Zane Ma Rhea

Frontiers of Taste

Food Sovereignty, Sustainability, and Indigenous–Settler Relations In Australia

Springer

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Frontispiece: Food for Modern Australia, Original work by Rhonda Inkamala and Jennifer Inkamala (gift to the author for use for this research and book)

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This book is dedicated to the peoples of the past whose worlds collided during the period of the most recent colonization, in acknowledgement of their attempts to establish food security into the present.

It is also written for the people of the present and future in the hope that we can discover ways to feed ourselves that are ecologically sustainable. It is the view of this work that ecological sustainability is inextricably linked to the recognition of Indigenous Peoples' food sovereignty. It also acknowledges the debt we owe to Indigenous inhabitants of previously colonized worlds because of the legacy they have left through careful cultivation and management of important sources of food and nutrition.

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Stealing and exchange: Indigenous food knowledge and the settler state *The Sociology Association of Australasia* (TASA) Canberra, 3 December 2009.

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Chapter 1
Food Security and the Colonial Impact

Abstract Food has provided a scholarly lens for understanding the past in many disciplines: archaeology, anthropology, and history in particular. The field of food studies is complex because of the many conceptual boundaries it crosses: symbolic, materialist, ecological, structural, and educational. Each perspective both informs and hides elements of the role of food in human societies. In parallel, there are many ways to try to understand the enduring legacy of the recent period of British and European colonization of the planet. Most demanding, and rightfully so, is the resounding objection of those peoples whose lifeways were tragically impacted by colonization. Indigenous peoples, together with non-Indigenous political activists, social change agents, and social scientists have debated and theorized colonization and its negative impacts on Indigenous peoples but fewer have analyzed the emergence of these societies into global postcoloniality. This now recognized postcolonial state leaves a begging question of how to proceed with life, so disrupted, so 'messed up', and so different from the 1600s when explorers and merchants set out from their home countries and landed themselves into the lifeways of other people about whom they had no knowledge or understanding. This chapter introduces the topic, gives background and context to the study, and discusses using food as a methodological lens. First giving an introduction to nomenclature and language used in throughout the book, it then briefly introduces the idea of a comparative, sociohistorical method of analysis that allows theorization of food exchanges between strangers as an aspect of social exchange. The chapter then examines early food knowledge traces and establishes the argument for the usefulness of examining food to give insight into colonization and nationhood. The final section of this chapter provides a brief outline of the later chapters in the book.

Keywords Indigenous · Endogenous · Colonial · Postcolonial · Food sovereignty · Food security

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Food dealings are a delicate barometer, a ritual statement as it were, of social relations, and food is thus employed instrumentally as a starting, a sustaining, or a destroying mechanism of sociability[1]

Background and Context

Food has provided a scholarly lens for understanding the past in many disciplines: archaeology, anthropology, and history in particular. The field of food studies is complex because of the many conceptual boundaries it crosses: symbolic, materialist, ecological, structural, and educational. Each perspective both informs and hides elements of the role of food in human societies.

In parallel, there are many ways to try to understand the enduring legacy of the recent period of British and European colonization of the planet. Most demanding, and rightfully so, is the resounding objection of those peoples whose lifeways were tragically impacted by colonization. Indigenous peoples, together with non-Indigenous political activists, social change agents, and social scientists have debated and theorized colonization and its negative impacts on Indigenous peoples but fewer have analyzed the emergence of these societies into global postcoloniality. This now recognized postcolonial state leaves a begging question of how to proceed with life, so disrupted, so 'messed up', and so different from the 1600s when explorers and merchants set out from their home countries and landed themselves into the lifeways of other people about whom they had no knowledge or understanding.

Food has literally fed the transformational reality of colonization, while also being a signifier of cultural collisions, accommodations, and incommensurabilities, and a marker of fundamental change of land, of water, of human labor, in fact of entire ecosystems. Schiebinger and Swan poignantly describe it as transplanting nature.[2] Possibly, because of its universality, food has received scant attention in sociohistorical studies of colonization but, as this book will argue, the sociohistory of food provides an important lens by which to examine postcolonial Indigenous-settler relations allowing scope for the theorization of food sovereignty, food security, and ecological sustainability into the future.

Clearly, food is needed to meet the most basic of human biological needs, to keep the human body functioning. But it is so much more than that. Taste is an extremely important aspect of the whole process of eating, and therefore, of food procurement preferences. And as we will see, taste habits have been a determining feature of the sociohistory of food in Australia, and arguably, in other postcolonial states such as the USA, Canada, India, South Africa, Malaysia, and New Zealand.

[1] Sahlins (1972, 215).

[2] Scheibinger and Swan (2005).

A pioneer of gastronomy, Brillat-Savarin, in his seminal work[3] speculates that taste seems to have two chief uses:

1. It invites us by pleasure to repair the losses, which result from the use of life.
2. It assists us to select from among the substances offered by nature, those which are alimentary.

Analysis of historical records for this research suggests that the frontiers of taste were reached in the colonial period, where people of fundamentally different food habits collided in life and death circumstances. The endogenous foods of the inhabitants of Australian lands and waters that then became occupied by newcomers were nothing like what the newcomers were used to. As an evocative, and now iconic, example demonstrates, overland explorers Burke, Wills, and King were crossing the country of Yandruwandha (people of the Lakes Country of north-eastern South Australia near what is now called Cooper's Creek).[4] They had run out of their carried food provisions. They tried to eat *nardoo*, a seed that they had seen people collect from ferns, pounding it to make into damper. Indigenous Australian people tell the story of Burke and Wills dying 'in the supermarket' (King survived because of being cared for by the Yandruwandha) because they did not know how to prepared the *nardoo* correctly by roasting it. The frontiers of taste about what actually constitutes edible food collided on these lands and the contestation was a matter of life and death.

Few newcomers took pleasure in the endogenous food they saw people eating and, as the previous example shows, they had little knowledge of how to choose edible foods from what they saw. As quickly as possible, the newcomers began to establish foodways that were familiar to them, bringing their exogenous foods to new lands and waterways, a pattern that was to recur as the colonial frontier expanded across the landmass of Australia, often in spite of the ecological limitations of the food cultivars of newcomers in terms of longer term sustainability.

The descriptor *frontier* here needs some elaboration. I use this descriptor in the Australian sense of the word, as an expression of a shifting boundary space that existed over time and geographical location across the lands and waterways of Terra Australis, where British imperialism and Indigenous sovereignty collided. The earliest expression of *frontier* as contested space occurred as seafaring explorers and colonists exerted their presence around the edges of the Australian landmass also including Norfolk Island and Tasmania, established settlements where they were able, and then extended their reach overland towards the interior. I use the word *frontier* both to mark a contested boundary and, as historical evidence affirms, to emphasize there was little that was benevolent in the triumphalism of the expansion of the British colonial frontier. I have extended the conventional

[3]Brillat-Savarin (1825/2007, Meditation II).

[4]For more information on all Australian Indigenous Language groups used in this book, go to: http://austlang.aiatsis.gov.au/main.php and for an interactive map, see http://www.abc.net.au/indigenous/map/default.htm.

use of the descriptor *frontier* to think about how the food sovereignty of Indigenous people was ignored, belittled, and seemingly vanquished in what I have described as the food wars. The research presented in this book will provide examples of how the newcomers did this not only to satisfy their needs for familiar foods but also to mark out the claim of sovereignty for Britain. The basis of the British claim to the landmass of Australia was that it was empty in the sense that land was not being cultivated or farmed in any way that was recognised by the newcomers. As Walker notes, in the case of the claim for Van Diemen's land made at Risdon Cove in 1803, Lieut. John Bowen was instructed to 'to begin immediately to clear the ground and sow wheat and other crops; and to furnish full reports on the soil, timber, capabilities, and productions of the country.'[5] The cultivation of the soil for food was not simply an act of securing basic food needs. It stood in for something that British law recognised as evidence of ownership, something that established their right against any French claim and also that proved their legitimacy in the face of claims by people already living there, whose management and cultivation of the land and waterways did not provide the 'evidence' recognised under British law that these lands were not empty. The British and European styles of 'agriculture', from earliest colonial times in Australia, proved ownership.

Equally important to note, throughout this book I am constrained by the need to communicate in English, and use historical records written by people who rarely recorded sufficiently detailed information about Indigenous Australian and Torres Strait Islander people they encountered. Imposition of English language names created meaningless labels for inhabitants and the food they ate, and continue to eat. For example, *anangu* means person *qua* human in Pitjantjatjara language but now this language group are referred to as 'the Pitjantjatjara people', literally, the 'People people'. Troy notes the same issue with respect to Eora.[6] Like colonized peoples all over the world, this ongoing issue is still to be resolved. Where possible, when discussing historical records, I will include the name of the language group whose land and waterways are being discussed to aid the reader but with the cautionary that they are sometimes an approximation of where the explorers might have been at the time of the record being discussed. I do this because such language descriptors mark out extant *sui generis* rights that have not been extinguished by colonial impositions.

Food as a Methodological Lens

This book, then, goes to the 'guts' of the matter, bringing the tools of socio-historical analysis to the task of understanding food in the context of Indigenous—settler relations in Australia: first in pre-contact times, for both

[5]Walker (1989, 23–24).

[6]Troy (1994).

inhabitants[7] and newcomers[8]; second, through the frontiers of taste experienced by inhabitants and newcomers from time of first contact exploration to colonization; and third, through an examination of how these frontiers have been negotiated into the present.[9]

Important Clarifications About Nomenclature

This book tries to think beyond the colonial, anthropological, 'discovery' view, in the spirit of the challenge posed by scholars such as Pascoe,[10] Petersen,[11] and Gammage.[12] This is no easy task and you, as a reader, will notice that the simple word 'people' is often used where one might be used to a descriptor such as 'Indigenous Australian', 'Indigenous', or 'non-indigenous'. In doing so, this narrative contributes to the attempt by authors to unthink colonization in the language that the writer chooses to use. An important explanation is given by Gammage who rightly affirms that those now referred to as 'Aborigines' are people who lived, and continue to live, on this land and its waterways. He says: 'it seems unjust to deprive Aborigines of the most common term of humanity simply because Europeans turned up, especially at a time when they were the only Australians'[13] This is not a trivial point. Using the word 'people' as the generic word for the original inhabitants speaks to the fundamental perspectival shift necessary to think about how people fed themselves sustainably over millennia in the Australian environment. It speaks to the question about what food is, and how people have developed cultural practices that help to provide a steadying influence over what Pollan has usefully termed the omnivore's dilemma.[14] Interestingly, Cook's first recorded sighting attributes such personhood. He says[15]:

> *At this time we saw several* ***people*** *a shore, 4 of whom were carrying a small Boat or Canoe, which we imagin'd they were going to put into the Water in order to Come off to us; but in this we were mistaken* (emphasis mine).

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[7]The word 'inhabitant' is used in this book provides a generic descriptor to the people who lived on the country now called Australia. In specific examples, the clan or language name will be given where possible but, in broader discussion, the generic descriptor will be employed.

[8]The word 'newcomer' is used in this book provides a generic descriptor to the people who came to Australia during this period: explorers, officers, soldiers, convicts, religious, colonists, entrepreneurs, traders, predominantly male, and later settlers, including women. In specific examples, the type will be given but in broader discussion, the generic descriptor will be employed.

[9]The actual dates of first contact vary, reflecting the uneven expansion of the colonial frontier.

[10]Pascoe (2014).

[11]Petersen (1978).

[12]Gammage (2011).

[13]Gammage (2011, xix).

[14]Pollan (2006).

[15]Cook and Wharton (1893, 28 April 1770).

Sailing further up the coast, in May 1770, he records that, 'We saw smokes by day and fires in the night upon the Main, and *people* upon one of the Islands'.[16] More common were pejorative assessments of inhabitants that have shaped attitudes in postcolonial Australia, post hoc, hampering our ability to unthink a negative and cohesive view of inhabitants as a labelled category 'Aborigine'.

This pejorative and cohesive worldview has been strengthened by an insistence that the same word 'Indigenous' be used to describe both the people with their histories, languages and cultures and also to describe flora and fauna. This causes ongoing offense to Indigenous peoples of Australia. My attempt to correct this historical artefact has been to use the capitalized word 'Indigenous' only in reference to the original inhabitants of these later colonized lands and waterways. To discuss flora and fauna of the landmass now called Australia (but also of relevance to broader understanding), I will use the terms *endogenous*, meaning 'having an internal cause or origin'.[17] For all flora and fauna brought in by newcomer explorers and settlers, I will use the term *exogenous*, meaning 'having an external cause or origin'.[18] This approach allows an important conceptual distinction between flora and fauna from which edible food derives and the sometimes different and sometimes similar ways that inhabitants and newcomers enculturated, and therefore understood and used, those resources. The distinction also ends the confusion between endogenously derived foods and Indigenous peoples' uses and understandings of those foods, a clarification about cultural influence that holds important ramifications for both sociohistorical analysis and contemporary debates about food security.

A Personal Journey

The impetus for this book has come from personal experiences. As a non-indigenous person living in Australia, I was introduced to the foodways that I now understand to have been imported from other places. Back then, I thought the food I ate was Australian. I did not have much of a geopolitical understanding of food at all. My mother, the female relatives of my extended family, and my mother's female friends produced the food I ate. I remember them sharing recipes from the *Women's Weekly with each other*, drawing on each other's knowledge and the new information that was coming to them through advertising in its nascent days in Australia. My mother and her peers were modern women, encouraged to feed their families with new, modern food. As a child, I remember *Rice a Riso* (instead of rice), *Deb Instant Mashed Potato* (instead of potato), *Corn Flakes* and

[16]Cook and Wharton (1893, 27 May 1770).

[17]http://www.oxforddictionaries.com/definition/english/endogenous.

[18]http://www.oxforddictionaries.com/definition/english/exogenous.

Rice Bubbles for breakfast cereal, and *Tip Top White Bread* (instead of home baked brown bread). I was a child fed on these 'modern' foods cooked in new gas and electric ovens in the latest aluminium pots and pans.

My grandmother's experiences were significantly different.[19] Here was a woman who, through poverty and necessity, had a foraging approach to food. She would send her husband and children out to gather food from wherever they could find it. Bluey, the next-door neighbor would drop off rabbits that he had shot. Surplus foods were always being shared with neighbors and family. Even in poverty, surplus was insistently created and shared. We went to grandma's pretty well every weekend and there was an expectation that we would bring food and take different food home, having shared a large family meal together. The left over vegetables of the week became the bubble and squeak of Sunday. The left over roast beef became the lunchmeat for the week. My grandmother's and my mother's world collided in this space and, without really being conscious of it, this collision shaped my attitudes to food.

My friendship with Indigenous families started young. In the city, I saw many familiar elements similar to the poverty of my grandmother. Hunting and foraging for food were still prevalent amongst my Indigenous Australian friends and so too began my political education about the impact of loss of traditional estates, an issue that is now surfacing in public debate in Australia. Food sovereignty was a persistent focus of conversation, especially in built up areas like Redfern and The Rocks in Sydney. Indigenous Australian people in Redfern were starving. Young Black activists were distributing food to families and I was receiving a powerful lesson in the politics of food. Between the poverty of my grandmother and the poverty of my Indigenous Australian friends, there was also something else happening. The foods they were eating and sharing were drawn from a complex of sources that reflected the profundity of Indigenous—settler relations and food, being the transition from a broadly sourced diet of proteins, fats, fruits and vegetables to narrowly sourced diet: the hunted, fished, and foraged local, unprocessed foods, still freely available were further away and hard to get, and importantly required little cash, whereas a narrower range of industrialized supermarket foods were starting to be prevalent—processed, requiring cash, and convenient.

The third part of the development of my food consciousness and providing the foundational understanding for this book was leaving home, travelling to remote Australian locations where I was introduced to Indigenous Australian foodways that were (and substantially remain) outside the cash economy, and also to France and England at a time when concerns about industrial food production and its alternatives were starting to emerge: vegan and vegetarianism, the Slow Food movement, the wholefoods revolution in tandem with political struggles, Black Power, feminism, socialism, and gay liberation that were a powerful counter-culture to the

[19]My father's mother.

easy persuasions that my mother and her peers experienced in the soft introduction to the industrialized food world.

I was (re)introduced to so-called 'real food' that was reminiscent of my grandparents' era and I became critical of the food 'con' to which I believed that my mother's generation were subjected. I went 'back' to eating home baked brown bread, and brown rice. I attempted to avoid industrialized food through becoming vegetarian and then vegan, joining a food co-op in Bath and then running a vegetarian wholefood restaurant in Spain. The experience of being able to source local produce that was pesticide and antibiotic free, organic by nature, supporting local farmers, and to handle food that was energetically vibrant and sustainable was an important step in my understanding of contemporary artisanal foodways. I began to see that highly processed, industrialized food relied on money and the illusion of convenience, with symbolic status attached to its modernity, packed with additives and undergoing something of a transformation from being food to becoming a food-like product. Industrialized food production has been a significant driver of the capitalist economy providing more food but arguably with less nutritional value. I experienced my diet become increasingly carbohydrate-dependent as a vegetarian. Even so, I could barely escape the pesticide-ridden, petrochemical industry because supermarkets began to industrialize the vegan, organic world, challenging the economic viability of local wholefood shops and cooperatives and the accessibility of food that was high in nutritional value.

Later in life, I returned to eating meat, fish, and seafood, realizing that affordable vegetarian, vegan, and even organic, foods were now becoming as highly processed as other industrialized food products. I began to reorientate my understanding of food, asking questions about what foods might be truly endogenous to Australia and, of specific interest in this book, why the colonizing project in Australia had so totally rejected the endogenous for the exogenous. Thus, this research emerged to examine the interface of Indigenous Australian and settler foodways up to the present as a way of thinking through how the production of endogenous foods known to Indigenous Australian people might be re-examined as the basis for a national Australian cuisine that could be scaled up but that also addressed Indigenous Australian food sovereignty and enduring food security needs, be ecologically sustainable ('clean and green'), drawing on the best of Indigenous Australian and newcomer knowledge.

This study was also sharpened by Quayson[20] in his incisive and critical engagement with postcolonialism. He asks, 'Does the flow of historical events not have anything to contribute towards the constitution of subject positions *between* cultures?' [Emphasis in the original]. There has been considerable analysis of modes of historiography and Quayson proposes a useful descriptor 'subjunctive historiographies' which he describes as '…that which, even though seeming to be

[20]Quayson (2000, 65).

steadfastly engaging with the past, is actually providing models of agency for the present'.[21] I take up Quayson's challenge to examine:

> *...to what extent these subjective historiographies allow us to imagine the conditions of the colonized that takes account of both its indigenousness and its modernity without subsuming one category under the other. To overemphasize indigeneity is to lapse into febrile essentialism, while to write solely from the point of view of modernity is to swallow up indigenous perspectives under implicit evolutionary or developmental theoretical models that end up completely marginalizing the indigenous sense of history and how these might be thought to provide ways of relating to present day postcolonial concerns.*[22]

This book attempts to think through contemporary foodways in a country like Australia, examining Indigenous-settler relations, in order to develop an understanding of how contact between inhabitants and newcomers, be they seafarers exploring the coasts, convicts, military, administrative personnel, scientists and seed collectors living in the new penal colonies and settlements or overland explorers, was shaped and informed by food. Further, it seeks to understand how these engagements established a *modus vivendi* that reaches through into the present postcolonial, pluricultural world. Theorizing these contacts sociologically required first that a reading of the extant histories and ethnographies was undertaken. Methodologically, the goal was to access archival records in various locations in order to analyze contacts between Indigenous and non-indigenous people where the exchange of food or knowledge about food occurred, using a comparative, socio-historical lens. Of specific importance to this book, analysis demonstrated that there was something important happening in the synergistic engagement between inhabitants, explorers, and then new settlers about food knowledge. The transfer of food and food knowledge was multifaceted and the flow of food knowledge was occurring both ways. While these exchanges were neither symmetrical nor balanced, this book seeks to provide analysis and discussion of food as a focal point of activity. The specific aims of this book are:

(i) To identify food knowledge held by both the original inhabitants and the newcomers;
(ii) To identify the various mechanisms by which this information was gained by the other;
(iii) To determine patterns of acculturation, assimilation, and cross cultural negotiation through a documented range of experiences, and
(iv) To theorize the opportunities for the re-emergence of endogenous foods into the postcolonial Australian world and to their potential contribution to Indigenous Australian food security and broader ecologically sustainable foodways

[21]Quayson (2000, 48).
[22]Quayson (2000, 49).

