle of the animal body both living, in the context of the hunt, and freshly killed in market scenes and spacious domestic interiors. The large scale of Snyders's paintings themselves demanded spacious interiors for their display, and the types of animals he favored were generally the most prized objects of the aristocratic hunt: deer; ornately feathered fowl both large and small; boar; and hares and rabbits. To the recently killed game Snyders almost always added living animals such as sniffing dogs, watchful cats, or chattering monkeys and parrots; these animals are shown inspecting, guarding, or otherwise interacting with their fallen kin. Geared to decorate the halls and galleries of wealthy art collectors who either hunted, if they were of the nobility, or purchased game as a commodity, Snyders's paintings were clearly directed to whet and satisfy the socially conditioned human appetite.¹⁸ His treatment of the animal body, however, explores beyond the human concerns of social status and the marketplace, and suggests a surprisingly nonanthropocentric regard for the physical existence of animals.

A case in point is Snyders's first known market scene, the *Game Stall* of 1614, a huge canvas, roughly seven by ten feet, that features an abundance of highly prized dead animals and a few humble, but assertive, live ones [Fig. 1]. The person presumably in charge of this sensual feast is a bearded man, perhaps a steward from the noble estate on which the game was caught, whose purse is in the process of being spirited away by a boy crouched under his elbow.¹⁹ The man's gesture of doffing his hat, as if to greet the viewer, is uncannily echoed in the angled hind legs of an eviscerated roebuck suspended near the center of the painting. Its tongue lolling in death, the roebuck's breast and head sprawl across the great, white wing of a magnificent swan, whose other wing, gatelike, relegates the human figures to the far left end of the table. Presiding over the right side of the painting is a bloody boar's head, its fearsome mouth open as if to utter a final cry, and framed by a dramatic pile of birds – peacocks, a pheasant, a branch full of colorful finches – and hares displayed to show three separate angles

¹⁸ Honig, *Painting and the Market* 151–163; Koslow, *The Noble Estate* chapter 3.

¹⁹ Robels H., *Frans Snyders: Stilleben- und Tiermaler 1579–1657* (Munich: 1989) 183; Koslow, *The Noble Estate* 99.



Fig. 1. Frans Snyder, *Game Stall*, 1614. Oil on canvas, 212 × 308 cm. The Art Institute of Chicago (photo: copyright The Art Institute of Chicago).

of the animal's body. Beneath the table lie some outsized vegetables as well as a live animal drama: two cocks fight, perhaps sparring over the two live hens settled in a cage that is tucked between the neck and outspread wing of the swan. The cocks are in turn stalked by a black cat, discernable mainly through the glinting yellow eyes that gaze more forcibly out toward the viewer than do those of the bearded man. As if to escape this scene of recent or impending carnage a white dove prepares to soar upward from the rim of a sieve on the right, while its mate, also living, perches patiently on the handle.

The fantastic yield of the hunt that Snyder's conjures in this painting has been convincingly interpreted as an appeal to contemporary social concerns. From a governmental perspective the painting could stand as a tribute to the well-regulated commercial exploitation of the hunt in Flanders, while from the perspective of a consumer it could function as a seductive offering that seems to have sprung out of nature itself.²⁰ Steering clear of overt moralizing, Snyder nevertheless enhances his realism with allegory, using the live animals as edifying actors. While the cocks stalked by the cat might parody the oblivious old man outwitted by the thief, the pairing of the hens with the cocks and the coupled doves signal the life that springs from death,²¹ as if in a distant, animal echo of the Christian stories staged in the backgrounds of sixteenth-century kitchen scenes.

On a visual level, however, Snyder immerses the viewer in the animal realm, as if encouraging us to imagine not just the rich rewards of the hunt, but also its predatory core. One confronts this turbulent portrayal of animal death with no intermediary figures or structures, and considering the likely elevation of the canvas in a high-walled room or gallery, one would probably have found oneself at eye level with the watchful cat beneath the table. A noble hunter, or a would-be hunter from the middle class, might enjoy such identification with a highly skilled predator, as anyone who caught a wild boar, a roebuck, several large birds and a pile of rabbits in a very short space of time would have to be. As a member of the deer family, the roebuck represented the game most prized – and thus most restricted by regulations – in the European noble hunt.²² As if to honor this noble status, Snyder

²⁰ Koslow, *The Noble Estate* 101; Honig, *Painting the Market* 153–154.

²¹ Honig, *Painting and the Market* 153; Robels, *Frans Snyder's* 58.

²² Sullivan, *The Dutch Gamepiece* 34.

suspends the animal heroically along the central axis of the composition, with the blood of the wound near the animal's heart appearing just above the painting's center. The white wing of the swan, spread like a cloth beneath the upper body of the deer, adds an almost sacral note to the display of its felled body.

Such indications of a valiant death, implying as they do the intrinsic value of the animal life, reflect the emphasis placed in the European hunt on the animal as a canny, highly conscious protagonist that will do everything possible to outmaneuver its human, canine or aviary pursuers. Jacques du Fouilloux's *La Vénerie*, the standard European hunting treatise first published in 1561 and re-issued many times in the following century in English, German and Italian editions as well as in the original French, not only details the practices and rituals of the hunt, but also provides extensive discussion of the habits and strategies of the prey itself.²³ Beginning in the second edition, the treatise also included a long poem by Guillaume Bouchet entitled the "Complainte du cerf".²⁴ This, as the title indicates, is a deer's lament, relayed in the first person, bemoaning the cruelty with which he is pursued by men, all for the many virtues that his body can yield, from the medicinal benefits of his horns to the tenderness of his meat. As if in retribution for such physical exploitation, the deer ends his complaint by wishing upon his human hunter the fate of Acteon who, transformed into a stag himself, bays helplessly before his own dog that ruthlessly sucks up his blood. Far from denigrating the act of hunting, the "Complainte du cerf" celebrated it precisely because the stag is presented as the noble hunter's worthy opponent. Hunting was, after all, considered a good preparation for human war²⁵; perceiving in the animal consciousness and sentiment comparable on some level with one's own confirmed the nobility of the sport. The English edition of Fouilloux's treatise, by George Turberville, featured similar 'complaints' by other commonly hunted animals, in effect extending the role of protagonist to all worthy prey.²⁶ They appear as protagonists in Fouilloux's illustrations, which feature, at the beginning of the section on each animal, the prey

²³ Jacques du Fouilloux, *La Vénerie* (Paris: 1585) (Paris: 1928).

²⁴ Jacques du Fouilloux, *La Vénerie* 190–193.

²⁵ Jacques du Fouilloux, *La Vénerie*, dedication, n.p.; Gaffet A., sieur de La Briffardière (attrib.), *Nouveau traité de Vénerie* (Paris: 1750) 4–5.

²⁶ Cartmill M., *A View to Death in the Morning: Hunting and Nature through History* (Cambridge, MA – London: 1993) 82–83.

presented alone on the page, with a first-person poem boasting of its virtues [Fig. 2]. The deer claims to exceed all the other animals in his beauty, and serves the pleasure of kings (albeit unwillingly, if we accept the animal's 'complaint' later on.)

Snyders, in devoting the central visual drama of his painting to the bodies of the magnificent fallen creatures, similarly acknowledges the importance of making the animal a soulful character whose death one can mourn as well as covet. Following several passages in the Old Testament, Europeans had traditionally considered the soul of the animal to reside in its blood; even Descartes acknowledged the possible existence of a material, bloody animal soul.²⁷ Perhaps this is why Snyders centered his composition around the bloody wound of the roebuck, with drizzles and smears of red paint elsewhere, as in the crook of the swan's right wing, to indicate the now-vanquished animal essence. In keeping the beautiful bodies intact, however, he appeals to a more human conception of the value of life: one might think, for example, of the fallen Christian bodies familiar (or remembered) from devotional painting, or dead human bodies dressed and embalmed for display before burial.²⁸ The white dove that prepares to soar upward on the right has been interpreted as an emblem of chastity,²⁹ but it also serves – visually, at least – in its more familiar capacity as the representative of departed life, this time life within the material, animal world to which the dove as a natural being belongs.