The Use of the Comparative Socio-Historical Method of Analysis

Scholars in this field such as Pascoe[23] and Gott[24] have contributed to the development of the methodological approach also used in this study (see also, Ma Rhea and Russell[25] and Ma Rhea[26]). Gott observes that: 'The removal of Indigenous people from their traditional lands in south-eastern Australia has rendered it necessary to collect much of the information about plant use from nineteenth century sources.'[27]

A history is an account of some past event or combination of events. Historical analysis is, therefore, a method of discovering, from records and accounts, what happened in the past. In historical analysis, researchers consider various sources of historical data such as written and visual texts. Commonly used by historians to gain insights into social phenomena, Mahoney and Rueschemeyer observe that the 'big questions' examined by researchers in the social sciences have tended to generate propositions that are '…too general to be usefully applied in explanation. In viewing cases at a less abstract level, by contrast, comparative historical analysts are frequently able to derive lessons from past experiences that speak to the concerns of the present.'[28]

Reviewing Historical Texts, Painting, Maps, and Drawings

This work began by reviewing relevant literature on the history of food in the colonial period, food and culture, global perspectives on food, and the extensive ethno-botanical record, that of people and their food knowledge. A period of intensive research was then undertaken, using both online library databases and other resources such as those being collected and reproduced by Project Gutenberg Australia,[29] and also undertaking work in a number of archives, museums and libraries both overseas and in Australia including Cambridge University Library, Cambridge, the Public Records Office, and the Kew Gardens Herbarium, London, United Kingdom, and the Bibliotheque Nacional de France, Paris, France. The data were gathered to examine the complex, colonially shaped, food history of Australia by focusing on inhabitants and newcomers from first contacts, through the

[23]Pascoe (2014).
[24]Gott (1999).
[25]Ma Rhea and Russell (2014).
[26]Ma Rhea (2014).
[27]Gott (2008).
[28]Mahoney and Rueschemeyer (2003, 9).
[29]Go to: www.gutenberg.net.au.

expansion of the frontier, and finally into the present through examination of the foods that were, and continue to be, eaten.

It was found that there was ample record of interactions about food between inhabitants, explorers, and then the early settlers for about 35 years after the beginning of the establishment of a foothold in an area. Written evidence of interest in endogenous foods and the knowledge held by inhabitants about them rapidly diminishes as the explorers and entrepreneurial colonists make way for settlers. More familiar, exogenous foods become reliably available to the settlers and interest in endogenous food sources and Indigenous knowledge of those foods only re-emerges as a potentially valuable knowledge again in the late twentieth century because of niche marketability of 'wild', 'native', and 'Bush Tucker' and emerging environmental concerns about the sustainability of exogenous farming practices on the Australian continent.

There is virtually no written record of Indigenous Australian interest in the newcomers' exogenous foods. From the outset, as Baudin records[30]:

> *They were likewise very little interested in our biscuit and fresh bread. At the beginning, they took it and mimicked us pretending to eat it, but as soon as one left them, they threw it away.*

The impact of forced changes to the Indigenous diet as the frontier of exploration expanded and as inhabitants became corralled into the cash economy, continues to be felt into the contemporary era. Poor diet is one of the recognized significant factors affecting the health of Indigenous people, especially the adoption of some Western foods.[31] The argument made in this book, based on the evidence presented, is that while newcomers achieved a sort of food security based on their transplanted, exogenous food practices at the household level the original inhabitants have not yet achieved food security in the postcolonial state. In the words of Eyre,[32] written in 1840:

> *…the localities selected by Europeans, as best adapted for the purposes of cultivation, or of grazing, are those that would usually be equally valued above others, by the natives themselves, as places of resort, or districts in which they could most easily procure their food. This would especially be the case in those parts of the country where water was scarce, as the European always locates himself close to this grand necessary of life. The injustice, therefore, of the white man's intrusion upon the territory of the aboriginal inhabitant, is aggravated greatly by his always occupying the best and most valuable portion of it.*

With hindsight, I would make the argument that the semblance of food security achieved by newcomers as settlers has reached the limit of its sustainability and there are now serious concerns being raised at the national level about Australian food security into the future. This book, then, makes the case for national investment into research and development of both an artisanal and industrial

[30]Baudin (1974, 345).

[31]Australia (2000).

[32]Eyre (1845/2009, 186).

manufacturing base using endogenous sustainable foods, ensuring that Indigenous food security matters are simultaneously addressed in terms of intellectual property matters, enterprise development, and access to new markets.

Theorizing Food Between Strangers as Social Exchange

Pilcher examines the pivotal influence of what he terms the 'Colombian Exchange' in transforming the eating habits of all humans.[33] His examination of the Columbus voyage of 1492 reveals what he terms 'the immediate biological and environmental consequences of contact between Europe and the Americas' but he observes, '… these changes were far from uniform.'[34] A similar observation can be made in the case of Australia. Coming later in the processes of European colonization, newcomers already carried with them some of the successes and failures of previous colonial experiments. While the processes of colonial occupation were similar, the local impacts of complex food exchanges can be examined to give an understanding of the material and cultural factors identified by Pilcher as local ecological flexibility, productivity and compatibility, and palatability.[35]

Oral and written records demonstrate that in Australia inhabitants passed on their food knowledge, particularly as it applied to procurement of meat such as kangaroo, to Dutch, Swedish, Spanish, Portuguese, French, and British explorers who were uncertain how to obtain meat or find vegetables and fruits in the harsh Australian environment. Equally, the evidence suggests that inhabitants began to learn about and eat some of the foods brought by the newcomers. Knowledge of fish and seafood was common to both, providing valuable insight into cultural attitudes and habits about such a familiar type of food. Both diets were fundamentally challenged during the first contact period.

Early Food Knowledge Traces

The historical records and anthropological ethnographies, including both written and visual items, of the early coastal explorers to the landmass of Terra Australis[36] that came to be known as Australia demonstrate the puzzlement and confusion that

[33]Pilcher (2006, 19).

[34]Pilcher (2006, 19).

[35]Pilcher (2006, 19).

[36]This book discusses historical records that were often made without noting the local Indigenous place name, and before places were given European names. For ease of understanding, the now established European names will be used while recognizing that the record may have used a different name and certainly, the inhabitants had already existent names for these places. This is also the case for names of foods recorded.

existed among those from Europe when they first encountered inhabitants and tried to describe and explain what food they were looking at and finding. Consistently, and unsurprisingly, the first preoccupations of the seafarers on arrival at the new shore were to find supplies of fresh drinking water and edible food. Early records describe landing parties first asking for directions to clean water from people who were at the shore on arrival or, in the absence of people, following walking paths in order to find water from springs and what were described as 'Native wells'. Often, the person recording these events would also describe how the scouting party, or landing party, would look for the local inhabitants by following the direction of smoke from fires that could be observed from sea. The practice of using these 'traces of habitation' such as established walking tracks to lead to wells and springs and of using smoke from fires to locate local inhabitants in order to find out about food and geographical features continued as the explorers of the frontier moved away from the coast to inland Australia. In 1802, Baudin's journal notes record that off the coast of modern day Karratha, Western Australia that[37]:

> *We saw four or five large clouds of smoke on various parts of the coast. There is no doubt, therefore, that this area is inhabited, but the fires responsible for the smoke seem a little way inland* (See, for example, Fig. 1.1).

Many of the French natural history artists record such 'traces de habitations', preserving important information beyond the words left from the journals and papers of the coastal and overland explorers. In these first contact situations, there is little to suggest that explorers or settlers recognised any pre-existing *sui generis* rights to these resources being held by inhabitants but there is clear evidence that the newcomers recognised the tacit knowledge held by inhabitants about the whereabouts of water and edible food.

As the frontier moved inland, similar methods were used by overland explorers to locate sources of food and drinkable water. For example, Hume and Hovell noted that[38]:

> *2 December 1824 : A native path, bearing impressions of the feet of a considerable number of natives, including those of women and children, was here met with, extending in the same direction in which they were themselves desirous of travelling.*

Less is known of how inhabitants responded to these first contacts except through the extant written records of the newcomers and stories handed down through Indigenous Australian families and told to anthropologists and later lawyers responsible for making legal representations to the courts about Indigenous land claims. Traces of record suggest that inhabitants sometimes considered the newcomers as visitors and thereby extended customary access to their food and water. In most cases where there was not open hostility at first meeting, the inhabitants were reasonably curious to find out about the habits and customs of the visitors and some of their artefacts but there is consistent evidence to show that they

[37]Baudin (1974, 231).

[38]Bland et al. (1965).

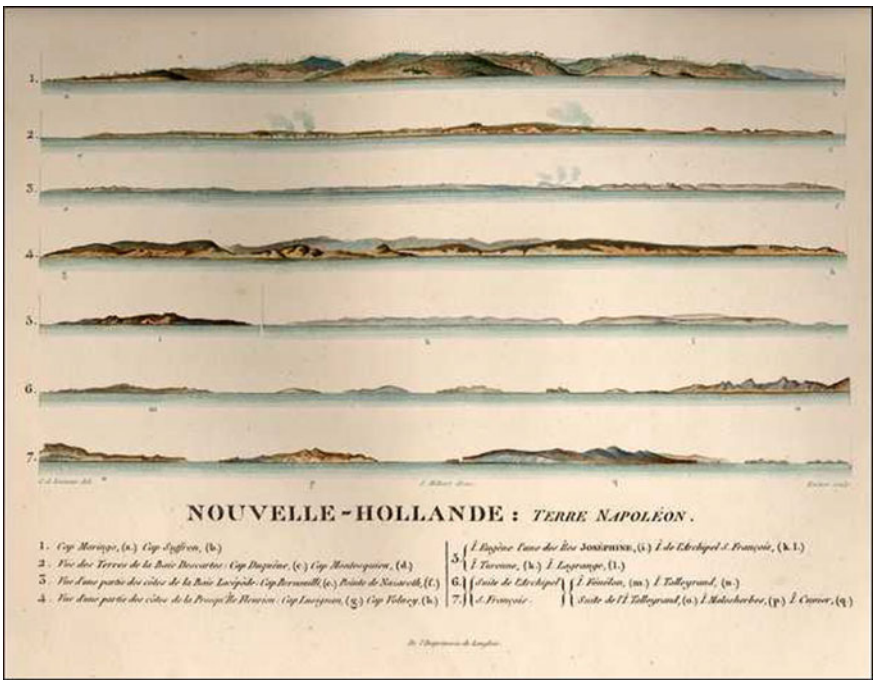

Fig. 1.1 *Nouvelle Hollande* [Seven Views of Western Australian Coast], (Fortier 1807). Image courtesy of the Bibliothèque Nationale de France and National Library of Australia

were completely disinterested in the food of the newcomers. This, as will be discussed later in this book, is a critical point in helping to understand the value that was given to food of the other in the various locations examined for this research.

Not surprisingly, examination of the historical records shows that food, its sources, methods of procurement, and of preparation, and ultimately its edibility and taste were all subjects of keen interest and concern for inhabitants and newcomers alike. Early examples in Australia demonstrate the curiosity and disgust that shaped the experiences of each other's food offerings during first contact encounters. By way of a brief example, Ransonnet described an attempted food exchange by the French landing party '*avec huit naturels*' (with eight Minang), recording that 'we shared coffee, biscuits and meat which they ate except for the fat which they left on the rock untouched'.[39] In another example, Flinders described his landing party sharing their food with Thawa or possibly Djirringany on the southeastern coast, offering rusks and being given whale blubber in return, an unpleasant exchange for both parties from the accounts.[40] There are traces of Indigenous Australian food knowledge amongst explorer records, for example, in South

[39]Ransonnet and Bevan (1803, 9).

[40]Flinders (1814, 10).

Eastern Tasmania (see Dyer[41]) suggesting that the local people ate birds, ferns, and kangaroo. Further specific examples of food knowledge, inaccuracies, and exchanges will be taken up in later chapters.

One of the most pressing issues for the new arrivals was their ability to recognise endogenous flora and fauna as edible food. Fish and seafood were, at least, recognizable, to the newcomers but other sources of meat, so familiar to inhabitants, were shocking to explorers and settlers. For example, inhabitants had been hunting, cooking, and eating kangaroo for tens of thousands of years, but people from Europe had not seen a kangaroo until 1629, and certainly none of the early explorers or settlers in the 'first contact' period knew anything about them (Fig. 1.2).

It is generally accepted that it was the Dutch explorer Franscisco Pelsaert,[42] in 1629 on the Abrolhos Islands off Geraldton (Western Australia), who first recorded a description of kangaroo. The first record of a European tasting kangaroo meat has been suggested to date back to 1793, when Spanish explorer Alejandro Malaspina pronounced it 'very good for sustenance, inferior to veal, but better than many others' (as recorded in Flannery).[43] According to linguist, Haviland, the word kangaroo derives from the Guugu Yimidhirr word 'gangurru' referring to a grey kangaroo.[44] The English settled on the spelling as 'kangaroo' and this is now used as a generic name for all the large macropod marsupials of that species, both reds and greys. The French followed the fashion established and recorded it as 'le Kangurou'. Cook is the first to record in English the sighting of kangaroos. He writes[45]:

> *Sat 23 June 1770: One of the Men saw an Animal something less than a greyhound; it was of a Mouse Colour, very slender made, and swift of Foot.Sun 24th June 1770: I saw myself this morning, a little way from the Ship, one of the Animals before spoke off; it was of a light mouse Colour and the full size of a Grey Hound, and shaped in every respect like one, with a long tail, which it carried like a Grey hound; in short, I should have taken it for a wild dog but for its walking or running, in which it jump'd like a Hare or Deer.*

Such early records provide the first glimpses of newcomers trying to make sense of animals they had never before encountered, by first comparing with those that were already familiar to them. This pattern of making comparison with the familiar had already seen a number of notable endogenous fauna being given European names. For example, in 1696 when Dutch explorer Willem de Vlamingh landed on the west coast of Australia, he described the print of large footed bird and named it 'ema' (Portuguese for long-legged Crane); by 1788, in Sydney this type of bird was shot by convict under instruction of the British Governor Phillip and named the

[41]Dyer (2007, 64-71).

[42]Pelsaert (1647).

[43]Flannery (2000, 123).

[44]Havilland (1979, 27).

[45]Cook and Wharton (1893).

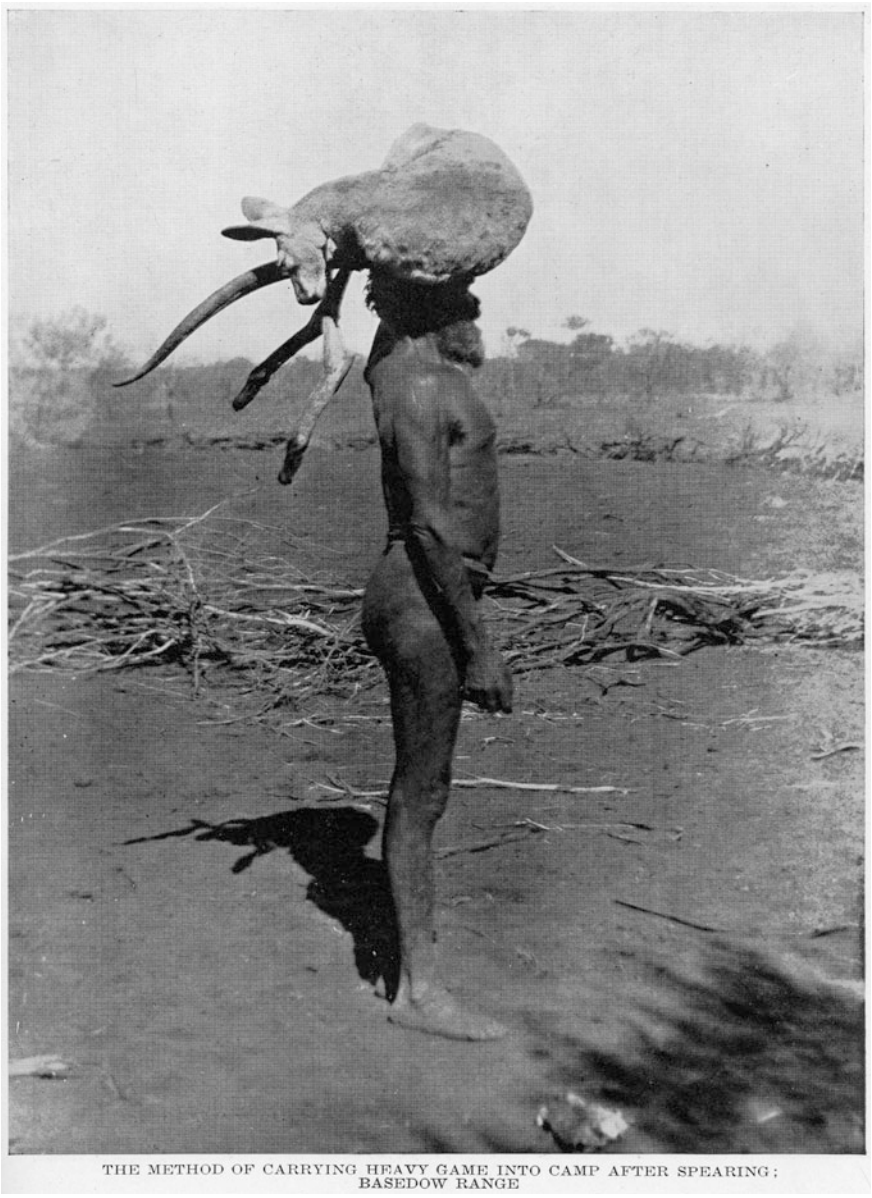

Fig. 1.2 *The method of carrying heavy game into camp* (Finlayson 1935). Image courtesy of Monash Rare Books Collection, Monash University

'NSW emu'. The practice of naming flora and fauna that looked similar to familiar things at home became common. Rare was the attempt to find out what the local name might be, and if a local name was learnt, it quickly became a replacement,

Table 1.1 Indigenous Australian population statistics[47]

State	Population prior to European contact	Lowest population/year	
NSW	48000	7434	(1901)
VIC	15,000	850	(1901)
QLD	120,000	22,500	(1927)
SA	15,000	4598	(1921)
WA	62,000	17,500	(1933)
TAS	4500	18	(1861)
NT	50,000	15,386	(1933)
Total	**314,500**	**78,828**	**(1933)**

generic name for all of the similar type (according to newcomer eyes) despite geographical location.

Interesting too, kangaroos, and other local birds and animals that formed part of the regular diet for inhabitants, came to be considered as 'game' in the mind of the newcomers; wild, difficult to hunt, and seemingly impossible to turn into farmed stock. In the ensuing chapters, these traces of early sensemaking and naming by explorers and settlers will be discussed in greater depth. Early practices, it seems, have persistently informed development of food and foodways choices as Australia has sought to develop its national identity based on a predominance of imported, exogenous food practices.

Foodways, Colonization and Nationhood

Madley observes that conflict between Indigenous people and settlers has commonly revolved around two interlocking economic issues: access to resources and control of territory.[46] Both groups needed natural resources and land to achieve their definition of economic success. Conservative estimates of the Indigenous population at first contact, first proposed by anthropologist Radcliffe-Brown and still accepted as the 'official' estimate suggest approximately 315,000 people as Table 1.1 demonstrates.

These numbers are now being debated, with recent estimates generally agreeing that a figure closer to one million is more accurate.[48] Smith et al. argue more forcefully that[49]:

[46]Madley (2004).

[47]Commonwealth of Australia (2007).

[48]See for example: Butlin (1983).

[49]Smith et al. (2008, 533).

The smaller the number of original inhabitants, the lower is the implied number of colonial casualties and the more defensible appears the claim that a people of the plough had a right to convert a seemingly empty land into a food basket for the empire. However, as scholars have come to understand the complexity of Indigenous Australian society and its management of plant and animal food resources, they have also gained a new appreciation of the land's carrying capacity.

Consideration of the 'official' statistics, even if out dated and politically motivated, provides a window into the catastrophic loss of life experienced by Indigenous Australians that occurred across Australia from first contacts on the frontier. The original inhabitants suffered shocking losses of life and in part, this can be directly attributed to them being denied access to traditional sources of food and clean water, creating the sort of food security crisis that directly correlates to poverty, poor levels of health, and inability to fend off disease and starvation.

As the British and other European explorers, colonists, convicts, and entrepreneurs, predominantly male, stayed in ever-increasing numbers, women arrived and they expanded their settlements, and increased their land and stock holdings, they thereby threatened the foundations and sustainability of each local food ecology. Inhabitants adopted many strategies to protect their traditional food and water sources. As might be discerned from the above observations, there was not one unified response by people to exogenous food and newcomer foodways and neither did the newcomers have a unified response to endogenous food or Indigenous foodways but it remains clear that Indigenous people suffered terribly during this time.

The analysis of the data indicates that there are points of comparison that enable a deeper investigation of contemporary knowledge about food in Australia. The matter of food security is of increasing importance to nation states and there are emerging international discussions that have begun to provide an important framework for analyzing and understanding the concept of food security in the postcolonial, highly globalized world. First is the work of the United Nations Food and Agricultural Organization (FAO), in its guidance of the development of the Rome Declaration[50] and its ongoing work on world food security.[51] A useful report in the Australian context has been developed by the Agriculture and Forest Industries Policy Branch, Victorian Department of Primary Industries.[52] This report, drawing from the work of the FAO and of the Department of Environment, Food, and Rural Affairs—UK (DEFRA)[53] has described a useful framework that will be employed here to analyze the food security context experienced by inhabitants and newcomers at various historical periods into this contemporary, globalized, highly industrialized time.

[50]FAO (1996).

[51]World Food Security: see for example, the resources available at: http://www.fao.org/monitoringprogress/resources_en.html.

[52]Goodall (2008).

[53]DEFRA (2006).

Goodall observes that the term 'food security' can be split into five broad contexts[54]:

> *Global food security – Production and distribution of sufficient food to meet fundamental nutritional requirements around the world*
> *National food security – A nation's ability to meet domestic food demand*
> *Household food security – A household or community's ability to access food (particularly healthy food), given physical and income constraints*
> *Emergency food security – Continuity of food supply in the face of sudden disruptions, andFuture food security – Given resource constraints and the threat of impacts from climate change, sustainable production of sufficient food to meet domestic and global food demands in the future.*

Of particular usefulness to this analysis will be the emergency, household/community, and national food security contexts within the broader context of global and future food security concerns.

Arising from this analysis there are a number of common themes that will be discussed in the relevant chapters: first, the impact of a subsistence worldview versus an industrialized worldview about food procurement and processing; second; incommensurable cultural practices reflected in contact episodes about food; and third, explaining the differential value attributed to various foods because of their exogenous or endogenous nature. Overall, consideration of these themes reveals a pattern of enduring legacy of first contact on the relative food security of Indigenous Australian and newcomer contexts over time and the impact of these experiences on the shape of contemporary Indigenous Australian and settler food knowledge towards a sustainable and secure food context in modern Australia.

Structure of the Book

In the first section, 'Food and Food Knowledge', Chap. 2 frames the analysis of historical records relating to the foodways of Indigenous people and Chap. 3 analyses journals and reports of sea and overland explorers prior to colonization and until the early nineteenth century for what was recorded about the foodways of inhabitants during these early, often brief, contacts. This is followed by Chap. 4 that examines what food seafarers brought with them on their journeys and what they found to be edible as they explored the coasts of this new land. Chapter 5 examines the collision of human need for food in the early settlements and the resultant emergency food security context thus created.[55] Analysis suggests that there was significant starvation that occurred for both inhabitants and newcomers but for different reasons.

The next section 'Expanding the Frontiers of Taste' examines food practices during the expansion of the frontier in a number of locations that provide insight

[54]Goodall (2008, 1).

[55]Goodall (2008, 9–10).

into the variety of factors influencing contemporary postcolonial Australian foodways. Chapter 6 examines the expansion out from Sydney through the letters and journals of early explorer parties, seed collectors, and early colonial settlers. Chapter 7 suggests that the French had a distinct approach to their exploration of Australia and food is an important aspect of their encounters with Indigenous people. Drawing on available materials, this chapter tells a story that reaches into contemporary debates about food and food sustainability in global cuisine. Through the explorer diaries of overland explorers, Chap. 8 traces the development of the food provisioning practices of overland explorers as they moved inland. These chapters include localized studies of the experiences of people trying to establish food and household security as explorers and early settlers traversed their estates bringing livestock and new ideas. As the frontier expanded, so too did the frontiers of taste for inhabitants and newcomers alike.

The final section, 'Food and the Making of Modern Australian Cuisine' brings the monograph into the contemporary era, offering concluding analysis of the development of a modern Australian cuisine. Addressing the question of what constitutes an Australian national cuisine in the postcolonial era, the chapter raises questions about Australia's dependence on highly industrialized, exogenously derived, food like products. Drawing on arguments put forward in this book, it examines the potential of endogenous flora and fauna to enter into the food economy examining the viability of current approaches to artisanal 'wild', 'native', 'Bush Tukka' and Indigenous-controlled food businesses, offering innovative thinking about Indigenous food sovereignty, sustainability, scalability, and edibility for the future food security context.

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Part I
Food and Food Knowledge

This section, 'Food and Food Knowledge' comprises three chapters. Chapters 2 and 3 provide insight into the foodways practices of inhabitants of a large land mass surrounded by oceans, and numerous smaller islands dotted around its coastal fringes. Prior ot colonization, little is now known of the food practices of a great diversity of peoples except in traces recorded in early journals and explorer logs of newcomers to this part of the world. Chapter 2 discussed how to frame the foodways of people prior to colonization and Chap. 3 provides a broad analysis of what people were eating, how they were gathering food, and how they were preparing it.

Chapter 4 then moves to an examination of the foodways of the early European and British sea explorers, with Cook being the most pivotal, as they began to chart the landmass and its surrounding waterways of somewhere they only knew of as the Great South Land or *Terra Australis*. As their knowledge of available foods grew, post-Cook the food practices of these sea explorers and the food cultivars and livestock that they brought to this part of the world are then analysed and discussed.

Chapter 2
Framing Indigenous Foodways Prior to Colonization

Aspects of this chapter have been published as: Ma Rhea (2013, 2014).

Abstract This Chapter of first section of this book, 'Food and Food Knowledge', frames the analysis of historical records relating to the foodways of Indigenous people. It focuses on what is known about food cultivation and dietary practices of people before newcomers explored and then settled on the lands and waterways of inhabitants, now known as Indigenous Australian and Torres Strait Islander peoples. A matter of importance is central to the analysis offered in this chapter. Explorers and early colonial diarists created a fiction that the inhabitants they encountered were in some indeterminate way less than human. Commonly described as natives, savages, and 'les naturels', the recorded observations of the newcomers were overloaded with interpretations that tried to fit inhabitants into an eighteenth and nineteenth century British or European worldview that was collapsing under the weight of the very colonial expansion they were causing. Old European worldviews were collapsing because of colonial encounters with Indigenous peoples around the world. This chapter argues that at the time of first contact, sustainable equilibrium had been reached, as evidenced by the fact that communities exited, and are known to have existed continuously in Australia since the late Pleistocene era (between 2000 and 3000 generations of people). Using food security as the focus, the chapter then gives a detailed examination of the edible foods used by people across the various ecosystems that comprise the modern Australian landmass.

Keywords Indigenous food knowledge · Edible foods · Australia

> *Their treachery, which is unsurpassed, is simply an outcome of their savage ideas, and in their eyes is a form of independence which resents any intrusion on THEIR land, THEIR wild animals, and THEIR rights generally. In their untutored state they therefore consider that any method of getting rid of the invader is proper.*[1]

[1]Cook and Wharton (1893, Chapter 8).

Z. Ma Rhea, *Frontiers of Taste*, DOI 10.1007/978-981-10-1630-1_2

This chapter focuses on what is known about food cultivation and dietary practices before newcomers explored and then settled on the lands and waterways of inhabitants, now known as Indigenous Australian and Torres Strait Islander peoples. A matter of importance is central to the analysis offered in this chapter. Explorers and early colonial diarists created a fiction that the inhabitants they encountered were in some indeterminate way less than human. Commonly described as natives, savages, and 'les naturels', the recorded observations of the newcomers were overloaded with interpretations that tried to fit inhabitants into an eighteenth and nineteenth century British or European worldview that was collapsing under the weight of the very colonial expansion they were causing. Old European worldviews were collapsing because of colonial encounters with Indigenous peoples around the world. Established classifications of the European world by bloodline, breeding, status, class, and gender were being reconfigured by race through the popular works of those such as Rousseau[2] and Darwin.[3] Others veered into the realms of fantasy following the very popular ideas of Diderot[4] who is attributed with promoting the view of Indigenous people as 'noble savages'. As observations flowed back to England and France through the writings of earlier explorers and settlers in the Americas and of those exploring Australia and the Pacific such as Cook,[5] D'Entrecasteaux,[6] Dampier,[7] and Bougainville,[8] the views formed of inhabitants became self-perpetuating and mutually reinforcing even as it was challenging the foundations of British and European worldviews. Cook perhaps most insightfully records in his journal that:

> *...they think themselves provided with all the necessarys of Life and that they have no superfluities.*[9]

This view is one that is still held by the original inhabitants and one that challenges orthodoxy about progressive evolution so favored by the modernist project that was brought to Terra Australis (Fig. 2.1).

One of the enduring challenges of researching about the foodways of people living on the landmass of Australia prior to British colonization is that there are scant traces and fragments of insight on which to base an understanding of this important topic. First, and foremost, I would like to acknowledge the stories that have been shared with me over my life by Indigenous Australian people about foodways of the past and present. Of note, in some cases families still hold intimate knowledge of their traditional estates and waterways. While this book focuses on

[2]Rousseau (1762), See also: Hannaford (1996).

[3]Darwin (1845/1997).

[4]Diderot (1772).

[5]Cook and Wharton (1893).

[6]Labillardière (1800).

[7]Dampier (1703).

[8]Diderot (1772).

[9]Beaglehole (1969, 399).

Fig. 2.1 *A large Tasmanian canoe seen on the eastern shore of Schouten Island* (Fortier 1807). Image courtesy of the Bibliothèque Nationale de France and National Library of Australia

food, people's knowledge goes beyond what was edible and many times in my discussions with descendants of ancestors of particular places. The stories they shared about food were given in a much expanded, ecologically sustainable, and aware context within discussions about seasonality, selection, and management of food resources, of their medicinal properties and of distinct cultural practices about particular food avoidances and food sharing responsibilities. This has been in sharp contrast to marked levels of disinterest shown by descendants of newcomers for whom historical understanding of their food, foodways, nutrition, and their dietary practices hold little interest. Even so, matters regarding those of Australian Indigenous people remain decontextualized and often founded on ignorant curiosity, disgust, and rejection since their ancestors first met inhabitants of these lands. Later chapters will provide discussion of the different contact experiences.

This chapter argues that at the time of first contact, sustainable equilibrium had been reached, as evidenced by the fact that communities exited, and are known to have existed continuously in Australia since the late Pleistocene era (between 2000–3000 generations of people[10]). Traditional owners can recount events that occurred long into the past, as the land was forming and reforming, corroborated by recent studies that date between 58,000 and 75,000 years in some places according

[10]Mulvaney (2002), Smith (2002).

to new methods of analysis discussed by Lourandos and others.[11] Recent studies that involve Indigenous Peoples in research about their traditional foodways (see for example the excellent work being undertaken by Kuhnlein Erasmus and Spigelski and the Centre for Indigenous Peoples' Nutrition and Environment) amply demonstrate that 'the dimensions of nature and culture that define a food system of an Indigenous culture contribute to the whole health picture of the individual and the community—not only the physical health but the emotional, mental and spiritual aspects of health, healing and protection from disease'.[12] Outsiders and newcomers to Australia did not have access to inhabitants' cultural understandings of the ecological context with which they were confronted, had little or no knowledge to draw on to understand what they were seeing, and as unwanted intruders were rarely invited into inner community knowledge about something so vital as food. As Sahlins observes 'food has too much social value—ultimately because it has too much use value—to have an exchange value'.[13]

This ignorance of something as fundamental as edible local food is replete in the historical records left by newcomers, whether seafaring or overland explorers, or later diarists of colonial life. Quoting such resources does not imply that these views were 'correct' in an absolute way. In this book, such sources are treated as being an accurate reflection of the colonial mindset, views and opinions that generated a cohesive, often corrosive and disparaging, narrative about endogenous edible food and Indigenous peoples who ate such foods. Following the method adopted by Pascoe[14], I have quoted from such resources despite the limitations of their worldview, to undertake a critical analysis of newcomer responses to endogenous edible flora and fauna, and Indigenous knowledge about such resources where that knowledge was recorded, responses that I will argue continue to shape contemporary understandings of food in the postcolonial, globalized world (Fig. 2.2).

By way of example, Heeres records one of the earliest reflections by Janzoon about his responses to what he saw on arrival to the Great South Land. It is notable both as an historical artefact and also for the lack of knowledge held by Janzoon's explorers about what foods were available to inhabitants, how they were procuring food, or how such foods were being prepared[15]:

> *The land between 13° and 17° 8′ is a barren and arid tract, without any fruit-trees, and producing nothing fit for the use of man; it is low-lying and flat without hills or mountains; in many places overgrown with brushwood and stunted wild trees; it has not much fresh water, and what little there is, has to be collected in pits dug for the purpose … The natives … chiefly live on certain ill-smelling roots which they dig out of the earth…*

[11]Lourandos (1997, xv), Hiscock (2008).

[12]Kuhnlein et al. (2009, 3).

[13]Sahlins (1972, 218).

[14]Pascoe (2014).

[15]Heeres (1899).

Fig. 2.2 *Fishing No. 2* (Orme 1814, 165). Image courtesy of Monash Rare Books Collection, Monash University Library

Indigenous Australian Food Security in Pre-contact Australia

Records such as these were the stuff of school curricula, newspaper speculations, fantasist diaries sent back to England, Europe, and America, and of university history courses across the colonial world. Despite their problematic nature, for this project, such records also leave glimpses, carefully teased out, of what inhabitants ate prior to the arrival of newcomers. There are some oral histories being shared by Indigenous people about the knowledge that their ancestors held about their traditional estates and of the food and water sources on which their ancestors, extended families, and clan groups relied on to live but they are not yet generally available.[16] I have had the privilege to be 'on country' with traditional owners[17]

[16]Gammage (2011), Zola and Gott (1992), Gott (2008).

[17]*Traditional owners* is a descriptor used for Indigenous Australians who have had their claim to Native Title right recognized. It pertains to a particular part of 'country' that has been legally recognized as previously belonging to their ancestors and whose right to that land was not extinguished by subsequent legal mechanisms overlaid by the British and then Australian legal frameworks.

who can trace their ancestral rights to a place back 40–60,000 years and in some cases longer. Broome speaks in numbers of generations in Victoria, noting, for example, that 'At least 1600 generations of Indigenous Australian people have made continuous life in Victoria…'[18]

There has been considerable scholarly work on many of the aspects of this complex space of food sovereignty as it intersects with food procurement and production methods used by inhabitants prior to the arrival of newcomers from Britain and Europe, especially in archaeology, anthropology, and history disciplines.[19] My sociological training has led me to ask questions of the ever-present now, about how inhabitants of this vast continent managed their food resources despite the absence of farms, petrochemicals, supermarkets, and slick advertising. Over many years, I have been invited to, connected to, and shown how to, experience a living, breathing relationship with 'country', always present, and all encompassing, and always with available edible flora and fauna. Even with these precious experiences, it is difficult to write about such foods without resorting to comparisons about the differences between subsistence and industrialized, capitalist food production, between nomadic and sedentary populations, and many other binary distinctions that abound in this space of intellectual work. Past historical, archaeological, and anthropological work has predominantly interpreted Indigenous Australian knowledge about edible food practices, without necessarily providing necessary corroboration from knowledgeable Indigenous people. More recent research such as that being undertaken about Australian Indigenous foodways by Briscoe, Cahir, Gott, David, Lourandos, Keen, McNiven, Mulvaney, Pascoe, and Russell amongst others starts to provide some answers in their collaborations with Indigenous Australian and Torres Strait Islander families, clans, and nations. In the future, there is the potential for accurate information to be given into the public sphere by traditional owners of handed down oral histories, of 'history in person'.[20] It forms an emerging field of scholarship whereby an understanding of living from country might arise. Food security for what were termed 'hunter and gatherers'[21], wanderers, or nomads who are now more internationally acknowledged as Indigenous peoples, implies a general recognition of their land, civil, and property rights over an area, complex systems of governmentality, inherited and ongoing environmental knowledge, including an intimate knowledge of edible foods and clean water sources.[22] Food knowledge was not uniform across regions, or indeed within language groups. As will be discussed more fully in later chapters, coastal

[18]Broome (2005, xviii–xix).

[19]See, for example, Keen (2004), Lourandos (1997).

[20]Holland and Lave (2001).

[21]Lee and Daly (1999).