Such references to life and death turn Snyders's animals from objects into subjects, a strategy that Fouilloux also used to give the hunt emotional drama. Unlike the hunt writer, however, Snyders allows the animals to dominate his painting to the extent of compromising the human element. The artist takes evident pleasure in equating or even subordinating the humans to the animals: the man's gesture that echoes the hindquarters of the deer; the parallel between the thief who quietly robs him and the cat stalking the squabbling cocks; and the way in which the great mass of matter hems the men into the back corner of the scene. This visual displacement of the human players in favor of the animals recalls the displaced Biblical narratives in the early market and kitchen scenes by Aertsen and Beuckelaer. But here we are encour-

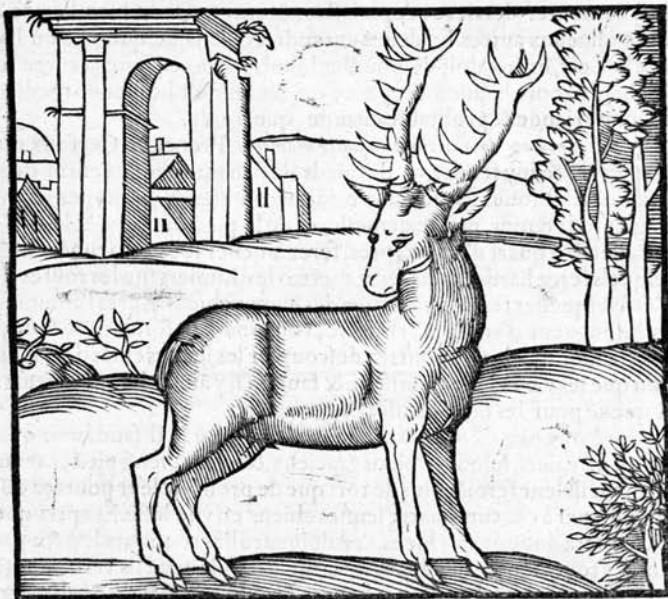
²⁷ *Leviticus* 17:14; *Deuteronomy* 12:23; Fontenay, *Le Silence des bêtes* 279.

²⁸ Ariès, *Hour of Our Death* 246, 361–362; Schama S., *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (Berkeley – Los Angeles – London: 1988) 186.

²⁹ Koslow, *The Noble Estate* 101.

VENERIE PAR

c'est leur droit commencement, parce qu'ils apprennent toutes ruzes & hour-uariz, pareillement à croire, à venir à tous forhuz: & si s'affinēt le nez en accoustumant les chemins & campagnes. En apres, quand on les veut dresser pour le Cerf, ils abandonnent aisément le Liēure: pour autant que la chair du Cerf est plus friande, & aussi qu'il a plus grand vent & sentiment que n'a pas le Liēure. Il faut icy entēdre que tous Chiens veulent cognoistre les piqueurs qui les fuyēt: & pource il est requis quand les valets de Chiens leur donneront à manger, & qu'on leur fera la curee, que les piqueurs s'y trouuent pour leur faire chere, & parler à eux, à fin qu'ils les cognoissent & entendent.



LA CHASSE DV CERF.

*Je suis le Cerf, à cause de ma teste,
Par les Grecs fuꝝ Ceratum surnommé,*

Fig. 2. Anonymous, "La Chasse du Cerf," ca. 1561. Woodcut, 8.5 × 9.5 cm. From Jacques du Fouilloux, *La Venerie* (Paris, l'Angelier: 1601) 14. Beinecke Rare Book and Manuscript Library, Yale University.

aged directly to compare the humans with the animals, both dead and alive, a comparison that is encouraged by the relatively low social status of these people and by their material pre-occupations. As a painter of animal death and drama – evident also in his hunt paintings, which typically eliminate the human figure altogether – Snyder inverted the figural hierarchy in Renaissance painting, whereby the human always predominated.³⁰ In this respect his work can be profitably compared with the writings of the late sixteenth-century French essayist Michel de Montaigne, whose celebration of the animal at the expense of the human pointedly inverted the human-animal hierarchy implicit in Western philosophy.³¹ Although Montaigne strove above all to humble the human, his elevation of the animal as a natural protagonist would have a lasting impact on seventeenth-century philosophy, and can serve as a useful guide to understanding the cultural implications of animal painting as well.

Although Montaigne discussed animals in a number of his essays, the most sustained of his arguments appeared in the *Apology for Raymond Sebond*, a book-length essay of the 1580s ostensibly defending a fifteenth-century Spanish theological treatise.³² In the course of castigating human society for its greedy self-assertion through presumed power and reason, Montaigne raised the humble animal as an example both of God's superior talent for creation and of the human's arrogance in thinking himself the center of the world. Marshalling a host of ancient writers to explain and defend his position, the essayist wove a dense fabric of anecdotes, philosophical arguments, and appeals to common sense. The reason that humans so vaunt, he argued, is but 'lumpish and sterile matter,' and he dismissed the common assumption that nature was created for our use, asserting that the human is in fact a 'wretched, paltry creature' who cannot understand, let alone govern, the mystery of the universe.³³ In a striking refutation of the philosophical principle of the Great Chain of Being, which placed the human above the animal, Montaigne instead underscored 'the parity that there

³⁰ Karel van Mander, *Den grondt der edel vry schilderconst*, trans. and ed. H. Miedema, 2 vols. (Utrecht: 1973) I, 101, no. 4; I, 105, no. 14.

³¹ Boas, *The Happy Beast* 3–9; Fontenay, *Le Silence des bêtes* 349–357; Harrison, "The Virtues of Animals" 471–472.

³² Michel de Montaigne, *The Apology for Raymond Sebond*, in *The Essays of Montaigne*, trans. G.B. Ives, 3 vols. (New York: 1946) I 579–816.

³³ Michel de Montaigne, *Apology for Raymond Sebond* I 592; 595.

is between us'.³⁴ He pointed out that every animal probably considers himself the protagonist of earthy life, from the gosling whose whole universe consists of the materials that he needs for life and growth, to the crane that thinks she owns the air.³⁵

Montaigne's radical rejection of anthropocentrism was intended as a critique of the arrogance he perceived within his own society, but within his irony he asks his reader to consider a fact about the animal that in the seventeenth century would become central to arguments in favor of animal soul. The matter of which animals are composed, base as it may be, is the very same vital substance as that which composes the body of the human – 'the condition of beasts in birth, in begetting, feeding, acting, moving, living, and dying being so similar to our own'.³⁶ Life, Montaigne asserts, is a mystery the human mind has never penetrated, try as we might, and although the animal lacks the potential for immortality, its embodiment of life's essential spark is reason enough for the human to stand in awe of it. Similarly influential on seventeenth-century arguments in favor of animal soul was the essayist's emphasis upon feeling, a bodily capacity that, once again, the human shares fully with the animal. In his essay "On Cruelty", Montaigne used the hunt as a means of demonstrating animal feeling, and the empathy he himself could have with such feeling. 'For my part, I have never been able to see without discomfort even the pursuit and killing of an innocent beast [...] As it commonly happens to the stag, finding himself breathless and strengthless, having no other resource, turns back and surrenders to us who are pursuing him, asking mercy from us by his tears – "covered with blood, and lamenting, and like one imploring" – this has always seemed to me a very grievous spectacle'.³⁷

While Montaigne drew this image of the bloody, imploring stag from Virgil,³⁸ it recalls the complaint of the deer in Fouilloux's hunting treatise (and suggests that Virgil also may have been a source for the latter). A modern reader might perceive more genuine sympathy with the animal on Montaigne's part, but his contemporaries who enjoyed the hunt would have appreciated the essayist's many proofs

³⁴ Michel de Montaigne, *Apology for Raymond Sebond* I 600.

³⁵ Michel de Montaigne, *Apology for Raymond Sebond* I 713–714.

³⁶ Michel de Montaigne, *Apology for Raymond Sebond* I 624.

³⁷ Michel de Montaigne, *Of Cruelty*, in *The Essays of Michel de Montaigne* I, 574–575.

³⁸ Ives G.B., *A Handbook to the Essays of Michel de Montaigne*, in *The Essays of Michel de Montaigne* III 1781, no. 62.

that animals were a worthy match for humans in intelligence, valor, and sensibility. They also would have recognized in Montaigne's vivid picture of animal death an allusion to their own inescapable fate; death, a theme running throughout Montaigne's essays,³⁹ looms large in the *Apologie*, as the animals inevitably demonstrate: 'the heart and life of a great and triumphant emperor is the [lunch] of a little worm.'⁴⁰ In his essay *Of Physiognomy* Montaigne argued that animals, never having lost their God-given natural ways, could in fact teach the human much that we need to know as to how to live and how to die.⁴¹ In regard to the latter, we might well envy the animals, for although they seek always to protect themselves and to avoid pain, they have no explicit fear of death, because they have no knowledge of it. On the contrary, Montaigne observed that animals regularly exhibit bravery, even joy in their deaths, implicitly grasping, as humans often do not, that death "is a part of our existence no less essential than is living".⁴²

Turning back to Snyder's *Game Stall*, we find in the profusion of mammal and avian bodies a similar invocation of the realm of matter, with its life and death; and we sense, as Montaigne would, that we are part of all of it. The bipeds with whom we would most naturally identify fit like a puzzle piece into the corner of the meaty composition. With the man's upper body echoing the hindquarters of the roebuck, and the boy's thievery echoing the crafty watchfulness of the cat, these humans appear willingly to assume their roles as members of the larger animal kingdom. Their marginal position encourages the viewer first to survey the table full of prize game, and only secondarily to consider the men, as if Snyder were using the bodies of the beasts to conduct his own demonstration of human humility. Montaigne's refusal to accept rationality as a justification for human superiority is corroborated in the complex materiality of Snyder's composition. The painting's appeals to the senses, to the emotions, and even, possibly, to the spiritual realm are all conducted by the animals: the heroically fallen

³⁹ Desan P., introduction to Friedrich H., *Montaigne*, ed. P. Desan (Berkeley-Los Angeles-London: 1991) xxiv.

⁴⁰ Michel de Montaigne, *Apology for Raymond Sebond* I, 613. I have altered the translation slightly.

⁴¹ Michel de Montaigne, *Of Physiognomy*, in *The Essays of Michel de Montaigne* II, 1431.

⁴² Michel de Montaigne, *Of Physiognomy* 1439–1440; quote from 1439. Cf. Friedrich, *Montaigne* 122–123.

deer with his bloody wound, the eternal cry of the boar, the pair of cocks fighting over the pair of hens, the predatory cat, the white dove that modestly counters all this violence and death in preparing to fly aloft. Although the human consumer for whom this game stall has been arranged might fancy himself superior to the whole spectacle, including the naïve steward and the thief, the painting's insistence upon the body and its inevitable mortality implicates any living being, from the 'great and triumphant emperor' to the smallest finch. Montaigne was not alone in trying to keep the vanity of human existence constantly before him; Catholics and Protestants of this era were alike enjoined to live their lives always with the consciousness of death.⁴³ Empathizing with a stag, even the very stag one pursues in the hunt, was one way to do this. Contemplating animal struggle and death in a big, bold painting might have been another.

The Snyders scholar Susan Koslow has speculated that the artist may have gained familiarity with Montaigne's arguments through the writings of the celebrated Flemish philosopher Justus Lipsius, who corresponded with Montaigne and presumably shared his high valuation of animals.⁴⁴ But as an innovator in the painting of animals on a monumental scale, Snyders would have had his own motivation to promote the material life and death of the animal as a model for human existence. The visual benefits of the animal had been promoted, if secondarily, by the Flemish artist and writer Karel van Mander in his treatise on painting published in Haarlem in 1604. Advocating that artists draw animals from life and include them in their history paintings as a means of enlivening the scenes, van Mander also advocated the comparative study of human and animal as a means of understanding their shared structures, as in the opposition of the limbs in forward movement.⁴⁵ Most relevant to Snyders's paintings was van Mander's invocation of the coloristic appeal of certain animals, such as the peacock, as a kind of visual poetry akin to a poet's use of aphorisms or tales-within-a-

⁴³ Ariès, *Hour of Our Death* 300–306; 327–33.

⁴⁴ Koslow, *The Noble Estate* 25. Wolloch ("Dead Animals" 723, n. 10) notes that Lipsius's views are debatable, but I have been unable to verify his claim from the sources he provides.

⁴⁵ Karel van Mander, *Den grondt der edel vry schilderconst* I, 105, no. 14; I, 134, no. 25; I, 114–117, no. 9.

tale.⁴⁶ But for Snyder, of course, the material properties of the animal were the painting's main event; his art *was* the animal, 'captured' in a hunt or a market stall.

Snyder's influence upon Netherlandish animal painting was most immediately evident in the work of artists who trained in his studio and who developed their own approaches to portraying the drama of animal life and death. Among the most original was Jan Fyt, a Flemish painter who featured close-up views of dead animals, often confronted by live ones, in outdoor compositions that promote even more strongly than Snyder did the materiality of animal existence. A striking example of Fyt's earthy, almost visceral, approach is found in the *Dead Game with Weasels*, a relatively small picture of about 1642, featuring a large hare and a collection of dead birds stalked by two snarling polecats [Fig. 3].⁴⁷ A European kingfisher with a brilliant orange breast, yellow and green finches, and a snipe occupy the upper ledge, their small, graceful bodies bent and twisted to form an array of colorful angles. These birds clearly form the object of the lower polecat's predatory gaze. The upper polecat, approaching the group, addresses the viewer directly, open-mouthed, with what we might imagine to be a weasel's admonitory shriek. Wildness emanates from the creature's uneven eyes, its left opened wide and its right in a squint. The large, striped game bag on the right indicates that a human hunter quite recently killed the game and left it lying in this corner of the woods. But the low vantage point of the painting, the confrontational polecat, and the looming hare in the foreground more readily imply that the viewer is a small, living animal, perhaps a spaniel left to guard the game, or even another marauding polecat.

As if to give sensory life to this encompassing animal drama, Fyt has laid down his colors thickly, even roughly; streaks and patches of paint physically embody the diverse textures of feathers and fur, while more loose pigment envelops the animals in a dense environment of

⁴⁶ Karel van Mander, *Den grondt der edel vry schilderconst* I, 249–50, no. 8; I, 250, no. 11. These references advocating the benefits of animal painting are more positive than the discussion in the chapter van Mander devotes exclusively to animal painting, Chap. 9; here, perhaps conscious of the elevated tone he wished to promote for painting, van Mander concentrates particularly upon the horse, the animal widely considered most 'noble'.

⁴⁷ I am grateful to Andria Derstine and Alfred Ackerman of the Detroit Institute of Arts for generously giving me access to examine this painting and for providing me with documentation of its technical features.