[22]See for example: Bonney (1939, 2004), Goddard and Kalotas (1985/2002), Turner-Neale et al. (1994).

dwelling people had access to a broad range of foods from land, waterways, and sea. Moving further inland, the estates were very large and the food and water resources were harder to access because of the unpredictability of rainfall and the general harshness of the land. Berndt and Berndt surmised that[23]:

> *In the Aborigines' hunting and gathering economy ... Their exploration of the Australian continent was channelled into exploration of the specific environments in which they finally settled. In each region, the combination of terrain, climate, and plant and animal life was different to some extent. The Aborigines knew all about their surroundings, not superficially, but through patient, diligent investigation and study. They learned what was edible and what was not, or what could become edible once it had been treated in certain ways.*

Brock makes a similar point, noting that[24]:

> *In pre-colonial times the Arrernte, Pitjantjatjara, and Yangunytjatjara survived in regions of unpredictable rainfall by moving to sources of water and food. They consumed food as it was procured, preparing and distributing it according to their own protocols, rather than eating set amounts at regular times during the day. The Arrernte lands were, however less arid than the central and western deserts where many Pitjantjatjara lived. Few accounts of pre-colonial food production exist. Those that do, document careful use of resources with periods of shortages.*

The life history of Moses Tjalkabota, translated from Arrente by Albrecht[25] provides many references to Tjalkabota's extensive food knowledge. Brock summarizes these in the following[26]:

> *[Tjalkabota] recalled the women gathering seeds which they ground and mixed with water, the fish which were caught in water holes and cooked over the fire, and the emus and other game brought back to camp by his father. Tjalkabota described a journey east from their main camp at Laprapuntja on Ellery Creek to a place known as Tnatjera (Owen Springs Point) where the family feasted on abundant food for two months, including putata (small grey wallabies), grubs from the witchetty bush, kura, knaia, kangaroos and possums. The children were taught which foods they could eat and which they should leave. Downstream from Laprapuntja lay an area where yelka (a small onion-like bulb and a staple food in the region) grew. It could sustain a large gathering of people for several months. Rain-filled claypans provided drinking water in good seasons.*

Given the expert knowledge held by people about reliable sources of food and drinking water, Pascoe's challenge to the field is that we begin to take seriously that the original inhabitants of the Australian landmass were agriculturalists who managed their vast estates in sustainable, innovative, and purposefully selective

[23]Berndt and Berndt (1964, 10).

[24]Brock (2008, 20).

[25]Albrecht (2002, 237–244).

[26]Brock (2008, 67).

ways.[27] He rejects the primitivist, 'hunter gatherer' label of the colonial narrative that has served to diminish the rights and recognition of people over their lands and waterways, something that has also been widely debated by other contemporary scholars such as McNiven and Russell, David and Denham, Lourandos and Keen.[28] While I am sensitive to this approach, my research suggests that it is only in the mind of the colonial narrative that there is a revolutionary triumphalist view of progress that hierarchically places hunters and gathers at the bottom of the evolutionary pile and western industrialized agricultural food production methods at the top (Fig. 2.3).

Rather, I would argue here that hunters and gatherers, by whatever descriptors were, and remain, highly skilled in the management, procurement, and preparation of local, fresh, highly nutritious, delicious edible food beyond the capacity of most people who rely on their highly processed food being provided for them by a profit-driven, global, industrialized food system. Each endogenous, ecological context has shaped a variety of human responses to food cultivation and procurement ranging across many techniques of food resource management, collection, propagation, preparation, and distribution depending on a complex interaction between culture and landscape (see, for example, Langton[29]). Colonization brought significant exogenous foodstuffs into the Australian endogenous context, the legacy of which remains to the present (Chap. 4). A outlined above, this chapter will focus on the *endogenous* as the theoretical starting point for examining, in Chap. 3, what inhabitants did to create, manage and prepare what was endogenous, edible flora and fauna.

Before the sea explorers came, there is evidence of significant variety in settlement patterns of people as told in ancestral stories and through explorers' early contact records. These data suggest that some communities lived on relatively small estates and were more sedentary and others had large estates, travelling around their lands and waterways to care for them as the availability of foods and water changed with the seasons. Therefore, I follow Pascoe in rejecting the negative connotations of the descriptor 'hunting and gathering' but will employ it as useful to specify techniques of food procurement in the English language, as imprecise as it is and as pejorative at it has become (see also Berndt and Berndt[30]).

Little is known about what modern science has termed 'nutritional value' of the foodways of people in Australia in the time before colonization. Some early explorer journals, colonist diaries, and anthropological studies examined food consumption practices as far as was possible to observe given the nature of the

[27]Pascoe (2014).

[28]McNiven and Russell (2005, Chapter 2), David and Denham (2006), Lourandos (1997), Keen (2004).

[29]Langton (1998).

[30]Berndt and Berndt (1964, 13–17), Gammage (2011).

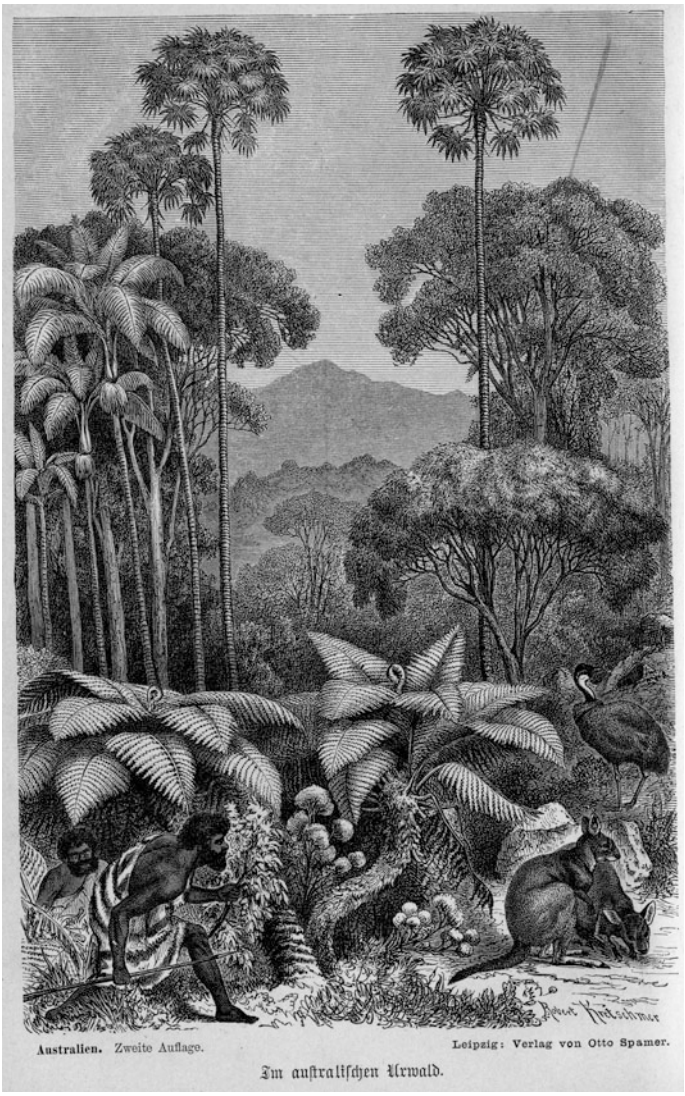

Fig 2.3 *Im australischen Urmwald (In northwestern Australia)* (Christmann and Oberländer 1880, 271). Image courtesy of Monash Rare Books Collection, Monash University Library

activities but, as will be discussed throughout later chapters, the worldviews of these outsider/observers were poorly adapted to understanding what they were looking at. As Petersen observes[31]:

[31]Petersen (1978, 25).

> *...the genetic evidence suggests that people of the Western Desert have long been isolated, so it may be assumed that not only is the subsistence adaptation of great antiquity, but that it was fully adequate to maintain the population without supplementation by migration. This is important because some medical writers appear to believe that because the levels of nutrition differ to our own, it was inadequate, although they give no substantive reasons for this judgement.*

Even though written records of first contact were generally ignorant and/or pejorative, they will be used here provide opportunity to evaluate observations with the newer perspective demanded by those such as Pascoe, Gammage and Petersen in mind, that assumes profound Indigenous Australian agency in their maintenance of themselves and their estates. Such an approach also gives insight into the nutritional value of endogenous food sources about which 'modern' Australia is only now becoming aware.

Food, Food Gathering, and Food Preparation Traces: Categorizing Edible Foods

In a classificatory sense, questions arose as I tried to develop a way of writing about inhabitants' knowledge about what they ate without demeaning the expert knowledge they held (knowing as I do how hard it would be for me to feed myself day after day in all weathers from birth until death). Thomas opines that: 'Broadly speaking, the Australian has four kinds of nourishment, fish, flesh, grubs and insects, and vegetable; but the supply of these varies very largely in different parts of the country'.[32] After analysis of the data and consideration of myriad classification methods, I found that there were a greater number of categories than Thomas suggested. Turner-Neale et al. for example, use[33]:

Kere	*food from animals; meat, fat, offal, blood*
Merne	*food from plants; fruits, vegetables, seeds*
Ntange	*edible seeds*
Tyape	*edible grubs and insects; witchetties, cicadas*
Ngkwarle	*honey-like foods; wild honey, gum*

They also reserve a special section for *Kwatye* (water), which includes 'all forms of water including rain, dew and running water. It is also used to describe related things such as frost, ice and steam as well as sources of water such as rainclouds,

[32]Thomas (1906, 88).

[33]Turner-Neale et al. (1994, viii).

rockholes, and soakages in creeks'.[34] Grey provides an example of his attempts to classify endogenous edible foods drawn from his observations of inhabitants on his travels in Western Australia[35]:*Six sorts of kangaroo; Twenty-nine sorts of fish; One kind of whale; Two species of seal; Wild dogs; Three kinds of turtle; Emus, wild turkeys, and birds of every kind; Two species of opossum; Eleven kinds of frogs; Four kinds of freshwater shellfish; All saltwater shellfish, except oysters; Four kinds of grubs; Eggs of every species of bird or lizard; Five animals, something smaller in size than rabbits; Eight sorts of snakes; Seven sorts of iguana; Nine species of mice and small rats; Twenty-nine sorts of roots; Seven kinds of fungus; Four sorts of gum;Two sorts of manna; Two species of by-yu, or the nut of the Zamia palm; Two species of mesembryanthemum; Two kinds of nut; Four sorts of fruit; The flower of several species of Banksia; One kind of earth, which they pound and mix with the root of the mene; The seeds of several species of leguminous plants.*

In addition to the lists left by explorers and later scholars, there has also been considerable detailed archaeological work on the numbers of food items, both plants and animals, known to have been eaten by various Australian Indigenous groups. For example, McNiven and Hitchcock provide a table listing some 450 different species of marine animals known to have been eaten by Torres Strait Islanders.[36]

After consideration of a number of sources, I have organized the materials by: flesh, fish, shellfish and molluscs, grubs and insects, vegetables and seeds, fruits and sugars, eggs, fungi, salt, and water in order to give a general but informative discussion of the range of foods eaten at the time that explorers were first encountering inhabitants. Of note, many of these flora and fauna remain available into the contemporary period but as yet have been disregarded by the general population of Australia in favor of highly industrialized, globally sourced, locally available food resources. Table 2.1 (below) provides a broad framework for examining the foods that were known to be eaten that will be referred to in the following chapters.

Questions arose about how to classify food procurement methods, as yet unresolved. For example, why is catching fish not hunting or gathering except if it is something like shark or whale hunting? Why is using a net to fish or catch birds across a river not a gathering practice? (Fig. 2.4).

What makes edible food 'wild', 'native' or to be considered 'game'? Do these descriptors only arise in distinction with foods produced through industrialized agricultural processes? There are clearly worldview biases in these somewhat arbitrary categorizations, so care has been used when employing such descriptors. The above table has been crafted through analysis of contemporary understandings

[34]Turner-Neale et al. (1994, 50–53).

[35]Grey (1841/1983, Vol. 2, 169–170).

[36]McNiven and Hitchcock (2004, Appendix 3).

Table 2.1 Framework for examining Australian endogenous edible foods

Examples			
Flesh	Animals	Kangaroo Kangaroo rat Flying fox Wombat Anteater/echidna Short-legged bandicoot	Dingo Opossum Flying squirrel Quokka Quoll Numbat
	Reptiles	Crocodile Tortoise Snake	Lizard Turtle Frog
	Birds	Emu Duck Swan Galah Pelican	Pigeon Turkey Mallee fowls Small birds Wedge tailed eagle
Fish and related	Fish	All fish	
	Other	Oysters Cray fish Yabbies Shrimps	Water rats Lobsters Mussels
Grubs and insects		Caterpillar Moths	Witchetty grubs
Vegetables and seeds		Nardoo Grass Seeds Pittosporum Acacia Yams	Cumbungi Murnong Water plant bulbs and stalks Wild onions Bracken roots
Fruits and sugars		Quandong Bush tomato Berries Lerp Honey ants	Nectar Manna Honey Tree exudates
Eggs		All (including turtles)	
Fungi			

Compiled from sources such as: Eyre (1845/2009), Stranger (2004, 2009), Swan Hill Aboriginal Learning Centre (2004), Zola and Gott (1992), Thomas (1906), Andrews (1862), Goddard and Kalotas (1985/2002)

considered alongside historical records written by newcomers who did not know what they were seeing. It has been developed with an understanding that historical records barely do justice to the range of possible food sources that were available to people. Even so, when read alongside contemporary knowledge, much of what was recorded has been found to align with contemporary Indigenous narratives, where such information is being shared. Therefore, the next chapter will extrapolate from these records to examine the foodways of the people living on the coasts of the landmass of Terra Australis.

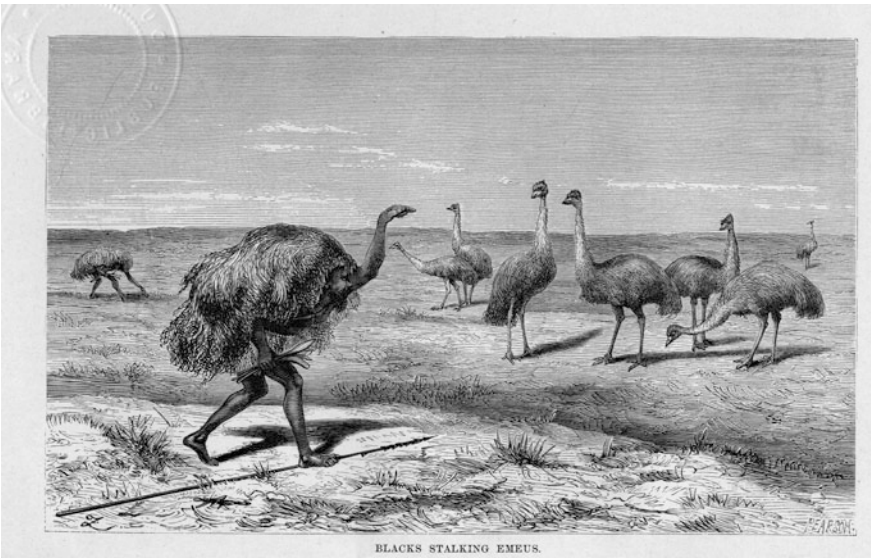

Fig 2.4 *Black stalking emus* (Baden-Powell 1872, Fontispiece). Image courtesy of Monash Rare Books Library

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Chapter 3
Endogenous Edible Foods at First Contact

Abstract Chapter 3 as the second chapter of the first section about 'Food and Food Knowledge' analyses journals and reports of sea and overland explorers prior to colonization and until the early nineteenth century for what was recorded about the foodways of inhabitants during these early, often brief, contacts. This chapter provides insight into a world that would change radically for inhabitants in their dealings with newcomers about access to, and use of edible resources. Drawn from journals and reports that were made by seafarer and overland explorers, these records provide a glimpse of what inhabitants were eating at first contact with explorers how people were procuring such food, how it was being prepared, and how it was being managed. Despite the ignorant assumptions made about people they encountered, and with apology to readers whose families are described herein, the descriptions of the food knowledge and practices of inhabitants is precious and indicative of the wealth of knowledge and skills held by people about what was edible in on their estates. Where possible, the probable language name and/or country has been given for information that was written about inhabitants by explorers. For some records, this is relatively straightforward but for others, such as Eyre, he wrote general, summative information about which the provenance is unknown. Even so, the works of explorers such as Eyre have been included because of the very valuable, detailed information they record. I hope that in time, such information will inform its rightful owners of information that may have been lost or forgotten. Broadly speaking, the range and types of edible foods available to coastal peoples was different to the foods available to those living far inland with only distant access to the sea. While coastal groups had access to both marine and land-sourced edible flora and fauna, and more reliable access to fresh water, inhabitants of the interior were reliant to a much greater extent on land-sourced foods, particularly in locations of unreliable rainfall. Even so, and given the geo-

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graphical distances involved, many of the food management, procurement, and preparation practices for common, endogenous, edible flora and fauna are remarkably similar.

Keywords Edible flora · Edible fauna · First contact · Australia

…there is nothing which has life in Australia that is not turned into account for food…[1]

This chapter provides insight into a world that would change radically for inhabitants in their dealings with newcomers about access to, and use of edible resources. Drawn from journals and reports that were made by seafarer and overland explorers, these records provide a glimpse of what inhabitants were eating at first contact with explorers how people were procuring such food, how it was being prepared, and how it was being managed. Despite the ignorant assumptions made about people they encountered, and with apology to readers whose families are described herein, the descriptions of the food knowledge and practices of inhabitants is precious and indicative of the wealth of knowledge and skills held by people about what was edible in on their estates. Where possible, the probable language name and/or country has been given for information that was written about inhabitants by explorers. For some records, this is relatively straightforward but for others, such as Eyre, he wrote general, summative information about which the provenance is unknown. Even so, the works of explorers such as Eyre have been included because of the very valuable, detailed information they record. I hope that in time, such information will inform its rightful owners of information that may have been lost or forgotten.

Broadly speaking, the range and types of edible foods available to coastal peoples was different to the foods available to those living far inland with only distant access to the sea. While coastal groups had access to both marine and land-sourced edible flora and fauna, and more reliable access to fresh water, inhabitants of the interior were reliant to a much greater extent on land-sourced foods, particularly in locations of unreliable rainfall. Even so, and given the geographical distances involved, many of the food management, procurement, and preparation practices for common, endogenous, edible flora and fauna are remarkably similar.

What People Were Eating

Flora and fauna existing on the landmass of Australia were the product of years of selective management by inhabitants. What for newcomers were types of foods they had never before encountered were food staples that people had carefully managed.

[1]Andrews (1862, 546).

Fig. 3.1 *Hunting the kangaroo* (Orme 1814, 162). Image courtesy of Monash Rare Books Collection, Monash University Library

What for newcomers were 'wild' game about which they had little knowledge or skills, were animals that were deeply embedded in Indigenous cultural practices and lifeways. Using the framework presented in Chap. 2 (Table 2.2), these flora and fauna will be introduced and then discussed later in terms of food procurement and food preparation practices.

There are sketchy records of the early seafaring explorers observing people eating animals, reptiles, or birds. As discussed in earlier chapters, and despite the obvious limitations of these records, still they contain invaluable snippets of important information (see, for example, Fig. 3.1). Sir Joseph Banks who became a powerful voice for the eventual colonization of Terra Australis wrote of his first impressions, for example, observing that:[2]

> *Of Land animals they probably eat every kind that they can kill which probably does not amount to any large number, every species being here shy and cautious in a high degree.*

We now know this to be untrue. As following analysis will show, the types of endogenous, edible flora and fauna were numerous, and the skills and knowledge

[2]Banks (1771).

held by inhabitants about such edible flora and fauna were extensive. The generally positive, if sometimes ignorant, detailed observations of those such as Banks were sometimes disputed, despite evidence to the contrary (see for example, Dampier[3]). Negative reports reverberated around the world and across time supporting theories of evolution that abounded in Europe and Britain at this time. Such views provide insight into the mix of negative attitudes to inhabitants and their knowledge of endogenous edible foods as being inferior and akin to savagery (as expressed by those such as Dampier[4] and Oxley[5]) or somewhat romantically as 'denizens of the wilderness' with nothing better to think about (as described by Giles[6]). The respect given by Cook, Banks, and others, and their interest in endogenous edible flora and fauna was swamped by narratives that made the case for the superiority of imported exogenous foods, supplied from Britain. The information that follows attempts to resurface information recorded by those explorers that were more curious, engaged, and sometimes respectful about the knowledge and skills held by inhabitants. These extant records hold important signposts into the contemporary era and ongoing debates about matters of food sovereignty, food security, and ecological sustainability globally.

Barrallier, for example, provides an early account of animals being eaten by D'harawal and Gundungurra people living on the lands he was exploring. He records:[7]

> *7 November 1802: They usually feed upon opossums and squirrels, which are abundant in that country, and also upon kangaroo-rat and kangaroo.*

These are similar to the descriptions given by others such as Mitchell[8] and Eyre,[9] even though lands they were crossing were those of geographically distant peoples. Explorer records about inhabitants eating reptiles, such as snakes and lizards, are scarce. It is possible that the explorers did not recognise reptiles as being edible, particularly the unfamiliar ones. Most newcomers seemed to be quite fearful of the edibility and taste of these sorts of foods, even when they observed inhabitants safely consuming them. From experiences circulated between explorers and around the earliest penal colonies in Australia, explorers knew that there was knowledge and skills needed to eat most endogenous flora and fauna, even when they could recognise them as edible. There are also scant records of information about people eating birds, especially in the early explorer journals. Overland explorers were more interested in learning about edible birds to supplement their carried provisions (Fig. 3.2).

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[3]Dampier (1697; 1729, 3).

[4]Dampier (1703).

[5]Oxley (1820).

[6](Giles 1889/2000, 193).

[7]Barrallier (1802).

[8]Mitchell (1839b, 211).

[9]Eyre (1845/2009, Chapter III).

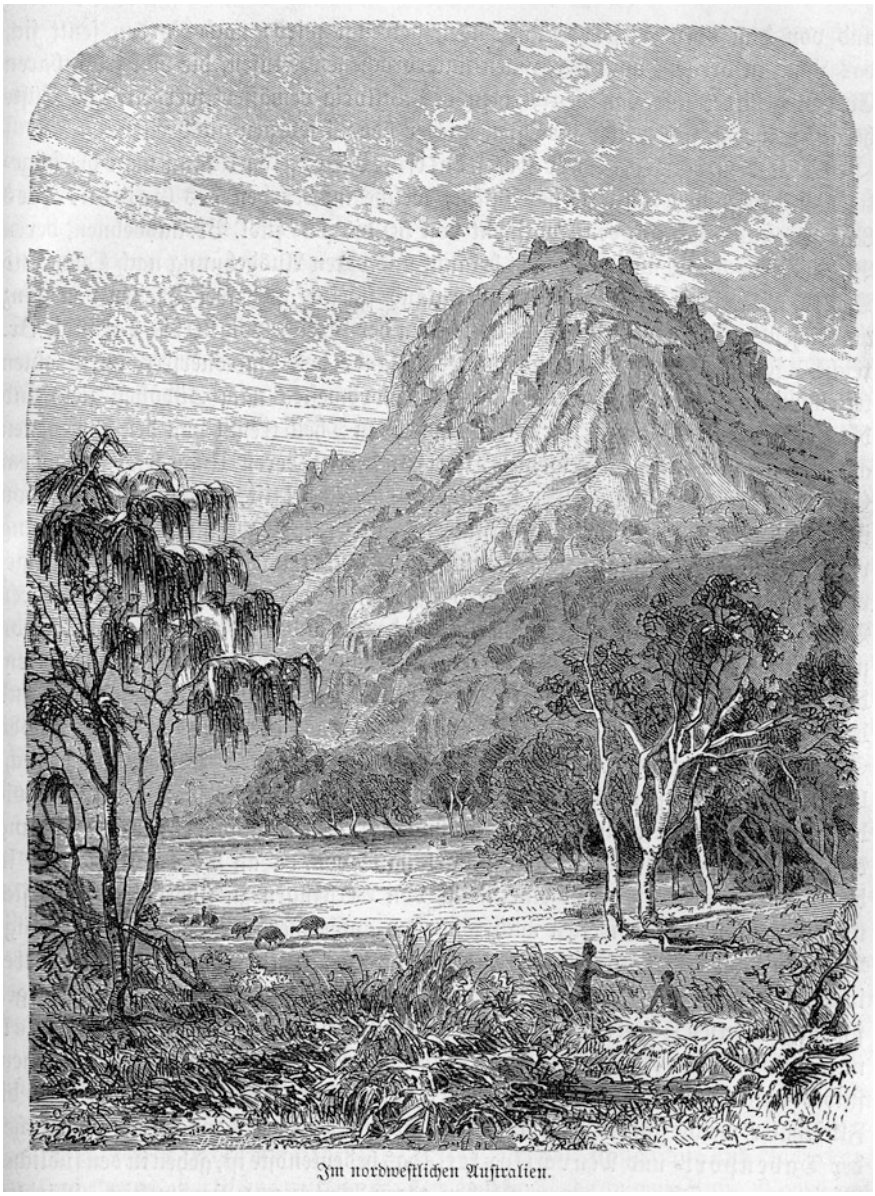

Fig. 3.2 *Im nordwestlichen Australien (In northwestern Australia)* (Christmann and Oberländer 1880). Image courtesy of Monash Rare Books Collection, Monash University Library

Mitchell records information about an aspect of cultural knowledge applied to eating of emu by inhabitants. In his journey in tropical Australia, he records that, '…the emus they kill for their fathers only; these birds being reserved, or held

sacred, for the sole use of the old men and women'![10] He found this practice also to be observed by people living in central Australia.[11] Such observations point to localized cultural practices about food held by inhabitants that were commonly not known by newcomers, given that few newcomers spoke the languages of people whom they encountered. Explorer journals, such as those kept by Mitchell who was privy to such information, continue to provide rich information back to descendants of ancestors who held such knowledge. Conversely, it was not necessary to have such culturally embedded knowledge to eat endogenous flora and fauna, as later analysis of explorer practices will reveal.

There are more plentiful explorers' records about knowledge of fish, shellfish, and related seafood held by inhabitants at the time of first contact with the explorers. The opinions of Captain James Cook, like Banks, became very influential 'back home' in Britain. Like Banks, Cook was ignorant of the foodways of inhabitants he encountered. For example, in his summary observations of the importance of fish and seafood to coastal inhabitants, says that:[12]

> *They live in small parties along by the Sea Coast, the banks of Lakes, Rivers, Creeks, etc. … these people live wholy by fishing and hunting, but mostly by the former, for we never saw one Inch of Cultivated land in the whole Country.*

In addition to early records confirming the importance of hunting and fishing as methods of food procurement, here we can see also that cultivation of land was of importance to these early explorers, with the absence of land cultivation being something of note within their worldview. Another early sea explorer, Matthew Flinders reviews accounts given by earlier explorers of the coastlines of Terra Australis including some traces of information about edible foods, and of particular interest, about fish and related foods. For example, he notes Marc-Joseph Marion Dufresne's records (cited as Marion 1772) that say, 'The many heaps of shells seemed to bespeak, that the usual food of these people was muscles and other shellfish…'[13] The consistency of such records tends to confirm the view that fish and seafood were eaten by most inhabitants around the coasts of Terra Australis at the time of early exploration by the newcomers. In addition to fish and seafood, Matthew Flinders[14] noted the eating of turtle when he was anchored around the islands and coastal inlets of the Darumbal. Barrallier[15] gives an early account of Dharug preference for eel:

> *7 November 1802: In the swamps of Manhangle, Carabeely, and others, enormous eels, fishes, and various species of shells are found, which are sometimes used by the natives as food.*

[10]Mitchell (1848/2003, 151).
[11]Mitchell (1839a, 40).
[12]Cook and Wharton (1893, Chapter 8).
[13]Flinders (1814, Section II).
[14]Flinders (1814, 39).
[15]Barrallier (1802).

Even so, there were some exceptions. French explorers observed that the people they met in Van Dieman's Land did not eat fish but did eat seafood. Banks, for example, noted that people were eating lobsters, shellfish, and dolphin.[16] Labillardière notes the importance of shellfish for Nuenonne…[17] Disagreement about the foodways of the particular inhabitants encountered by the French, and whether they ate fish or not, has raged in Australia but evidence from all other available records seems to suggest that this may have been an isolated example, by preference, seasonality, or some other reason as yet unknown, that was then generalized and passed on as fact about all inhabitants of Van Dieman's land.

As explorers moved the focus of their attention inland, their journeys took them onto drier and drier country, where water became scarce, and the sorts of edible fish changed and then disappeared. The eating of grubs and insects was largely outside the experience of the newcomers. Initial records such as those left by seafaring explorers such as Flinders[18] were inaccurate in their suggestion that there was nothing they could see that was edible. If they had possessed the correct knowledge of the country they were crossing they could not have reported such: 'Vlamingh went on shore (to the main coast), with eighty-eight armed men, and walked inland to the eastward. There were a few large, and some small trees, from which dropped a kind of *gum-lac*; but they found nothing which could be used as food.' Such gum lac together with grubs and insects formed an important part of the seasonal diet for inhabitants. Grey's journal notes showed that edible insects vary with location, based on his observations across Western Australia. He provides the following information:[19]

> *…for example in the southern parts of the continent the Xanthorrhoea affords an inexhaustible supply of fragrant grubs, which an epicure would delight in when once he has so far conquered his prejudices as to taste them; whilst in proceeding to the northward these trees decline in health and growth, until about the parallel of Gantheaume Bay they totally disappear, and even a native finds himself cut off from his ordinary supplies of insects…*

Whether these foods remain beyond the frontiers of taste for the modern Australian palate is yet to be resolved. As will be discussed in the final chapter, there is an emerging consciousness that on a planet of diminishing resources, it might be a good idea to consider eating bugs and grubs. For inhabitants, the argument for the sustainable use of all edible resources was a necessity that comes as no surprise. Early observations by sea explorers confirm that fruits and sugars were also sought out by inhabitants. Flinders records of the pandanus that:[20]

> *They suck the bottom part of the drupes, or separated nuts, as we do the leaves of the artichoke; but the quantity of pulp thus obtained, is very small, and to my taste, too astringent to be agreeable.*

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[16]Banks (1771).

[17]de Labillardière (1800, 108–109).

[18]Flinders (1814, Section II).

[19]Grey (1841/1983, Vol. 2, Chapter 14).

[20]Flinders (1814, 79).

Mitchell's journal entry also shows the development of his knowledge of fruits and sugars being eaten by people he was observing, in this case about a small melon:[21]

> *Their food consisted of the fish of the river, ducks, and the small indigenous melon, Cucumis Pubescens, which grew in such abundance, that the whole country seemed strewed with the fruit, then ripe, and of which the natives eat great quantities, and were very fond. It is about the size of a plum only, and in the journal of my first interior journey (in 1831), is mentioned as a cucumber we were afraid to eat.*

Similar to vegetables, roots, nuts, and seeds, fruits and sugars were highly prized. Fruits of various sorts were recorded by Eyre.[22] He also records a report from a Mr. Simpson who gave the following account of inhabitants eating Bunya nuts, from the Bunya Pine, a fruit-bearing tree that grew extensively across the lands of Bundjalung, Yuggera, Waka Waka, and Gubbi Gubbi, and was a highly prized food:[23]

> *The Aborigines are particularly fond of the bunya nuts, which are as large as a full sized almond, including the shell, and, in good seasons, come from a distance of 100 or 200 miles to feast upon them.*

Sugar, in the forms both of honey from bees and from sweet flower nectars, was another valuable item. Mitchell[24] and Eyre[25] both note its importance and the skill needed to find and procure honey from 'native' bees.[26] Blaxland notes the following about Dharug eating sweet nectar:[27]

> *30 May 1813: Traces of the natives presented themselves … in the flowers of the honey-suckle tree scattered around, which had supplied them with food. These flowers, which are shaped like a bottle-brush, are very full of honey.*

The eggs of all sorts of birds and other egg-laying fauna, such as turtles were a highly prized food source. Cook provided an early observation of coastal people eating sea eggs:[28]

> *Tues 3 Jul 1770: About 9 in the evening he landed in a Bay … where he disturbed some of the Natives, whom he supposed to be at supper; they all fled upon his approach, and Left him some fresh Sea Eggs, and a fire ready lighted behind them…*

Overland explorers' journals noted that all sorts of eggs were eaten in the interior of the continent. Eyre gave the following generic information (Fig. 3.3):[29]

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[21]Mitchell (1848/2003, 60).

[22]For more detail, see: Eyre (1845/2009, 293–303).

[23]Eyre (1845/2009).

[24]Mitchell (1839b, 140).

[25]Eyre (1845/2009, 273).

[26]The descriptor 'native' bee is still used to distinguish it from imported European bee varieties.

[27]Blaxland (1813).

[28]Cook and Wharton (1893, Chapter 8).

[29]Eyre (1845/2009, 293–309).

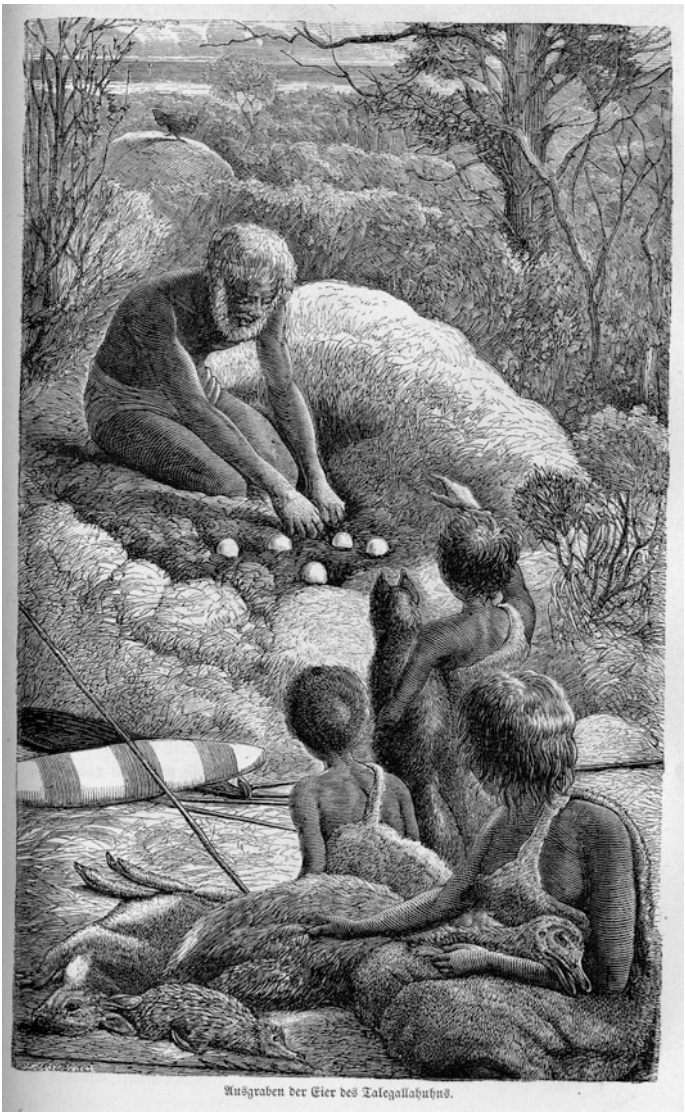

Fig. 3.3 *Ausgraben der Eier des Talegallahuhns (Digging out the eggs of the brown-collared brush turkey)* (Christmann and Oberländer 1880, 302). Image courtesy of Monash Rare Books Collection, Monash University Library

> *The eggs of birds are extensively eaten by the natives, being chiefly confined to those kinds that leave the nest at birth, as the leipoa, the emu, the swan, the goose, the duck, etc. … The eggs of the emu are … generally looked upon by the natives as a great prize. Eggs are eaten in all stages. I have even seen rotten ones roasted, and devoured with great relish.*

Various types of fungi were also eaten but there is scant information about this source of food. Calvert provides information that there were seven sorts eaten by inhabitants that he observed.[30] Backhouse[31] records the following:

> *On a Myrtle, we met with a large fungus, such as is eaten by the natives in cases of extremity. It is known in the colony by the name of Punk, and is white and spongy; when dried it is commonly used instead of tinder. Another edible fungus grows upon the Myrtle, in these forests: it is produced in clusters, from swollen portions of the branches, and varies from the size of a marble to that of a walnut … It may be considered the best native esculent in Van Dieman's Land.*

It is possible, as with the argument about fish, that Backhouse generalizes an observation that was specific to a time of year, a location, or for a reason as yet unknown. The record is clear that an endogenous fungi was eaten, that part seems to be substantiated. Equally clear, it is likely that Backhouse did not have the necessary knowledge to know the cultural practices of inhabitants around such a food. Kalotas has traced Indigenous Australian knowledge of the use of fungi and reports that some inhabitants were known to have eaten fungi, citing early explorer reports of the Beefsteak Fungus, *Fistulina hepatica*, being eaten by Western Australian Aborigines and the Native Truffle *Choiromyces aboriginum* being eaten by the Pitjantjatjara and Pintupi of the Australian Western Desert.[32] Eyre observed that, 'Fungi are abundant, and of great variety. Some are obtained from the surface of the ground, others below it, and others again from the trunks and boughs of trees.'[33] Grey noted that: 'The different kinds of fungus are very good. In certain seasons of the year they are abundant and the natives eat them greedily.'[34]

Food Procurement Practices

Explorer records leave fragments of information about how inhabitants procured food. Newcomers made constant comment that inhabitants lacked traditional European food cultivation practices (also known as farming) expressing views that often amounted to disparaging dismissal of what they did not understand about the new ecosystems in which they found themselves. Neither did they seem to have any memory of food procurement techniques that used foraging, hunting, fishing, and gathering skills coming as they commonly did from cities and nascent industrialization; these emerging systems of human organization had also brought estrangement from traditional British and European feudal systems of food procurement and preparation.

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[30]Calvert and University of California Libraries (1894, 24).

[31]Backhouse (1843, 119).

[32]Kalotas (1996).

[33]Eyre (1845/2009, 302).

[34]Grey (1841/1983, Vol. 2, 306).

The level of detail given in explorer journals is important here, given the destruction of Indigenous cultural knowledge during colonization. For Indigenous descendants of the original inhabitants, the examples and citations given provide detailed information not only of the sorts of edible, endogenous resources eaten by inhabitants but also a glimpse into some of the cultural practices around these foods and the skills and knowledge involved in their procurement and preparation. Such records also belie the generalizations made by newcomers about local edible foods in their scramble to subdue and redesign the Australian ecology in the image of Britain.

Important first is the fact that food procurement was commonly regarded as the responsibility of everyone who was able in a community. The overland explorer Giles noted the centrality of food procurement for the Kokatha community of Youldeh, recording that '… all are concentrated on the object of obtaining food for themselves and their offspring.'[35] MacGillivray,[36] when anchored on Muralug Island in the Torres Strait, noticed that:

> *Children are usually suckled for about two years, but are soon able, in a great measure, to procure their own food, especially shellfish, and when strong enough to use the stick employed in digging up roots, they are supposed to be able to shift for themselves.*

This was particularly important when people were attempting to procure large animals such as kangaroo. Barrallier gave detailed explanation of the importance of having the necessary numbers of people to help catch kangaroo:[37]

> *When the natives assemble together to hunt the kangaroo, they form a circle which contains an area of 1 or 2 miles, according to the number of natives assembled. They usually stand about 30 paces apart, armed with spears and tomahawks. When the circle is formed, each one of them holding a handful of lighted bark, they at a given signal set fire to the grass and bush in front of them. In proportion as the fire progresses they advance forward with their spear in readiness, narrowing the circle and making as much noise as possible, with deafening shouts, until, through the fire closing in more and more, they are so close as to touch one another. The kangaroos, which are thus shut into that circle, burn their feet in jumping on every side to get away, and are compelled to retire within the circle until the fire attacks them. They then try to escape in various directions, and the natives frightening them with their shouts throw their spears at the one passing nearest to them. By this means not one can escape.*

Many journal entries attested to the skills and knowledge held by inhabitants about methods of procuring food. Cook recorded his impressions about Gweagal[38] food procurement practices, saying that:[39]

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[35]Giles (1889/2000, 193).