Fig. 3. Jan Fyt, *Dead Game and Weasels*, ca. 1642. Oil on panel, 75.2 × 94.3 cm. The Detroit Institute of Arts, City of Detroit Purchase (Photo: copyright 1993 The Detroit Institute of Arts).

colored matter. This tactile use of paint, perhaps inspired by Fyt's contact with Dutch art in a trip to the northern Netherlands in 1642, is so material in effect that one imagines being able to identify each creature simply by stroking, or even biting it, rather than simply by looking at it. The rich color contributes its own sensuality to the scene, whether in the red paint smeared to simulate blood-stained fur on the hare's belly and around its nose, or in the rich patches of orange, green, gold, brown, gray, and black that define each creature, dead or alive. The open mouth of the upper polecat is painted hot yellow, like fire, as if to connote the animal's shriek, and we might also imagine smelling the foul odor that polecats – like their relative, the skunk – use to mark their presence or to drive enemies away. Fyt's teacher Snyder arrayed his creatures before the viewer as a vast, stimulating spectacle; Fyt, by contrast, immerses the viewer into the woodland realm of the animal, with its sights, sounds, smells, and textures, and with its own, inherent violence.

Fyt's emphasis upon the material substance of the animal body represents a new step in the tradition of Flemish realism, for he evidently strove not just to reproduce the look of the natural world, but to mold it physically in paint. Late sixteenth-century painters of nature such as the Flemish illuminator Joris Hoefnagel had created arrestingly lifelike portrayals of animals through illusionistic techniques; in his lifesize recreations of insects for his natural history known as *The Four Elements*, Hoefnagel simulated reality so closely that a contemporary was moved to paste actual insect wings onto Hoefnagel's images of the creatures.⁴⁸ In Fyt's painting it is the material streaks, smears and dabs of paint that substantiate the animal body. Pamela Smith has recently noted the dialogue between artists' preoccupation with matter and the experimental approaches gaining ground in Flemish natural philosophy during the early modern era.⁴⁹ Relevant to Fyt in this respect is the early seventeenth-century physician-chemist Joan Baptista van Helmont, who rejected all traditional textual sources in favor of working directly with the body and substances of nature.⁵⁰ Although van Helmont's research

⁴⁸ Kaufmann T.D. – Kaufmann V.R., "The Sanctification of Nature: Observations on the Origins of Trompe l'oeil in Netherlandish Book Painting of the Fifteenth and Sixteenth Centuries", *J. Paul Getty Museum Journal* 19 (1991) 60; see also Hendrix, "Of hirsutes and insects".

⁴⁹ Smith, *The Body of the Artisan* 30–55.

⁵⁰ Pagel W., *Joan Baptista Van Helmont: Reformer of science and medicine* (Cambridge – New York: 1982).

was censored in Flanders during his lifetime,⁵¹ his conviction that one learned about nature through capturing the evidence of its physical workings was gaining momentum within Fyt's culture.

But the most innovative aspect of Fyt's approach is the creaturely psychology he summons, with live animals acting as surrogates for the viewer in a drama composed almost entirely of what can be seen, touched, smelled, grabbed, or tasted. The animalistic perspective Fyt adopted resembles the effort on the part of several mid-seventeenth-century French writers to explain animal vitality and consciousness. Through the influence of empirical science, they were re-examining the natural animal intelligence argued earlier by Montaigne to determine how, specifically, such intelligence might work. Descartes's view that living bodies were entirely mechanistic, and that consciousness and thought belonged to the human mind alone, appeared untenable to many in light of the evidence of animal behavior. But how, exactly, did creatures, material as they were, engage the realm of the immaterial, where perception, thought, and a guiding 'soul' were believed to reside? To answer this question philosophers worked with the concept of the sensitive soul first theorized by Aristotle, but they updated it to fashion a more concrete, image-based consciousness founded upon the animal's sensual perception. The French priest Pierre Gassendi, in his *Syntagma Philosophicum* published posthumously in 1658, drew from the atomic theory of the ancient Greek philosopher Epicurus to reason that there must be a vital principle, or soul, within the human and animal body alike. This soul was material, yet capable of as much subtlety as matter would allow – it was 'the flower of matter,' as his follower Bernier put it.⁵² Animated by the constant movement of the corpuscles that compose matter, this bodily soul was like a fire, always moving, fully substantive, and yet bordering on the insubstantial. This 'flame' of the animal soul, created at the beginning of the world, is passed from creature to creature, as new life springs from death and nature constantly renews itself within the animal realm.⁵³

Such a subtle material substance should also be able to produce for the animal a corresponding material intelligence, and Gassendi

⁵¹ Van Helmont's principal work, *Ortus Medicinae*, was published posthumously in Amsterdam in 1648 under the auspices of his son Franciscus Mercurius.

⁵² '[...] Comme la fleur de la matiere'; Bernier F., *Abrégé de la philosophie de Gassendi*, 7 vols. (1684) (Paris: 1992) V 303–304; quote from 304.

⁵³ Bernier, *Abrégé de la philosophie de Gassendi*, V 303–304, 309.

argued that animals, endowed with acute sensory perception, were alive with internal images that constituted a kind of thought.⁵⁴ The most sustained argument for sensory-based animal intelligence was the *Traité de la connaissance des animaux*, an essay that the French royal physician Marin Cureau de La Chambre attached to his treatise on human psychology, the *Caractères des passions*, of 1645.⁵⁵ For Cureau, the mental life of an animal is founded upon images, whether these are actual images, gained from sight, or experiential images derived from the other senses.⁵⁶ These images, which he often called ‘portraits,’ are reproduced, stored, and recalled for future use as ‘phantasms’ in the animal imagination.⁵⁷ Even more than Gassendi, Cureau believed that human understanding built directly on top of this imagistic base: we are all animals in our sensory responses, humans having reason added to our imagination.⁵⁸

Fyt’s *Dead Game with Weasels*, a sensual drama enacted by tactile, material creatures, offers a compelling argument for why we should believe in a substantive and imagistic animal soul. The lower polecat, mouth open and snout raised, appears sensually to take in the potential feast arrayed on the ledge above, not only through his small, glistening eyes, but also through his nose and even, perhaps, through his anticipated taste. Following Cureau, we might imagine numerous ‘phantasms’ of birds within the creature’s mind that have drawn him to the dead game pictured here. The crooked eyes and the open, fiery maw of his companion imply a psychology founded on what can be seen, felt and remembered, and also confirm another of Cureau’s key arguments: that animals communicate both through sound and through a meaningful

⁵⁴ Bernier, *Abrégé de la philosophie de Gassendi*, V 308; Murr S., “L’âme des bêtes chez Gassendi”, *Corpus* 16–17 (1991) 44–52.

⁵⁵ The essay was published with the *Caractères* in 1645 under the title “De la connoissance des bestes”; it was reissued as an independent publication in 1648 interspersed with an extended rebuttal directed at Cureau’s principal critic, the Cartesian philosopher Pierre Chanet. In 1662 the 1648 publication was presented once more, this time with the original 1645 essay attached. See the reprint of the 1662 version, Cureau de La Chambre M., *Traité de la connaissance des animaux* (Paris: 1989).

⁵⁶ Cureau de La Chambre, *Traité de la connaissance des animaux* 315–321.

⁵⁷ Cureau de La Chambre, *Traité de la connaissance des animaux* 317–319. The concept of the mental image, or phantasm, was drawn from Aristotle.

⁵⁸ Cureau de La Chambre, *Traité de la connaissance des animaux* 330–331; 344. Darmon A., *Les Corps immatériels: Esprits et images dans l’oeuvre de Marin Cureau de La Chambre* (Paris: 1985).

use of the body.⁵⁹ What creature could doubt the message of warning projected so purposefully toward us? For Fyt immerses the viewer, too, in the material realm of images: we are encouraged not just to survey the various animals and objects but to imagine touching them as well – the silky fur of the hare, the dense plumage of the partridges, the velvet and leather hunting pouch, even the bristly polecats. While as rational humans we might invent an aristocratic hunting scenario to accompany this scene, the material force of the painting – its insistence upon feeling – encourages us also to exercise the imaginative capacity that we share with animals. This life-giving, imaginative spark is precisely what the dead creatures appear to lack, with their eyes staring blankly or closed entirely, their postures twisted and inert. Fyt's rich, densely colored paint seems almost, in this respect, like an homage to the hare and the birds, whose whole existence was founded upon matter and upon the burning "flame" of material perception.

Gassendi's philosophy was known in the Netherlands, both through the international scientific network and through Gassendi's own two visits there, and a number of Netherlandish natural philosophers were developing comparable theories of bodily soul and subtle matter.⁶⁰ Fyt himself had lived in Paris in 1633–34, where he might have been exposed to the debates that would lead to the important mid-century publications on animal psychology. But even without specific awareness of the philosophical theories Fyt could have developed his own plausible depiction of animal consciousness, for his explorative approach, as we have seen, also built imaginatively upon the workings of nature. The success of Fyt's pictures suggests that his audience was receptive to their bold exposition of animal life and death, just as educated laypeople in the Netherlands took an active interest in the discoveries their scientific counterparts were making in natural history, anatomy, and medicine. Art was, in this sense, a distinct form of knowledge, partly documentation and partly a search for deeper philosophical truths.

The notion of art as a form of knowledge akin to natural philosophy was particularly strong in the northern Netherlands, where a long tradition of visual representation made the depiction of animals fundamental

⁵⁹ Cureau de La Chambre, *Traité de la connaissance des animaux*, 358–362; Le Guern O., "Cureau de La Chambre et les sciences du langage à l'âge classique", *Corpus* 16–17 (1991) 21.

⁶⁰ Cook, "The New Philosophy in the Low Countries" 128; French, "Harvey in Holland" 75; 82–3.

both to the natural sciences and to art. Seventeenth-century Dutch publications in the growing field of natural history were often richly illustrated with visual representations of the creatures under study. Jan Swammerdam's *Historia insectorum generalis* of 1669, for example, featured nuanced graphic images of the insects, crustaceans, and other small creatures that Swammerdam, a physician and anatomist by training, had carefully observed, dissected, and described in his treatise [Fig. 4]. His images offered both a record of nature and general proof, as Swammerdam put it, that even the smallest creatures are 'so many voices engaged in publishing [God's] praise'.⁶¹ Many Dutch scientists shared Swammerdam's belief that God lay in the visible structures and workings of nature. A combination of objectivity and wonder also informed the Netherlandish *kunstkammers*, spectacular collections of natural and artificial objects that included many animals, from the preserved bodies of mammals and birds, to skeletons and fossils.⁶²

Dutch painters of still life and landscape invoked this fascination with natural images and objects through rich and varied pictorial language. When Dutch artists began taking up dead game as subject matter in the second quarter of the seventeenth century, they focused upon the animal, in particular, as a catalyst for reflection. As with other forms of still life, the Dutch animal paintings invite one to contemplate material objects, but they also highlight the animal as a physical protagonist, even in the stillness of death. A vivid case in point is the *Hunter Sleeping near Dead Game*, a relatively large work executed by the Dutch animal painter Jan Baptist Weenix around the middle of the seventeenth century [Fig. 5]. A variety of birds large and small are gathered around the central figure of a great blue heron suspended from a branch, its wings outspread in a huge, feathered fan and its long body winding down the center of the composition. Beneath it lies another prized game bird, the bittern, draped over a stone ledge, while the bodies of smaller birds litter the ground below. As one typically finds in dead game paintings, the hunter's implements interlace with the dead creatures, as if to imply his bodily intervention: a hunting bag lies just below the head of the heron, its long, leather strap encircling the body of a ruff in a manner

⁶¹ Jan Swammerdam, *The Book of Nature* (a posthumous, expanded version of the *Historia insectorum generalis*) II, 92.

⁶² Freedberg, "Science, Commerce, and Art". Freedberg (382) argues that the tendency to see the workings of God in nature was particularly strong in the first half of the seventeenth century.

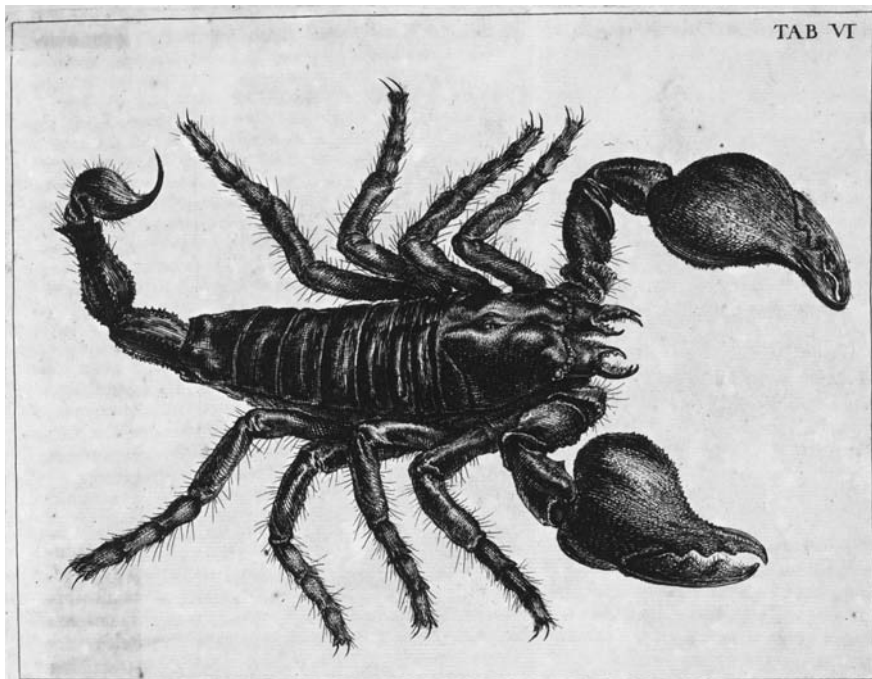


Fig. 4 [COL. PL. XXXI]. Jan Swammerdam, Scorpion, ca. 1669, engraving, 9.6 × 13.7 cm. From Johannes Swammerdam, *Historia insectorum generalis* (Utrecht, Meinardus van Dreunen: 1669) Tab. VI. Beinecke Rare Book and Manuscript Library, Yale University.



Fig. 5. Jan-Baptist Weenix, Hunter Sleeping near Dead Game, ca. 1652. Oil on canvas, 109 × 166.5 cm. Lille, Musée des Beaux-Arts (photo: copyright Réunion des Musées Nationaux/Art Resource).

suggesting a snare. But here, unusually, the hunter himself is shown sleeping on the left, his body as inert as the birds and his arm raised, winglike, to shield his eyes with his hand. The whole group is guarded by a small, alert spaniel, whose body position suggests that she, too, may have been resting, but has lifted her head to confront the viewer – an intruder? – with a pointed outward gaze.

Weenix's inclusion of a human in this scene was probably inspired by his early career in Rome, where he had painted Italian peasants in picturesque landscapes that he sold to, among others, Pope Innocent X.⁶³ In his later career Weenix lived much as a gentleman, having acquired a mansion outside Utrecht,⁶⁴ and although this in itself would not have given the artist hunting rights, it might have made him conscious of the hunt as a uniquely aristocratic sport. But Weenix's sleeping hunter evinces less noble status than he does a natural, even animal, need for bodily rest, a fact reinforced by the man's unconscious imitation of his own dead game in his prostrate body and winglike arm. Although the barrel of the gun forms an impressive silhouette against the sky, it is not this human tool but rather the spaniel's eyes that warn us to keep our distance. The communication in this scene, like the display of the body in death, is entirely animal.