[36]MacGillivray (1967, 12).

[37]Barrallier (1802).

[38]For specific reference to the people who spoke this language dialect, see: http://australianmuseum.net.au/clan-names-chart. Attenbrow also makes argument for this being a coastal Eora/Dharug clan (Attenbrow 2010).

[39]Cook and Wharton (1893, 96).

> *They have wooden fish Gigs, with 2, 3, or 4 prongs, each very ingeniously made, with which they strike fish. We have also seen them strike both fish and birds with their Darts. With these, they likewise kill other Animals; they have also wooden Harpoons for striking Turtle, but of these I believe they get but few, except at the seasons they come ashore to lay.*

Such specific accounts of spearing, and the more general observations made by explorers such as Grey[40] and Sturt,[41] attest to the levels of detailed knowledge that inhabitants held of the cycles of flora and fauna, in order to maximise the ability to harvest, prepare, and eat such highly prized food sources. Such records also demonstrate the array of implements used in food procurement and preparation, such as long and short spears, nets, lines, wooden shovels and other digging sticks, bark trays for winnowing, rocks, and sharpened stones for killing and preparing food, switches, and hooks.

Historical disputes abounded about whether inhabitants created any built environments to facilitate the procurement of food. Despite Dampier's disparaging general observations about inhabitants and their ways of life, he does confirm that Djawi and/or Bardi used weirs to catch fish, something that many denied in their efforts to substantiate that they had discovered the most primitive of races, in need of an evolutionary leap. Like Sturt,[42] Dampier recorded of Djawi and/or Bardi weir use, recording that:[43]

> *Sometimes they get as many fish as makes them a plentiful banquet; and at other times they scarce get everyone a taste ... all that are able march out, be it night or day, rain or shine, it is all one; they must attend the weirs or else they must fast: for the earth affords them no food at all.*

Eyre provided an interesting general summary of fish procurement:[44]

> *Fish are procured in different ways. They are caught with weirs or dams, as already described; and also with large seines made of string manufactured from the rush, and buoyed up with dry reeds, bound into bundles, and weighted by stones tied to the bottom ... Fresh water turtles, varying in weight from three to twelve pounds, are also taken in the same way, and are excellent eating.*

More recent research, such as that by McNiven et al.,[45] confirms these early records by Dampier, Eyre, and Sturt amongst others, that weirs were a common method, shared across the continent, for managing fish stocks. Lourandos provides a detailed contemporary account of food management practices of Gunditjmara and their neighbors of western Victoria associated with eel aquaculture.[46] The references to weirs are important and show the antiquity of such fish procurement

[40]Grey (1841/1983, 100).
[41]Sturt (1963, 169).
[42]Sturt (1963, 59 & 135).
[43]Dampier (1697; 1729, 3).
[44]Eyre (1845/2009, 295).
[45]McNiven et al. (2012).
[46]Lourandos (1987).

Fig. 3.4 *Fishing No. 1* (Orme 1814, 165). Image courtesy of Monash Rare Books Collection, Monash University Library

practices. These snippets continue to provide accurate information about how people managed the food stocks on their estates. As well as weirs, fishing lines and nets were made using materials such as flax to catch fish.

Eyre left insight into the use of lines and nets made of flax for procurement of river- and riparian-derived foods through his descriptions, citing the use of flax to make small hand nets, and even larger nets used for diving:[47]

> *With this two natives dive together under the cliffs which confine the waters of the Murray, each holding one end of the bow. They then place it before any hole or cavity there may be in the rocks beneath the surface, with the size, shape, and position of which they have by previous experience become well acquainted; the terrified fish is then driven into the net and secured.*

He and Mitchell both also recorded similar observations about diving for mussels, cray-fish, and lobster employing both nets and small spears (Fig. 3.4).[48, 49]

[47]Eyre (1845/2009, 293–309).

[48]Eyre (1845/2009).

[49]Mitchell (1839b).

Nets were also used to catch other foods. Mitchell, for example, made the following observations, giving a detailed description of how nets were made by Barkindji people living along the Barka (Darling River) to catch birds:[50]

> *They also feed on birds, and especially on ducks, which they ensnare with nets, in the possession of every tribe. These nets are very well worked, much resembling our own in structure, and they are made of the wild flax which grows in tufts near the river … the largest of their nets are those set across the Darling for the purpose of catching ducks which fly along the river in considerable flocks.*

Eyre gave similar observations for snaring of emus, swans, pelicans, ducks and teal, waterfowl, geese, widgeons, shags, and pigeons providing information about various noosing and netting procedures, again drawn from his observations across the lands of many traditional owners.[51] There were also different techniques recorded for catching small animals. Stuart left a description of the method he observed that had been developed by Wirangu:[52]

> *These kangaroo mice are elegant little animals, about four inches in length, and resemble the kangaroo in shape, with a long tail terminating with a sort of brush …When the natives discover one of these nests they surround it, treading firmly round the base in order to secure any outlet; they then remove the top of the cone, and, as the mice endeavour to escape, they kill them with the waddies which they use with such unfailing skill. When the nest is found by only a few natives, they set fire to the top of the cone, and thus secure the little animals with ease.*

Buckley's observations concur with those made by Sturt about the skill of Wathaurung to procure small animals such as the hedgehog by first using a small child to locate the animal, and then by digging, recording that:[53]

> *… in order to obtain it from its hiding place they put into the hole a young child with its [hands] legs foremost who feels how and where the animal is situated and reports accordingly in what part he is to be obtained by digging into the earth as the holes run under and parrellel with the surfice for some distance…*

Eyre also recorded the use of digging as a technique of food procurement. From one of his explorations from Adelaide to King George's Sound that he remembered observing that, 'Frogs are dug out of the ground by the women, or caught in the marshes, and used in every stage from the tadpole upwards.'[54] Mitchell made a generic observation about the method of digging with a wooden shovel being used to get edible roots and to break into anthills.[55] Eyre also made the following useful albeit generic observations, saying that:[56]

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[50]Mitchell (1839a, 231).

[51]Eyre (1845/2009, Chapter 3).

[52]Stuart and Hardman (1864, 37).

[53]Morgan (1852, 6).

[54]Eyre (1845/2009).

[55]Mitchell (1839a, 262).

[56]Eyre (1845/2009, 293–309).

Fig. 3.5 *Native Australian bee-hunters* (Arthur 1894, 70). Image courtesy of Monash Rare Books Collection, Monash University Library

> *Roots of all kinds are procured by digging, one of the most important being that of the flag or cooper's reed, which grows in marshes or alluvial soils that are subject to periodical inundations.*

Procuring the honey from bees required a number of methods to be employed, namely those used to locate hives such as recorded by Mitchell (Fig. 3.5):[57]

> *Their plan was to catch a bee, and attach to it, with some resin or gum, the light down of a swan or owl; thus laden the bee would make for its nest in the branch of some lofty tree, and so betray its store of sweets to its keen-eyed pursuers, whose bee-chase presented, indeed, a laughable scene.*

The second stage involved smoking the bees out of the hive so honey could be collected (smoking techniques were also used for other potential foods such as for possums as can be seen in Fig. 3.6). Sturt[58] also notes the use of fire and smoking as techniques to procure food, writing that:

[57]Mitchell (1839b, 140).

[58]Sturt (1963, Vol. 1, 99).

Fig. 3.6 *Smoking out the opossum* (Orme 1814, 161). Image courtesy of Monash Rare Books Collection, Monash University Library

> *...the natives continued to fire the great marshes, and as the element raged amongst them, large bodies of smoke rose over the horizon like storm clouds, and had the effect of giving additional dreariness to the scene. I am inclined to think that they made these conflagrations to procure food, by seizing whatsoever might issue from the flames, as snakes, birds, or other animals...*

Barrallier left an early description of Dharug methods of procuring grubs and insects using a thin switch with a hook:[59]

> *8 November 1802: When they discover on the trunk of a tree the mark of the hole made by some of these grubs, they make the hole larger with their axe, and if they are certain that the grub is there they dip their switch into the hole, and, by means of the hook, draw it out, and eat it greedily. It is a delicacy of which they never get tired.*

Hume and Hovell[60] left a similar record about Wiradjuri method of procuring grubs from trees, as did Eyre.[61] Sturt[62] observed of Yankuntjara and their neighbors that they used a much longer version of the switch and hook than that of Dharug because the large black caterpillar they sought often burrowed eight to ten feet into the ground.

Transporting procured items of food also required vessels and implements. Bark pieces and wooden carved carrying trays were used to carry food, as were nets also made from bark and flax. Forrest[63] makes the following record about the nets he saw Kalaamaya using:

> *...they had a great many dulgates and opossums, which they carried in a net bag, made out of the inner bark of the ordnance-tree, which makes a splendid strong cord.*

Hovell and Hume provided the following detail about the use of flax:[64]

> *15–16 November 1824: From the flax plant the natives, as they afterwards discovered, make their fishing lines, and the nets which they use for carrying their travelling gear and provisions.*

Some Thoughts About Water Resources

Away from natural springs, and further inland, the availability of water and other drinkable resources became severely constrained in times of drought. Inhabitants had well-developed systems for accessing water and other drinkable resources and there are some explorers' journals, such as Mitchell's, that gave information:[65]

> *...I discovered that they dug up the roots for the sake of drinking the sap. It appeared that they first cut these roots into billets, and then stripped off the bark or rind, which they sometimes chew, after which, holding up the billet and applying one end to the mouth, they*

[59]Barrallier (1802).
[60]Bland et al. (1965).
[61]Eyre (1845/2009, Chapter III).
[62]Sturt (1963, 135).
[63]Forrest (1875).
[64]Bland et al. (1965).
[65]Mitchell (1839b, 158).

let the juice drop into it. We now understood for what purpose the short clubs which we had seen the day before had been cut.

Thomas[66] also provided the following detailed discussion of various methods employed to find drinkable liquids that would quench thirst:

In many places are found what are called native wells-narrow deep holes, the position of which is known to the natives, for otherwise they would hardly be able to find them. But when these holes and ordinary water-holes fail them, they are far from being at the end of their resources. In the mallee scrub they dig down and get pieces of root some eighteen inches long; there is plenty of water in this, which, when the root is turned on its end, drains out into a vessel placed beneath. Where the pandanus- tree grows the moisture below the surface is tested by pushing a spear three or four feet into the ground; if the point is moist, a bunch of dry grass is rammed down this acts as a strainer, and the water is sucked up with a reed. Sometimes the base of the Melaleuca tree bulges out; when this is cut open, it is found to contain a pint or two of water. Where real water is not obtainable, the native refreshes himself with a sweet substance from a Sterculia.

Such detailed knowledge was essential to have, given the extremities of climate found in the more inland regions of Australia. Such knowledge attests to the intimate knowledge held by inhabitants about such sources across their sometime vast estates, the ways of procuring it, and why, in times of hardship, newcomers were completely at a loss to know what to do beyond the obvious sources of water found in small pools and around watercourses.

Food Preparation

After food had been procured, there was a variety of methods employed to prepare it and make it edible. Commonly fire was, and still is, used to cook many sorts of flora and fauna by singeing, roasting, or baking. Hot stones were also used. Grey provided a good general description of what came to be known as the 'native oven', writing that:[67]

In the course of the morning's march we had passed a very neat native oven, or fireplace, much more carefully constructed than anything of the kind I have since seen; it consisted of a hole sunk eight inches deep in the earth, which was quite circular, three feet in diameter, and very neatly paved and lined with flat stones…

Banks made the following journal entry about the method used by coastal Eora for the preparation of fish:[68]

Their victuals they generally dress by broiling or toasting them upon the coals, so we judg'd by the remains we saw; they knew however the method of baking or stewing with hot

[66]Thomas (1906, 112–113).

[67]Grey (1841/1983, 100).

[68]Banks (1771).

stones and sometimes practis'd it, as we now and then saw the pits and burnd stones which had been made use of for that purpose.

Barrallier also noted D'harawal and Gundungurra use of roasting for larger animals.[69] Mitchell provided a general description about a method of cooking kangaroo that he observed on his 1836 expedition across the countries of the D'harawal, Gundungurra, Ngunawal, and Wiradjuri lands, one that is still used in the contemporary era using a ground oven.[70] On Carnegie's journey across the lands of the Ngaanyatjarra, he recorded a simple singeing of animals using open flames.[71] Despite the geographical distance, Mitchell observed the same method used by Wiradjuri.[72] Eyre noted that edible roots were also roasted on the fire.[73]

Carnegie[74] made the following journal entry about how Ngaanyatjarra cooked reptiles, highlighting the need to use a twig to remove entrails before singeing:

A lizard or iguana calls for a further exercise of culinary knowledge. First, a crooked twig is forced down the throat and the inside pulled out, which dainty is thrown to any dog or child that happens to be near; the reptile is then placed on hot coals until distended to the utmost limit that the skin will bear without bursting, then it is placed on ashes less hot, and covered with the same, and after a few minutes is pronounced cooked and ready for the table.

Mitchell noted that the preparation of ants and their eggs sometimes involved winnowing and sometimes not, recording that, 'Sometimes the pupae were winnowed clear of ants, but in Queensland the two are eaten together, mixed with salt water.'[75]

There are scattered examples of foods that explorers found to be poisonous but that inhabitants ate. There was much speculation about the methods employed by people to make such foods as the palm nut edible. Banks noted that Guugu-Yimidhirr and Kuku-Yalanji ate such a palm nut, noting that explorer attempts to experiment with this food were fatal.[76] Banks gave the first glimmers of understanding that inhabitants who ate these palm nuts held knowledge that made them safe to eat and palatable, recording of a palm nut tree that it:

...generally bore a plentiful Crop of nuts about the size of a large chestnut and rounder ... It is probable however that these people have some method of Preparing them by which their poisonous quality is destroyed ...

[69]Barrallier (1802).
[70]Mitchell (1839a, Chapter 3.14).
[71]Carnegie (1898, 111–112).
[72]Mitchell (1839a, 262).
[73]Eyre (1845/2009, 293–309).
[74]Carnegie (1898, 111–112).
[75]Mitchell (1839b, 111).
[76]Banks (1771).

Carron recorded how Djirbalngan and their neighbors sourced and prepared seeds to make bread, observing that:[77]

> *I found a large quantity of castanospermum seeds in one of the creeks, apparently put there to steep by the natives, who use them for food. They informed me that they steep them in water for five days, and then cut them into thin slices and dry them in the sun; they are then pounded between two large stones, and the meal being moistened with water is baked on a flat stone, raised from the ground a few inches, with a small fire burning beneath.*

Eyre also observed a type of bread being made from *belillah*, a bulbous root, which 'also grows on lands subject to floods. It is about the size of a walnut, of a hard and oily nature, and is prepared by being roasted and pounded into a thin cake between two stones…'[78]

Edible Flora and Fauna: Some Cultural Management Practices

In the contemporary era, it is becoming common for scholars to accept that Indigenous peoples invested significant energy in the task of cultivating and managing their food resources. Such research and development of particular desirable characteristics in flora and fauna was a virtually unthinkable idea for explorers and newcomer who followed. The common assumption held by newcomers was that all the plants and animals they encountered were there 'naturally' and that inhabitants were merely passive receivers of Nature's bounty. Despite this insistent worldview, analysis of explorer journals reveals some evidence of resource management and other cultural practices associated with particular plants or animals, a selection of which will be discussed below.

At the outset, records exist that show that some explorers, such as Mitchell, were aware of how it must have felt for inhabitants to be dealing with the invasion of their estates, saying:[79]

> *How natural must be the aversion of the natives to the intrusion of another race of men with cattle: people who recognise no right in the aborigines to either the grass they have thus worked from infancy, nor to the kangaroos they have hunted with their fathers.*

Here Mitchell refers to the land management practice he had observed, where lands were cleared of trees and grasses allowed to grow that would attract kangaroos and other animals. This system worked well for inhabitants, as discussed above, where the whole, able-bodied community would be involved in catching

[77]Carron (1849/1965, 17).

[78]Eyre (1845/2009, 293–309).

[79]Mitchell (1848/2003, 151).

kangaroos. A method used for millennium allowed careful selection of kangaroos that were to be taken for food and those that were allowed to live to meet future needs.

Characteristics of plants and animals were also selectively managed over many centuries, choices made to this day by Indigenous Australians who continue to manage their estates. Some explorers, such as Grey, demonstrated this point, noting that there were certain resource management 'rules' regarding certain edible flora and fauna:[80]

> *1. No vegetable production used by the natives as food should be plucked or gathered when bearing seed*
>
> *2. Certain classes of natives should not eat particular articles of food; this restriction being tantamount to game laws, which preserve certain choice and scarce articles of food from being so generally destroyed as those which are more abundant*

He went on to note that, '…Independent of these laws there are certain articles of food which they reject in one portion of the continent and which are eaten in another; and that this rejection does not arise from the noxious qualities of the article is plain, for it is sometimes not only of an innocent nature but both palatable and nutritious.'[81] It is not only certain types of foods that were allowed to be eaten or avoided by certain people, and such rules being different for different communities. Certain sources of water were also avoided as Hovell and Hume recorded of the following:[82]

> *14 October 1824: It is said that the natives will not taste of the waters of the lake. Yet those travellers who drink of it, do not perceive anything disagreeable either in the taste or otherwise.*

Another important aspect in the management of edible foods was the matter of seasonality. Explorers recorded evidence of the relationship of seasonality of various foods and availability of drinkable water to the movement of people around their estates. The fact of the seasonality of many foods, and therefore the seasonal mobility of inhabitants often confused explorers, who would suggest in passing over a piece of country that it was empty of habitation when in fact the inhabitants were living in another part of their estate.

Sturt provided an excellent summation of the issues associated with the seasonality of available foods and the influence of such seasonality on the need for inhabitants to move around their estates:[83]

> *As regards their food, it varies with the season. That which they appeared to me to use in the greatest abundance were seeds of various kinds, as of grasses of several sorts, of the mesembryanthemum, of the acacia and of the box-tree; of roots and herbs, of caterpillars*

[80]Grey (1841/1983, 119).

[81]See also, Thomas (1906, 107–108).

[82]Bland et al. (1965).

[83]Sturt (1965, 301).

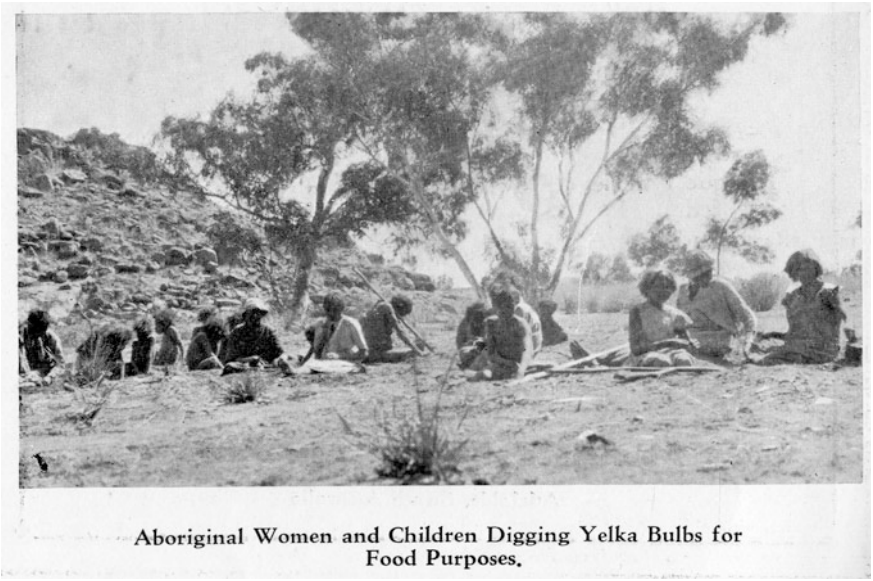

Fig. 3.7 *Aboriginal Women and children digging for Yelka bulbs for food purposes* (Albrecht 1943). Image courtesy of Monash Rare Books Collection, Monash University Library

> *and moths, of lizards and snakes, but of these there are very few. Besides these they sometimes take the emu and kangaroo, but they are never so plentiful as to constitute a principal article of food. They take ducks when the rains favour their frequenting the creeks and lagoons, exactly as the natives of other parts of Australia do, with nets stuck up to long poles, and must procure a sufficiency of birds during the summer season. They also wander among the sand ridges immediately after a fall of rain, to hunt of which they procure vast supplies; but all these sports are temporary, particularly the latter, as the moment the puddles dry up the natives are forced to retreat and fall back on previous means of subsistence.*

Sturt was careful to note details about the seasonal availability of particular edible foods as he crossed the estates of inhabitants recording for example, that, 'At this period they subsisted on the barilla root, a species of rush which they pound and make into cakes, and some other vegetables' (see Fig. 3.7 for an example of women and children digging for Yelka bulbs).[84]

Eyre observed the seasonal availability of various roots that were edible, noting that the best time for gathering them was, '… after the floods have retired and the tops have become decayed and been burnt off.'[85] He also drew attention to a particular delicacy, also noted by Sturt, saying:[86]

[84]Sturt (1963, 135).

[85]Eyre (1845/2009, 293–309).

[86]Eyre (1845/2009, 293–309).

The thick pulpy leaf of the mesembryanthemum is in general use in all parts of Australia which I have visited, and is eaten as a sort of relish with almost every other kind of food. That which grows upon the elevated table lands is preferred to that which is found in the valleys. It is selected when the full vigour of the plant begins to decline and the tips of the leaves become red, but before the leaf is at all withered. The fruit is used both when first ripe and also after it has become dried up and apparently withered. In each case it has an agreeable flavour and is much prized by the natives.

Sturt also provided insight into his developing sense of awareness that inhabitants held knowledge of the seasons that allowed them to prepare in advance of seasonal changes, in this case for catching fish:[87]

On 24 September 1844: Close to our tents there was a large and hollow gum-tree, in which a new fishing net had been deposited, but where the owner intended to use it was a puzzle to us, for it was impossible that any fish could remain in the shallow and muddy waters of the Darling; which was at its lowest ebb, and the current was so feeble that I doubted if it really flowed at all. Whether the natives anticipated the flood which shortly afterwards swelled it I cannot say, although I am led to believe they did, either from habit or experience.

Sturt[88] also provided this observation about the seasonal use of weirs, as also discussed above:

Immense numbers of fish ... pass into these temporary reservoirs, which may thus be considered as a providential provision for the natives whose food changes with the season.

Eyre noted the particular efficacy of large nets for catching fish in the Murray River learning that at particular times of year, '…when the female fish are seeking for a place to deposit their spawn that this mode of fishing can be adopted.'[89] Mitchell left detailed observations of the impact of seasonality on food procurement practices of Wiradjuri especially in the cold weather, observing for example that, '… they float on pieces of bark; and thus also they can spear the fish, having a small fire beside them in such a bark canoe.'[90]

While few images survive from the observations made by Eyre, images from other communities survive (see, for example, Fig. 3.8 from the Gippsland region).

Some explorers noted that the abundance of a particular type of food provided opportunity for gatherings of extended families, clans, and nations to feast. Grey's observations attested to the cultural significance of seasonally available foods:[91]

The gum of the mimosa, thus referred to, is a favourite article of food amongst the natives, and when it is in season they assemble in large numbers upon plains of the character previously described by Captain Sturt in order to enjoy this luxury. The profusion in which this gum is found enables large bodies to meet together...

[87]Sturt et al. (1849).

[88]Sturt (1963, 59 & 135).

[89]Eyre (1845/2009, 289–309).

[90]Mitchell (1839b, 231).

[91]Grey (1841/1983, Vol. 2, 167–168).

Fig. 3.8 Natives fishing on the lakes in Gippsland (Haydon 1846, 42). Image courtesy of Monash Rare Books Collection, Monash University Library

Thomas recorded observations about a very popular seasonal delicacy, Bogong moths (Agrotis spina) of the high plains of southwestern Australia, a source of rich nutrition that brought people from far and wide during summer:[92]

> *To procure them they lighted fires under the rocks on which they collect, and when the moths fell down they were collected in bushels; a fire was lighted and kept burning till the ground was considered hot enough; then the ashes were cleared away, the moths placed on the heated ground, and stirred about till the down and wings came off. After winnowing, they were eaten, or placed in a wooden vessel and pounded. Sometimes they were smoked; otherwise, they would not keep longer than a week. In taste, they resemble a sweet nut, but the effects for the first few days are unpleasant. The natives, however, got fat on them, and so did their dogs.*

Similarly, Mitchell recorded of the seasonality and popularity of honey from bees:[93]

> *We were now in a land flowing with honey, for our friendly guides, with their new tomahawks, extracted it in abundance from the hollow branches of the trees, and it seemed that, in the proper season, they could find it almost everywhere.*

[92]Thomas (1906, 110–111); see also, Flood and Australian Institute of Aboriginal Studies (1980).
[93]Mitchell (1839b, 140).

Eyre left detail about gathering ants in the spring:[94]

> *White ants are dug in great numbers out of their nests in the ground, which are generally found in the scrubs. They are a favourite food of the natives in the spring of the year. The females only are used, and at a time just before depositing their eggs. They are separated from the dirt that is taken up with them, by being thrown into the air, and caught again upon a trough of bark.*

Unsurprisingly, but not obvious to early explorers and other newcomers, inhabitants had learned over generations about how to cultivate, manage, and enjoy edible flora and fauna, aware of the seasonal nature of some popular and briefly abundant foods. Such abundances provided opportunities for clans to gather and feast. These knowledges and associated celebrations around culturally embedded food practices were substantially extinguished over past centuries in the emerging national 'Australian' consciousness but in many instances, these flora and fauna still exist, and continue to be eaten, enjoyed and celebrated by those that hold such knowledge.

Conclusion

The early written records of explorers demonstrated that inhabitants were eating a range of foods, and that there are similarities between examples in the methods of procurement and preparation of foods even with vast distances between communities. The records cited above require a critical reading and analysis to separate what was observed from what was to become a convenient colonial fiction about inhabitants, of their poor food resources, lack of food management practices, only the basics of food preparation, and a savage disposition. A critical reading confirms that, instead, inhabitants were eating a wide range of foods and that they held food procurement and preparation practices that were skillful and successful. Given the coastal focus of early sea explorers, and the short time they stayed in any location, most of the information they gleaned was about how inhabitants accessed fish and shellfish from the sea and from coastal rivers. There are some glimpses, too, of people gathering greens, fruits, seeds, nuts, grubs, and fungi and the more observant explorers commented on the possibility that these foods might be seasonal. Collectively, the lack of knowledge of these early explorers was compounded because they did not speak the languages of the inhabitants they encountered and nor did they necessarily recognize flora and fauna that were being eaten, because they did not recognize such as being edible. Arguably, they only saw what they already understood as food, and its management, procurement, and preparation methods.

There is ample record in explorer journals about the wide range of seasonally available food resources eaten by inhabitants of the estates they crossed and about

[94]Eyre (1845/2009, 293–303).

how these resources changed according to location. In addition, these records show that inhabitants had developed a different but equally effective repertoire of skills to procure foods according to such seasonality and within each ecological niche. Ortega y Gasset[95] offers a thesis that game is always scarce and it is in the management of the environment that the hunter succeeds. The explorers' journals attest to the wealth of skills and knowledge held by inhabitants that ensured the survival of people in sometimes harsh and sometimes plentiful ecological contexts.

Keen observation, intimate knowledge of edible food sources, and the skills of a hunter and gatherer were all common observations made by explorers about inhabitants as they went about the business of procuring, preparing, and eating foods from their estates. Embedded within these practices were also many cultural rules observed differently in different locations. These first contact explorers did not just note flora, fauna, and edible foods of the inhabitants. They sometimes also noted cultural and resource management practices, albeit ones of which they had no real understanding. There is clear evidence that food procurement was something that engaged whole families, clans, and communities. While there are stories of the skills of the individual mussel diver, kangaroo hunter, or grub collector, everyone was expected to have skills to source food, even very young children. Many records show that food procurement was undertaken by extended family groups. What is common in these records is that food procurement was an intensive activity that often required numbers of people, something that was not an option available to the explorers or early settlers. Distinctions, such as those based on age and gender, were sometimes observed but how these were recorded or understood by the newcomers remains uncorroborated for the most part. As Petersen notes in contemporary research, considerable time is spent by women and men in different food procurement and preparation activities.[96]

Of note, there is an interesting manner in which explorer narratives about what they were observing developed and became the narrative style for retelling information about what explorers were finding. Banks provided an early example as he compared what he had observed in Australia with other similar food items he had experienced in other explorations across the world. His early comparative method became a common device use to try to describe and understand endogenous edible foods. He employed this method by using approximation, so little knowledge did he, and those that followed, have of edible foods beyond the familiar ones from Britain. What they were beginning to learn was that not to have information held by inhabitants about particular flora and fauna, and how it was best prepared, could be fatal. Seemingly, rather than learn from people about their ways with edible food resources, evidence would suggest that they preferred to experiment and face the consequences.

While most explorers were prepared to try a limited range of somewhat familiar foods such as fish, kangaroo, fruits and honey, consideration of explorers' reactions

[95]Ortega y Gasset (1942/1972).

[96]Petersen (1978, 30).

suggests that these were foods that they were mostly reluctant to incorporate into their daily diet. There is a common thread among these records that some of the explorers experimented with foods they were offered by inhabitants or that they cautiously tried by themselves but a negative experience seemed to discourage them from trying again. In such conditions, encouragement to keep experimenting with endogenous edible foods disappeared rapidly because of hearsay couched in narratives of revulsion and primitivism. Such discouragement echoes into the contemporary time.

For explorers, and later colonists, some were keen observers of the food practices of inhabitants. Even those who were interested lived on the frontier of taste, where they were working out what they could tolerate to eat in the longer term and what they could not. In this period when the presence of explorers was causing concern to inhabitants but not yet overarching hostility, the availability of food, and how much of an obligation existed to share precious resources is knowledge we no longer have.

For a small number of explorers, inhabitants seemed prepared to share some knowledge about edible foods and sources of water. It might be assumed as Jochelson observes that, '…hospitality often turns enemies into friends, and strengthens the amicable relations between groups foreign to one another.'[97] In the case of Australia, there is not much evidence of this being the case. Much of the knowledge shared by inhabitants with these strange newcomers was not really understood. The newcomers had no worldview by which to develop their understanding of the endogenous edible food resources around them, the cultural knowledge held by inhabitants of these foods, and commonly explorer parties were isolated in small groups that did not give them the critical mass of labour needed to procure food on such an intensive and selective basis. Contemporary research is beginning to provide detail to support the thesis of this book that inhabitants held accurate and sustainable knowledge about what endogenous foods were available to them on their estates, be they coastal peoples who spent parts of each year living inland as part of their seasonal mobility or those who lived in drier regions in central Australia.[98] To gain further insight into the explorer worldview, the next chapter moves to an examination of the foods that these newcomers were eating and bringing onto the sovereign estates of the inhabitants of Terra Australis.

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[97]Jochelson (1926, 125).

[98]Attenbrow (2010, Hall and McNiven (1999), Gammage (2011).

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Chapter 4
Bringing Exogenous Foods to Australia

Abstract This chapter is the final chapter in the section 'Food and Food Knowledge'. It examines what food seafarers brought with them on their journeys and what they found to be edible as they explored the coasts of this new land. It focuses, first, on the food exploits of early European explorers who mapped the landmass of Australia and probed its inhabitants, collecting knowledge about people and available resources for future exploitation by their European masters. It then moves to an analysis of food related matters during explorations that continued once Cook, under orders from the British, claimed the eastern part of the landmass of Terra Australis. The work of such people as the seafaring explorers of the coasts, seed collectors, and land surveyors supported the colonial administrators in their development and expansion the colony and the attitudes to food formed by such people were influential in the early days of colonization. Analysis of data suggests that post-Cook overland and coastal explorations were different from those conducted by earlier British and European explorations because after Cook claimed possession of the eastern coast of the landmass, the British were exploring with the intent to stay, to establish colonies, to stave off rival claims particularly of the French, and to optimize the use of available resources to support the expansion and consolidation of settlements. Scholars of archaeology, anthropology, and history have examined aspects of the encounters between sea explorers and inhabitants during this period but only passing attention had been made of the importance of food in these encounters. Undertaking a sociohistorical analysis, and similar to the previous chapter that analyzed what inhabitants were observed to be doing to procure and prepare endogenous edible flora and fauna at the time of these encounters, this chapter analyses what the seafaring explorers were eating and how they were procuring and preparing their food. Later chapters will examine food in the context of particular encounters in particular locations and the development of a new sort of food consciousness that arose from these encounters.

Keywords Early European sea explorers · French sea exploration · British sea exploration · Captain Cook · Food practices at sea

How the men performed the feats they did, wandering over vast and unknown oceans, visiting unknown coasts with iron-bound shores, beset with sunken reefs, subsisting on food not fit for human beings, suffering from scurvy caused by salted diet and rotten biscuit, with

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a short allowance of water, in torrid zones, and liable to be attacked and killed by hostile natives, it is difficult for us to conceive…[1]

This chapter focuses, first, on the food exploits of early European explorers who mapped the landmass of Australia and probed its inhabitants, collecting knowledge about people and available resources for future exploitation by their European masters. It then moves to an analysis of food related matters during explorations that continued once Cook, under orders from the British, claimed the eastern part of the landmass of Terra Australis. The work of such people as the seafaring explorers of the coasts, seed collectors, and land surveyors supported the colonial administrators in their development and expansion the colony and the attitudes to food formed by such people were influential in the early days of colonization.

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Early European and British Sea Explorers

Overall, the excellent analysis of navy food undertaken by Macdonald gives insight into the sorts of food being carried by various sea exploratory expeditions from Europe and Britain. She argues that the colonial navies did not display much difference in their approaches to provisioning their explorations across the new world. By extension, and in consideration of the available records, it does not appear that these global exploratory expeditions ate very differently, even though private philanthropy sometimes allowed better or a broader range of some

[1]Giles and Bosanquet (1986, Introduction).

[2]See, for example, Perkins and Langton (2008), McNiven (2001).

foodstuffs that would survive long sea voyages prior to refrigeration. Macdonald has observed that, for navies[3]:

> *...all were restricted by what was currently available and would keep in good condition for a long time, and with some regional variations, this came down to biscuit, salt or dried meat or fish, cereals, dried pulses and a little cheese and butter or oil with fresh food when in port.*

The first records of European mariners sailing into waters around the land known as Terra Australis Incognita (unknown southern land) were those of Willem Janzoon, the Dutch explorer who is credited with the first sighting of Australia, on the Cape York Peninsula, on 18 November 1605. His record of an exploration at the Mitchell River on the lands of the Wik is suggestive of the initial reaction of explorers to what they saw, in particular here about food and fresh water. Janzoon provided account of early attempts to find food and water, for example, on a fateful fishing expedition[4]:

> *...there was great disorder in landing, the men running off in different directions, until at last a number of black savages came running forth from the wood, who first seized and tore to pieces an assistant, named Jan Willemsz Van den Briel who happened to be unarmed, after which they slew with arrows, callaways (spears) and with the oars which they had snatched from the pinnace, no less than nine of our men, who were unable to defend themselves, at the same time wounding the remaining seven (among them the skipper, who was the first to take to his heels...*

Being better armed, another group searched for water[5]:

> *On the 25th the skipper of the Pera got orders to go ashore with the two pinnaces well-manned and armed, in order to make special search for fresh water, with which we are very poorly provided by this time; about noon the skipper having returned, informed us that he had caused pits to be dug in various places on the coast, but had found no fresh water.*

He made the following frustrated observation[6]:

> *...for during all the time we have searched and examined this part of the coast [at the mouth of the Mitchell River, Cape York] to our best ability, we have not seen one fruit-bearing tree, nor anything that man could make use of...*

Given the discussion in the previous chapter, it is apparent that the explorers held none of the food knowledge of Wik and their neighbors who had been eating from this country for many thousands of years. It is unsurprising that the newcomers decided first to try to seek out resources being used by inhabitants, albeit cautiously because of the hostility they had met from people. Even following the lead of inhabitants, they were coming away empty handed. Janzoon recorded that[7]:

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[3]Macdonald (2004, 149).

[4]Heeres (1899, 24).

[5]Heeres (1899, 37).

[6]Heeres (1899, 40).

[7]Heeres (1899, 57).

> *In the afternoon we saw smoke rising up from the land; we accordingly rowed to shore in order to land if possible, with our spirits somewhat raised, for I concluded that if there were men, there must be water too. Coming near the shore, I found it to be a steeply rising coast, full of rocks and stones, with the surf running violently; nevertheless 6 of our men swam ashore, and we remained at anchor with the pinnace in 25 fathom outside the surf. The men now searched for water everywhere until nightfall, without, however, finding any…*

Abel Tasman, credited in 1642 with being the first European explorer of Van Dieman's Land also recorded the difficulty his party had with finding drinkable water or fresh vegetables.[8] Making landfall on the lands of the Paredareme, he recorded that[9]:

> *…here we found water, it is true, but the land is so low-lying that the fresh water was made salt and brackish by the surf … We made no arrangements for gathering vegetables since the high seas prevented our men from getting ashore except by swimming, so that it was impossible to get anything into the pinnace.*

Mostly, these early explorers relied on their knowledge of fishing techniques to supplement food brought with them on their ships.[10] Examination of their sea journeys shows that in town ports along the trade routes they followed, they stocked up on rice, wheat, maize, salted meats, fresh water, and alcohol. Between 1606 and 1770, many merchant ships from the Dutch East Indies Company probed and charted this great southern landmass. Where possible, these merchant ships tried to supplement their stocks with local produce but were confronted in Australia with no commerce or trade that they recognized, few edible foods they could recognize except fish, and great difficulty in accessing fresh water. Commonly the inhabitants hid from them or in rarer cases fought and killed them. There was rare record of these early explorers spending time with inhabitants as they circumnavigated the landmass, making their maps, and preparing their reports. Throughout the 18th century, knowledge of Australia's coastline increased gradually, and with it a growing understanding of edible endogenous flora and fauna. At the turn of the century, British explorers such as William Dampier[11] heralded this understanding. His journals recorded his efforts to make sense of what edible fauna were available in the Gathaagudu (Shark Bay) area, on the country of the Malgana, Nhanda, and Yingkarta speaking peoples[12]:

> *7 August 1699: The land animals that we saw here were only a sort of raccoon, different from those of the West Indies, chiefly as to their legs; for these have very short forelegs; but go jumping upon them as the others do (and like them are very good meat)… The sea-fish that we saw here (for here was no river, land, or pond of fresh water to be seen) are chiefly sharks. There are abundance of them in this particular sound, and I therefore give it the*

[8]Tasman and Heeres (1898).