Thus inviting us to compare human to animal, sleep to death, and unconscious to conscious life, Weenix makes his painting interesting, even intriguing, without disrupting its descriptive realism. Once again, the animal psychology of *Cureau de La Chambre* provides a useful point of comparison, for just as Cureau asked his reader to consider the world from the perspective of an animal, so Weenix drowns his hunter in sleep while allowing the dog to take over the whole business of conscious thought. From the perspective of Cureau's psychology, we might say that the man, unconscious, experiences the random flow of 'phantasms' that constitutes dreaming,⁶⁵ while the dog actively forms a mental image of what she visually perceives. Now, we assume, the dog is quickly comparing this new image before her with those already accumulated in her memory to assess the current level of danger. Cureau, as many proponents of animal soul after him, used the example of the hunting dog and its prey to demonstrate imagistic animal reasoning.

⁶³ Stechow W., "Jan Baptist Weenix", *Art Quarterly* 11 (1948) 181–198.

⁶⁴ Sullivan, *The Dutch Game Piece* 30.

⁶⁵ Cureau de La Chambre, *Le Système de l'âme* (1664) (Paris: 2004) 196–197.

Although certain images are imprinted on animals by nature, such as the instinct to run, dogs are constantly learning new models for pursuing their prey, while the prey develops ever more sophisticated ruses to outwit its pursuers. To the Cartesians who argued that animals operate mechanistically, with no conscious goal in mind, Cureau pointed out that a dog would not develop such complex means to catch a hare if the dog had no mental image, or consciousness, of the hare as a target.⁶⁶ It is just such sensory awareness, sharpened by empirical experience, that Weenix implies in the lifted head and directed gaze of his spaniel. Although it is hard to envision this tiny dog actually overpowering the heron looming by her side, her intent gaze suggests an alertness to the ‘image’ that for Cureau proved a dog’s intelligence.

As an artist Weenix would have aimed more for scenic plausibility than for clear-cut ‘proof’ of nature’s operations. But in staking his own artistic endeavor upon sensory-based imagery, Weenix mined as intensively as Cureau did the visible evidence of the animal. His comparison of the sleeping human with the lifeless birds probed the border between life and death much as natural philosophers sought an alternative to Descartes’s ‘machine’ by equating animal soul with vitality itself. In those paintings by Weenix that exclude the human altogether, it is death – with all its suggestive force – that emerges as the primary means of examining animal existence at its core.

Consider his life sized *Still Life with Dead Swan* of about 1651 [Fig. 6]. A large swan, its pristine whiteness unblemished by signs of blood or violence, dominates the center of a group of animals draped over a stone ledge. A basket of fruit in the background adds a decorative embellishment and perhaps distantly alludes to the consumption of some of these animals as food. But it is the bodies of the birds that the viewer is asked to study, contemplate, and perhaps even identify with – if only on the level of knowing what it feels like to have a head, neck, torso, and limbs. Each of the animals has been carefully depicted so as to make it instantly recognizable: a tiny finch lying by the head of the swan, a turkey draped against the swan’s belly, a pair of bitterns suspended on the right, and two gray partridges folded into the two right angles formed by the larger birds. Originally the painting included a duck and a hare lying on a ledge below and, in the lower left corner, the

⁶⁶ Cureau de La Chambre, *Traité de la connaissance des animaux* 348; 358.



Fig. 6. Jan-Baptist Weenix, *Still Life with Dead Swan*, ca. 1651. Oil on canvas, 152.4 × 153.7 cm. Detroit Institute of Arts, Gift of Ralph Harman Booth (photo: copyright 1996 The Detroit Institute of Arts).

head of live greyhound gazing out of the scene.⁶⁷ Here again the dog would have served as an intermediary, this time inviting the viewer to consider the animal body in full: its structure, the texture of its feathers, its subtle coloring and markings, and the sheer matter of which it is composed, weighty and now lifeless. Like a natural history illustration, Weenix's painting encourages objective study, but this is not the only kind of study one would apply to it. For the 'knowledge' the painting seems to explore implies the unseen as well as the seen – something intangible embedded within its insistently material composition.

Weenix invokes this spiritual quality primarily through an appeal to feeling. Like Snyder, whose works Weenix may have had in mind when executing this large painting,⁶⁸ he has given the birds postures that suggest dramatic, even heroic, deaths. The broad, illuminated diagonal of the swan's belly, countered by its tremendous outspread wing, has the look of a sacrificial offering laid out for contemplation on the soft black cloth. The body of the foremost bittern suspended above seems still to contain vestiges of the bird's final struggle, with the free leg dropping and the wings outspread in silhouette before the radiant, almost fiery underbelly. The other bittern echoes its mate from behind, like a deathly shadow. The turkey, legs bound,⁶⁹ stretches fully across the ledge, while the head sinks against the belly of the swan, a surprisingly intimate gesture at odds with the behavior of these birds in life. The two partridges draped over the turkey's back echo the tactile connection of turkey and swan and help to unite the whole, avian group in a dense cluster of touching bodies. It is just this emphasis upon the body that separates dead game paintings from other kinds of still lives, and here it encourages on the part of the viewer not just sympathy, but empathy. While the birds are clearly studied and presented as objects, their sheer physicality – sinking bodies, heavy heads, closed eyes – also encourage a kind of gut identification on the part of the human viewer.

The theme of death likewise emerges both as something to consider in another and as something to feel for oneself. All of the animals in Weenix's painting were avidly hunted by the Netherlandish aristocracy

⁶⁷ Keyes G.S., catalogue entry in idem (ed.), *Masters of Dutch Painting: The Detroit Institute of Arts* (Detroit: 2004) 260–261.

⁶⁸ Cf. Sullivan S.W., "Jan Baptist Weenix: Still Life with a Dead Swan", *Bulletin of the Detroit Institute of Arts* 57,2 (1979) 65.

⁶⁹ This was one of the earliest appearances of the turkey in a Dutch game piece; Sullivan, "Jan Baptist Weenix" 67.

in this era; a huge swan and splendid bitterns would have been especially prized. Killing allowed one to possess an animal, to render its wildness utterly tame, and owning a picture of an impossibly diverse, single catch might have fostered even stronger proprietary pleasure.⁷⁰ It is easy to imagine such interest in the animals as booty merging with an interest in their bodies as natural specimens, for both were facets of the material worth of the creatures to their human owner. But with only a little further thought Netherlandish viewers in this era would also recognize the implications for themselves in these majestic animal deaths, for the human body is no less mortal than that of the beast, as both Catholic and Reformed Christians were obliged to remember. Weenix makes *vanitas* particularly vivid in the vicarious appeal of the weighty bodies. Here is another aspect of animal matter, one to which the human viewer is involuntarily bound. However much one may trust in one's own immortality, life in the world – the life of animals – will always end like this.

What makes the implications of *vanitas* especially poignant is the evidence of life that death provides. In Weenix's painting, as in all paintings of dead game, the animals appear to have expired moments before, prompting us to consider not only the death just entered but also the life left behind. The role of witness to the dead, played so often by living animals, is in this painting assumed by the viewer as well; we see in the dense richness of the feathered bodies the full evidence of their former existence. Protagonists of the lives we imagine for them, the animals are still embedded in the realm of the senses, evoked here through their implied sense of touch. The single white feather that falls from the body of the swan and hovers in the lower center of the painting captures this fleeting, material essence of animal life and death.

In asking us thus to reflect upon the animal Weenix again invokes the kinds of imagery used by the proponents of animal soul. Gassendi and Cureau, as we have seen, argued that there was a vital principle in the animal that constituted the essence of the creature when it was alive, and whose absence signaled death.⁷¹ Although the vital principle itself was invisible, it was fully material, like an effervescent flame, and the visible testament to its existence was the animal's sensory life. Although

⁷⁰ Cf. Sullivan, "Jan Baptist Weenix" 70.

⁷¹ This vitalist concept of bodily soul was also promoted in Flemish natural philosophy by Joan Baptista Van Helmont; Pagel, *Joan Baptista Van Helmont* 96; 124.

Weenix's dead creatures no longer see, nor fashion their own, internal images, he creates a kind of memorial to the sensory imagination they once had: we see it in the tactile contact of body on body, as well as in the vivid display of colors, textures, and highlights that still glow with the "fire" of life just departed.

Subsequent theorists of sensitive soul – several of them physicians like Cureau⁷² – would continue to liken human to animal in their common reliance upon the senses. The French physician Guillaume Lamy, in his treatise on the sensitive soul of 1677, argued that a complex play of senses, both internal and external, constituted the basis of animal life, including that of the human.⁷³ Extending a notion first put forth by Aristotle, Lamy argued that touch was the most essential sense, for touch was universal among animals and formed the model for the other senses, all of which incorporated or implied touching in some way.⁷⁴ Lamy's concern with theorizing sensation from as broad a base as possible, sweeping the human into the realm of animals so as better to ground it in nature, contrasts strikingly with the anthropocentric approach taken by Descartes in his writings on feeling and passion. In his early physiological treatise, written in 1629–33 as *Treatise on Man and Animal* but published posthumously in 1664 simply as *Man*,⁷⁵ Descartes described the intricate workings, perceptions, and reactions of the bodily "machine" as an essentially human construct, with the animal implied but rarely specifically addressed.⁷⁶ In his late psychological treatise known as *Passions of the Soul*, Descartes argued that passions (emotions) were produced by rational thought interacting with bodily perceptions and responses, thus rendering emotional experience an exclusively human domain.⁷⁷ To what extent animals experienced feeling, with

⁷² Wellman K., "Enlightenment Physiology and the History of Philosophy", paper presented at Eleventh International Congress on the Enlightenment/American Society for Eighteenth-Century Studies, Los Angeles, Aug. 2003.

⁷³ Guillaume Lamy, *Explication mécanique et physique des fonctions de l'ame sensitive* (Paris: 1677) 5–6; 15.

⁷⁴ Guillaume Lamy, *Explication mécanique* 10.

⁷⁵ Wilson, "Descartes and the Corporeal Mind" 662.

⁷⁶ René Descartes, *L'Homme*, in *Oeuvres philosophiques*, 3 vols. (Paris: 1963) I 379–480.

⁷⁷ Descartes carefully explained at the outset of the treatise how, in humans as in all animals, the body can perceive and respond to stimuli mechanically, with no contribution of the soul. The passions, by contrast, are the province of the uniquely human soul acting with the body. René Descartes, *Les Passions de l'âme*, in idem, *Oeuvres philosophiques* III 951–1103.

no thoughtful 'soul' to interpret the material realm, remained an open question.⁷⁸ The sensitive soul was, for Lamy and others, a means of addressing those features of the human that were 'animal,' and in the process they advanced a sentient animal psychology. Lamy may also have had something of Montaigne's desire to unseat human arrogance, as suggested in another publication, also of 1677, in which he critiqued a colleague's insistence upon human mastery of the animal. Observing, in the spirit of Montaigne, that the mighty human can be undone by the tiny flea, Lamy pointed out that the intelligence of the human, although vast, was filled with doubt. That of animals, although limited, was more certain, precisely because of its material foundation.⁷⁹

Weenix's Dutch audience, whose perspective on humanity was informed by extensive knowledge of the animal realm, evidently found much to consider in a painting in which the human figured nowhere at all. Animal life, although manipulated at will by the human, could also offer a model of the most basic kind of experience and understanding of the world. Animal death, even more, called attention to the value of material existence, which was no more, and no less, than what could be sensually perceived. Toward the end of a rambling, half-hearted refutation of the mechanistic model of animal behavior that he published in 1672, the French priest Ignace-Gaston Pardies suddenly burst out with the basic reason he and others could not support the notion of the soulless animal. 'They live, doubtlessly, and they also die. Thus there must be within them some principle that makes them live: and this principle, of whatever nature it may be, is what we call a soul'.⁸⁰ Weenix's magnificent creatures, bodies intact and softly folded into one another as if in some kind of eternal sleep, announce through the very evidence of their animal bodies that they, too, have doubtlessly lived, and must therefore have possessed that vital principle that seems, even now, to linger. None of the theorists tried to explain exactly what this

⁷⁸ One might infer from Descartes's treatise that animals can experience the basic sensations that he attributes to the body alone, such as hunger, thirst, heat, and coldness, but without any kind of psychological perception (Descartes's "soul") it is not clear whether the creature would be able to associate these sensations with material objects in any meaningful way. René Descartes, *Les Passions de l'âme* 971.

⁷⁹ Guillaume Lamy, *Réponse aux raisons par lesquelles le sieur Galatheau pretend établir l'Empire de l'homme sur tout l'Univers* (Paris: 1677) 288; 313.

⁸⁰ 'Ils vivent sans doute, et ils meurent aussi. Il faut donc qu'ils ayent en eux quelque principe qui les fasse vivre: et ce principe, de quelque nature qu'il puisse estre, est ce que nous appellons une Ame'. Ignace-Gaston Pardies, *Discours de la connoissance des Bestes* (1672) (New York – London: 1972) 185.

vital essence was, for since it was both material and of the subtlest possible constitution, most assumed it was beyond the reach of physical observation or description. A painter, however, in making everything he could out of animal lives just extinguished, did not need to limit his representational methods to those of natural history or philosophy. Instead, he worked as much sensuality and material depth as he could into the dead animals on display, and in doing so offered a compelling case as to why their lives mattered.

Selective Bibliography

- ALPERS S., *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago – London: 1983).
- ARIÈS P., *The Hour of Our Death*, trans. H. Weaver (New York: 1981).
- ARISTOTLE, *De anima*, in *The Works of Aristotle*, trans. and ed. W.D. Ross, 12 vols. (Oxford: 1963).
- BERNIER F., *Abrégé de la philosophie de Gassendi*, 7 vols. (1684) (Paris: 1992).
- BINSKI P., *Medieval Death: Ritual and Representation* (Ithaca, NY: 1996).
- BOAS G., *The Happy Beast in French Thought of the Seventeenth Century* (Baltimore, MD: 1933).
- BRUSATI C., *Artifice and Illusion: The Art and Writing of Samuel van Hoogstraten* (Chicago – London: 1995).
- , “Natural Artifice and Material Values in Dutch Still Life”, in Franits W. (ed.), *Looking at Seventeenth-Century Dutch Art: Realism Reconsidered* (Cambridge – New York: 1997) 144–157; 233–234.
- CARLINO A., *Books of the Body: Anatomical Ritual and Renaissance Learning*, trans. J. Tedeschi – A.C. Tedeschi (Chicago – London: 1999).
- CARTMILL M., *A View to Death in the Morning: Hunting and Nature through History* (Cambridge, MA – London: 1993).
- CAZORT M. – KORNEILL M. – ROBERTS K.B., *The Ingenious Machine of Nature: Four Centuries of Art and Anatomy* (Ottawa: 1996).
- COHEN L.D., “Descartes and Henry More on the Beast-machine – A Translation of their Correspondence Pertaining to Animal Automatism”, *Annals of Science*, 1,1 (1936) 48–61.
- COOK, H.J., “The New Philosophy in the Low Countries”, in Porter R. – Teich M. (eds.), *The Scientific Revolution in National Context* (Cambridge – New York: 1992) 115–49.
- CRAIG K., “*Pars Ergo Marthae Transit*: Pieter Aertsen’s ‘Inverted’ Paintings of Christ in the House of Martha and Mary”, *Oud Holland* 97 (1983) 25–39.
- , “Pieter Aertsen and the Meat Stall”, *Oud Holland* 96 (1982) 1–15.
- CUREAU DE LA CHAMBRE MARIN, *Traité de la connaissance des animaux* (Paris: 1662) (Paris: 1989).
- , *Le Système de l’âme* (1664) (Paris: 2004).
- DARMON A., *Les Corps immatériels: Esprits et images dans l’oeuvre de Marin Cureau de La Chambre* (Paris: 1985).
- DESCARTES RENÉ, *Discourse on the Method and Meditations on First Philosophy*, trans. E.S. Haldane – G.R.T. Ross, ed. D. Weissman (New Haven – London: 1996).
- , *Oeuvres philosophiques*, 3 vols. (Paris: 1963).
- FONTENAY E. de, *Le Silence des bêtes: La philosophie à l’épreuve de l’animalité* (Paris: 1998).
- FOUILLOUX JACQUES DU, *La Vénérie* (Paris: 1585) (Paris: 1928).
- FREEDBERG D., “Science, Commerce, and Art: Neglected Topics at the Juncture of History and Art History”, in Freedberg D. – Vries J. De (eds.), *Art in history/History in art: Studies in seventeenth-century Dutch culture* (Santa Monica, CA: 1991) 376–428.
- FRIEDRICH H., *Montaigne*, ed. P. Desan (Berkeley – Los Angeles – London: 1991).
- FRENCH R.K., “Harvey in Holland: Circulation and the Calvinists”, in French R.K. – WEAR A. (eds.), *The Medical Revolution of the Seventeenth Century*, (Cambridge – New York: 1989) 46–86.
- GAFFET A., sieur de La Briffardière (attrib.), *Nouveau traité de Venerie* (Paris: 1750).
- GUERRINI A., *Experimenting with Humans and Animals From Galen to Animal Rights* (Baltimore – London: 2003).
- HARRISON P., “The Virtues of Animals in Seventeenth-Century Thought”, *Journal of the History of Ideas* 59 (1998) 463–484.

- HASTINGS H., *Man and Beast in French Thought of the Eighteenth Century* (Baltimore, MD: 1936).
- HENDRIX M. L., "Of Hirsutes and Insects: Joris Hoefnagel and the Art of the Wondrous", *Word and Image* 11 (1995) 373–90.
- HENRY J., "The matter of souls: medical theory and theology in seventeenth-century England", in French R.K. – Wear A. (eds.), *The Medical Revolution of the Seventeenth Century* (Cambridge – New York: 1989) 87–113.
- HONIG E.A., *Painting and the Market in Early Modern Antwerp* (New Haven – London: 1998).
- HOUGHTON C., "This Was Tomorrow: Pieter Aertsen's *Meat Stall* as Contemporary Art", *Art Bulletin* 86 (2004) 277–300.
- KAUFMANN T.D. – KAUFMANN V.R., "The Sanctification of Nature: Observations on the Origins of Trompe l'oeil in Netherlandish Book Painting of the Fifteenth and Sixteenth Centuries", *J. Paul Getty Museum Journal* 19 (1991) 43–64.
- KEYES G.S. (ed.), *Masters of Dutch Painting: The Detroit Institute of Arts* (Detroit: 2004).
- KOSLOW S., *Frans Snyder: The Noble Estate; Seventeenth-Century Still-Life and Animal Painting in the Southern Netherlands* (Antwerp: 1995).
- LAMY GUILLAUME, *Explication mechanique et physique des fonctions de l'ame sensitive* (Paris: 1677).
- , *Réponse aux raisons par lesquelles le sieur Galatheau pretend établir l'Empire de l'homme sur tout l'Univers* (Paris: 1677).
- LE GUERN O., "Cureau de La Chambre et les sciences du langage à l'âge classique", *Corpus* 16–17 (1991) 17–25.
- MANDER KAREL VAN, *Den grondt der edel vry schilderconst*, trans. and ed. H. Miedema, 2 vols. (Utrecht: 1973).
- MONTAIGNE MICHEL DE, *The Essays of Michel de Montaigne*, trans. G.B. Ives, 3 vols. (New York: 1946).
- MORRIS K., "Bêtes-machines", in Gaukroger S. – Schuster J. – Sutton J. (eds.), *Descartes' Natural Philosophy* (London – New York: 2000) 401–419.
- MOXEY K., "The 'Humanist' Market Scenes of Joachim Beuckelaer: Moralizing Exampla or 'Slices of Life'?", *Jaarboek van het Koninklijk Museum voor Schone kunsten te Antwerpen* (1969) 109–187.
- , "Interpreting Pieter Aertsen: the Problem of 'Hidden Symbolism'" in *Pieter Aertsen. Nederlands Kunsthistorisch Jaarboek* 40 (1989) 29–39.
- MURR S., "L'âme des bêtes chez Gassendi", *Corpus* 16–17 (1991) 37–63.
- PAGEL W., *Joan Baptista Van Helmont: Reformer of science and medicine* (Cambridge – New York: 1982).
- PARDIES IGNACE-GASTON, *Discours de la connoissance des Bestes* (1672) (New York – London: 1972).
- ROBELS H., *Frans Snyder: Stilleben- und Tiermaler 1579–1657* (Munich: 1989).
- ROSENFELD L.C., *From Beast-Machine to Man-Machine: Animal Soul in French Letters from Descartes to La Mettrie* (New York: 1940).
- RUPP J.C.C., "Matters of Life and Death: The Social and Cultural Conditions of the Rise of Anatomical Theatres, with Special Reference to Seventeenth-Century Holland", *History of Science* 28,3 (1990) 263–287.
- SCHAMA S., *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (Berkeley – Los Angeles – London: 1988).
- SCHNEIDER N., *Still Life: Still Life Painting in the Early Modern Period*, trans. H. Beyer (Cologne: 2003).
- SMITH P.H., *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago – London: 2004).
- STECHOW W., "Jan Baptist Weenix", *Art Quarterly* 11 (1948) 181–198.
- STRIJK D.J., *The Land of Steven and Huygens: A Sketch of Science and Technology in the Dutch Republic During the Golden Age* (London – Boston: 1981).

- SULLIVAN S.A., *The Dutch Gamepiece* (Woodbridge-Suffolk-Totowa-NJ-Montclair, NJ: 1984).
- SULLIVAN S.W., “Jan Baptist Weenix: Still Life with a Dead Swan” *Bulletin of the Detroit Institute of Arts* 57, 2 (1979) 64–71.
- SWAMMERDAM JAN, *The Book of Nature, or, The History of Insects*, trans. T. Flloyd, rev. and ed. J. Hill, 2 vols. in 1 (London: 1758).
- VERBEEK Th., *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637–1650* (Carbondale – Edwardsville: 1992).
- VESALIUS ANDREAS, *De humani corporis fabrica* (Basel: 1543).
- WILSON C., “Descartes and the Corporeal Mind: Some Implications of the Regius Affair”, in Gaukroger S. – Schuster J. – Sutton J. (eds.), *Descartes’ Natural Philosophy*, (London – New York: 2000) 659–679.
- WOLLOCH N., “Dead Animals and the Beast-Machine: seventeenth-century Netherlandish paintings of dead animals, as anti-Cartesian statements”, *Art History* 22 (1999) 705–727.
- , *Subjugated Animals: Animals and Anthropocentrism in Early Modern European Culture* (Amherst, NY: 2006).

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