[9]Tasman and Heeres (1898, 15–16).

[10]Macdonald (2004).

[11]Dampier (1703, Chapter 3, 12).

[12]For more information see: http://www.sharkbay.org/.

name of Shark's Bay. Here are also skates, thornbacks, and other fish of the ray kind (one sort especially like the sea-devil) and garfish, bonetas, etc. *Of shellfish we got here mussels, periwinkles, limpets, oysters, both of the pearl kind and also eating-oysters, as well the common sort as long oysters ... There are also some green-turtle weighing about 200 lb. Of these we caught 2 which the water ebbing had left behind a ledge of rock, which they could not creep over. These served all my company 2 days; and they were indifferent sweet meat.*

As suggested in the previous chapter, these explorers employed the method of approximation to compare what they were finding with other apparently similar examples, struggling to make sense of this new world of animals, reptiles, and marine creatures and the edibility of what they were finding. By the eighteenth century, the French were also exploring, mapping, classifying, and wanting to establish their presence in Terra Australis (for further discussion see Chap. 7). These early explorations by the French were sometimes made in parallel with British explorations. While French interest in Terra Australis continued, the actions of James Cook, on behalf of the British, to claim the eastern coastal landmass fundamentally changed the ways that all parties approached the land, its inhabitants, and its food resources.

1770: James Cook and Joseph Banks

In 1770, James Cook and Joseph Banks led the first British joint scientific expedition of the Royal Navy and the Royal Society to the southern Pacific Ocean. James Cook was commanding his first seafaring exploration and he charted the Australian east coast, claiming it for Britain under instruction from King George III of England on 22 August 1770 at Possession Island (an island that lays between Yadhaigana and Muralug country on the western tip of Cape York, Queensland), naming eastern Australia 'New South Wales'. Cook sailed with naturalists, astronomers, cartographers and was well funded philanthropically through the influence of Joseph Banks, amongst others, to undertake extensive mapping and classification activities. Mulvaney explains these classification activities in the emerging field of botany for which Banks became a powerful advocate, saying[13]:

During the eighteenth century, the Linnaean classification of flora enabled botany to be systematised and provided with a global reference. Linnaean taxonomy and nomenclature expedited the reduction of plants to specimens, numbers, and names. Once a specimen was so identified, it represented that plant type no matter where it was found.

Cook played a pivotal if brief role in the history of the development of an understanding of edible food, the focus of this book, for a number of interrelated reasons. The first was that Cook understood the nutritional value of food. He is credited, for example, with being the first ship's captain to stop the disease scurvy.

[13]Mulvaney (2007, 31).

To achieve this, he was keen at all opportunity to collect edible greens. Wharton in his introductory 'Sketch of Captain Cook's Life' gives the following information, recorded by the ship's surgeon Mr. Perry[14]:

> *Sour krout, mustard, vinegar, wheat, inspissated orange and lemon juices, saloup, portable soup, sugar, molasses, vegetables (at all times when they could be got) were, some in constant, others in occasional use … the allowance of salt beef and pork was abridged from nearly the beginning of the voyage, and the sailors' usual custom of mixing the salt beef fat with their flour,* etc.*, was strictly forbad … Upon our leaving England, also, a stop was put to our issuing butter and cheese, and throughout the voyage raisins were served with the flour instead of pickled suet. At Tierra del Fuego we collected wild celery, and every morning our breakfast was made with this herb, with ground wheat and portable soup … to this it may be added, that no opportunity was, as appears by the Journal, ever lost of getting wild celery and any other wild herb that presented itself.*

Unlike Dampier, Cook focused on finding fresh vegetables. He made the following journal entries during his explorations of the lands and waterways of Guugu Yimidhirr and Kuku Yalanji[15]:

> *Thurs 26 July 1770: Such people as can be spared from the necessary Dutys of the Ship are employ'd fishing and gathering greens and other refreshments.Sat 4 August 1770: We found in several places on the Sandy beaches and Sand Hills near the Sea, Purslain and beans, which grows on a Creeping kind of a Vine. The first we found very good when boiled, and the latter not to be dispised, and were at first very serviceable to the Sick; but the best greens we found here was the Tarra, or Coco Tops, called in the West Indies Indian Kale,* (* Colocasia Macrorhiza.) which grows in most Boggy Places; these eat as well as, or better, than Spinnage.*

The second reason for his importance in understanding the food history of Australia was that he assessed the capacity of the land for agricultural production of exogenous foods. The following excerpt during his early time in Kundul (Botany Bay), where he tried to make contact with Eora provides an example:

> *Thurs 3 May 1770: We found the face of the Country much the same as I have before described, but the land much richer for instead of sand I found in many places a deep black soil, which we thought was Capable of producing any kind of grain.*

His general assessment was contained in a summary section towards the end of Chap. 8. Of the coastal areas of New South Wales, he concluded his report optimistically, saying:

> *The Land naturally produces hardly anything fit for Man to eat, and the Natives know nothing of Cultivation …[but] …In this Extensive Country it can never be doubted but what most sorts of Grain, Fruit, roots,* etc.*, of every kind would flourish here were they once brought hither, planted and Cultivated by the hands of Industry; and here are Provender for more Cattle, at all seasons of the Year, than ever can be brought into the Country.*

[14]Cook and Wharton (1893).

[15]Cook and Wharton (1893).

Fig. 4.1 *Turtle catching on land* (Orme 1814, 42). Image courtesy of Monash Rare Books Collection, Monash University Library

The third reason for his importance was that he, and his team including Solander and Banks, left detailed information about flora, fauna, and the possibilities for edible endogenous foods (for a later image of these practices, see Fig. 4.1).

Cook[16] recorded the varieties of fish they found as they explored up the coast from Kundul. By early May, they were passing the lands of Guring-gai and Awabakal[17] and his men had found a taste for eating stingrays. A month later, in June 1770, as they explored the lands and waterways of Guugu Yimidhirr and Kuku Yalanji, Cook recorded land parties shooting pigeons, netting fish, catching turtles, stingrays and sharks using fish hooks and nets, and gathering clams, palm cabbages, greens, and plantains. Having identified kangaroo, they managed to shoot their first and Cook made the following detailed record of their examination of this surprising animal, one like no other they had ever seen[18]:

> *Sat 14 July 1770: Mr. Gore, being in the Country, shott one of the Animals ... weighing only 28 lb clear of the entrails; its body was long; the head, neck, and Shoulders very Small*

[16]Cook and Wharton (1893, Chapter 8).

[17]Wafer et al. (2008), Attenbrow (2010).

[18]Cook and Wharton (1893, Chapter 8).

in proportion to the other parts. It was hair lipt, and the Head and Ears were most like a Hare's of any Animal I know; the Tail was nearly as long as the body, thick next the Rump, and Tapering towards the End; the fore Legs were 8 Inches long, and the Hind 22. Its progression is by Hopping or Jumping 7 or 8 feet at each hop upon its hind Legs only, for in this it makes no use of the Fore, which seem to be only design'd for Scratching in the ground, etc. *The Skin is cover'd with a Short, hairy furr of a dark Mouse or Grey Colour. It bears no sort of resemblance to any European animal I ever saw…*

Cook's hunting parties had success with finding food using methods of procurement, some similar to inhabitants, namely using fishing nets and gathering by hand, and employing some new methods with fishhooks and guns. They also identified some fruits[19]:

There are, indeed, growing wild in the wood a few sorts of Fruit (the most of them unknown to us), which when ripe do not eat amiss, one sort especially, which we called Apples, being about the size of a Crab Apple it is black and pulpey when ripe, and tastes like a Damson; it hath a large hard stone or Kernel, and grows on Trees or Shrubs (The Black Apple, or Sapota Australis).

Without doubt, these invaluable records allow us brief insight into a group of people led by James Cook whose observations opened for the possibility, later realized, of a penal colony being established. Even so, his first record of trying to establish relations with Guugu Yimidhirr and Kuku Yalanji echoed the past and future role of food within the complexity of Indigenous-settler relations. In this important chapter, Cook also provided the record of his first attempt to share food[20]:

Tues 10 July 1770: P.M., … we made them understand that we were going to eat, and asked them by signals to go with us; but this they declined, and as soon as we left them they went away in their Canoe.

Banks, in his roles as the chief naturalist on the journey and representative of the Royal Society, was a keen observer of flora and fauna, sometimes noting edible foods in his journals. He and his scientist colleagues Daniel Solander and the Finnish botanist Herman Spöring Jr made the first major collection of Australian flora.[21] As was noted in the previous chapter, fish was a familiar source of food for both inhabitants and these early sea explorers. In common with all other seafaring explorer journals, Banks left notes of the use of fish, seafood, stingrays, and turtles wherever available.[22] He observed inhabitants using lances to spear fish where his group used nets to haul the seine. Here we start to see records that demonstrate that inhabitants and newcomers employed different methods to achieve the same goal of catching fish. We also see a demonstration of seafaring explorers' practices related to resource use—'more than all hands could Eat'. This attitude proved to be a significant issue when more newcomers came, settled, and continued to use these same

[19]Cook and Wharton (1893, Chapter 8).

[20]Cook and Wharton (1893).

[21]Banks et al. (1980).

[22]Banks (1771).

fishing practices because fish stock were quickly depleted through over-fishing (as will be discussed more fully in Chap. 5).

Banks' journal entries provided insight into the foods eaten by seafaring explorers. He also brought a scientist's botanical observations to his thinking about edible food[23]:

> *We had been so long at sea with but a scanty supply of fresh provisions that we had long used to eat everything we could lay our hands upon, fish, flesh or vegetable which only was not poisonous; yet we could but now and then procure a dish of bad greens for our own table … plants we eat were a kind of Beans, very bad, a kind of Parsley and a plant something resembling spinage, which two last grew only to the Southward. I shall give their botanical names as I beleive some of them were never eat by Europeans before: first Indian Kale (Arum Esculentum), Red flowerd purslane (Sesuvium Portulacastrum), Beans (Glycine speciosa) Parsley (Apium), Spinage (Tetragonia cornuta).*

Banks' remarks that reflected his attitude to edible plants were echoed in his words about animals, fish, and birds that he recognised. He somewhat prophetically mused that such flora and fauna, while edible under these conditions, would 'be highly nauseous to us whenever we have plenty of Beef and mutton etc.'[24] As the next section discusses, such attitudes were also expressed by explorers in the post-Cook era of sea explorations by the French and British that continued beyond the establishment of the British penal colonies in Port Jackson, Lord Howe Island, and Tasmania. Even explorers of the inland regions repeated this familiar willingness to eat endogenous food only under conditions of extreme hardship and hunger, as will be examined further in Chaps. 6 and 8.

Post-Cook Sea Exploration

Cook and Furneaux undertook a second journey that passed by Van Dieman's Land (now Tasmania) in 1773. Furneaux gave the information about the wood, flora, and fauna that was identified while they were exploring Toogee coastal lands.[25] The wood of unfamiliar trees proved inadequate to the job of replacing worn and broken ship's rigging. Using guns, they managed to shoot down a large white bird 'about the size of a large kite of the eagle kind' but found the fish to be scarce, 'mostly shark and dogfish'. At the time of their exploration of this area in March, being the end of summer, the lagoons were dried out but still had trout. Unable to use the nets to haul out fish they instead used hand-fishing lines. They also attempted to hunt whale, something that continued as this image painted at a later time shows (Fig. 4.2).

There is little record of other explorations until La Pérouse arrived in Port Jackson as the British were moving their settlement from Kundul (Botany Bay). The French

[23]Banks (1771), Beaglehole (1962).

[24]Banks (1771).

[25]Furneaux (1777/1970).

Fig. 4.2 *Boats approaching a whale* (Orme 1814, 54). Image courtesy of Monash Rare Books Collection, Monash University Library

King Louis XVI selected Jean-François de Galaup, Compte de La Pérouse (known in contemporary Australian historiography as *La Pérouse*) to lead a major scientific expedition on the vessels the Boussole and the Astrolabe. La Pérouse had orders to study climates, native peoples, plants, and animals, collect specimens and artefacts and to observe the activities of other European powers. Like Cook, La Pérouse had scientists, cartographers, and artists travelling with him. Hearing of the planned settlement of Australia by the British, La Pérouse arrived in Botany Bay to investigate. On 26 January 1788, the French expedition sighted Botany Bay, but Governor Phillip's 'First Fleet' had already arrived. The British received La Pérouse courteously, but were unable to help him with food, as they had none to spare.

Dyer[26] gives account of seven expeditions of French exploration between 1788 and 1831. Certainly, the French interaction with the new British penal colony in New South Wales and emerging settlements predominantly on the eastern coast were now more focussed on the British efforts in this new land to support agriculture and settlement. Even so, the French knew of the size of the landmass and continued to send out scientific explorations, focusing on Western Australia and the

[26]Dyer (2007).

southern coast (to be discussed in more detail in Chap. 7). Of note, La Pérouse and both his vessels vanished after leaving Port Jackson and in the early 1790s, D'Entrecasteaux was charged with the responsibility to find out what had happened to that fateful exploration team.

The searches and scientific explorations undertaken by D'Entrecasteaux are recorded in the reports written by Labillardière.[27] These provide wonderful insight into aspects of French food procurement practices as they explored the Tasmanian and Western Australian coasts in search of La Pérouse. Labillardière made numerous records about attempts by them to source edible exogenous food. As they explore and search the lands and waterways of Nuenonne around what is now known as D'Entrecasteaux Bay, his records provided insight into the French approach to coastal exploration, namely that they carried provisions of sea biscuit with them but relied on finding fresh drinking water on land. They also came prepared to use guns to shoot down birds and animals for food. For example, he recorded that[28]:

> *28th April 1792. As soon as it was day, we went out with our guns to shoot something for our breakfast. We soon killed a couple of rooks, which were immediately broiled and eaten, as if they had been the most delicate food.*

Like the British expeditions being led by Cook, the French were learning to take onboard supplies of fresh green vegetables whenever possible. Labillardière recorded that the exploration party were excited to discover a new species of parsley that they '…carried a large quantity of it on board … which was acceptable to the mariners who felt the necessity of obviating, by vegetable diet, the bad effects of the salt provisions…'.[29] He also noted their good fortune with fish and shellfish, particularly gathering a large supply of oysters.[30] Even so, he complained that those of his group who had gathered such fresh provision were not given it as their supplies for further explorations. Instead, he listed their provisions that he described as being 'of the standard sort …ship's biscuit, cheese, brandy and sometimes a little salted bacon….'[31]

While there is some detail recorded in journals about the methods that explorers were using to procure food, there is less detail given about how they prepared their food. Labillardière gave a rare example of how they were learning to prepare their food like Nuenonne, citing a 'a very fine meal of fish and muscles, which we broiled on the coals after the manner of the New Hollanders'.[32] It is interesting to me that such an essential human activity as the procurement, preparation, and consumption of food received so little attention from those who kept journals, particularly in a situation where nothing was familiar, everything required adjustment to the

[27]de Labillardière (1800, Chapter V).
[28]de Labillardière (1800, 104).
[29]de Labillardière (1800, 105).
[30]de Labillardière (1800, 106).
[31]de Labillardière (1800, 106).
[32]de Labillardière (1800, 125).

environment, and novel ways of doing things was the order of the day. There are details of many aspects of such journeys, but about how these explorer parties prepared their food, the records fall almost completely silent.

In parallel with the French, even while the British were establishing colonies, their exploration efforts also continued. In 1798, Matthew Flinders and George Bass sailed their vessel, the Norfolk, through Bass Strait and around the southern island of Van Dieman's Land. Flinders recorded information about the standard ship's diet, like Cook before him showing some understanding of the nutritional needs of his people. He provided interesting detail about his approach to planning the food provisions for the journey, recording that[33]:

> *Within the tropics, lime juice and sugar were made to suffice as antiscorbutics; on reaching a higher latitude, sour krout and vinegar were substituted; the essence of malt was reserved for the passage to New Holland, and for future occasions. On consulting with the surgeon, I had thought it expedient to make some slight changes in the issuing of the provisions. Oatmeal was boiled for breakfast four days in the week, instead of three; and when rice was issued, after the expenditure of the cheese, it was boiled on the other three days. Pease soup was prepared for dinner four days in the week, as usual; and at other times, two ounces of portable broth, in cakes, to each man, with such additions of onions, pepper,* etc. *as the different messes possessed, made a comfortable addition to their salt meat.*

Like previous seafaring explorers, Flinders relied on fish and seafood to augment the on-board supplies. Having arrived on the southwestern coast of the Australian landmass, and passing the lands of Wardarni and Bibbulman, Flinders made the following record about the foods they found edible on the estates of Minang (King George's Sound). These lands are now recognized as the lands of the Wagyl Kaip of the Southern Noongar region (being the Noongar dialectals groups, Ganeang, Goreng, and Minang from the Great Southern area).[34] Flinders' men continued to experiment with the best ways to catch and prepare fish and oysters, finding their seine hauling method for catching fish was less successful than using hand-fishing lines.[35]

He also referred to taking on provision of kangaroo meat.[36] By the confident tone of the narrative, it is evident that the newcomers were learning to catch and prepare this meat, something that earlier explorers had approached in a far more tentative manner. As they voyaged the length of the southern coast past the lands and waterways of Goreng, Wudjari, Ngatjumay, Mirning, Wirangu, Nawu, and Narangga, they arrived on an uninhabited island known by Ngarrindjeri as Karta (Island of Spirits) where they found numerous kangaroos. These they shot and, after skinning and breaking up the meat, they[37]:

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[33]Flinders (1814, Vol. 1, 158–159).

[34]http://www.noongarculture.org.au/wagyl-kaip/.

[35]Flinders (1814, Vol. 1, 173).

[36]Flinders (1814, Vol. 1, 234).

[37]See http://www.samuseum.sa.gov.au/gallery/ngurunderi/ng9htm.htm.

...stewed down into soup for dinner on this and the succeeding days; and as much steaks given, moreover, to both officers and men as they could consume by day and by night.

The voyages undertaken by these explorers were not without privations. Flinders recorded that they suffered from a lack of food.[38] Even so, his careful planning ensured that most of his ship's company managed to avoid many of the illnesses that dogged the early sea explorers. Some explorer parties told a different story of terrible privation and illness.[39] Infamously, Nicolas Baudin led a French expedition to map the coast of Australia. He had two ships, the Géographe and the Naturaliste that was captained by Hamelin. In April 1802, Baudin met Matthew Flinders on Ngarrindjeri country (now known as Encounter Bay). While Flinders had paid careful attention to the lessons learned by Cook about scurvy, Baudin, it appeared, had not. Péron, who accompanied Baudin, judged him harshly, recording the terrible quality of the food they had to eat[40]:

... putrid water, biscuits reduced almost to dust by weevils, and salt meat so absolutely offensive to sight and smell that 'the most famished of the crew frequently preferred to suffer the agonies of hunger' rather than eat it...

Baudin faced serious opposition to his leadership of the expedition, a task that was not helped by his inability to feed his people properly. While there was certainly discontent about food, highlighted by both Péron[41] and Scott,[42] consideration of Baudin's journals demonstrate that he, like other seafaring explorers, was trying to make sense of what edible flora and fauna were available throughout his journeys.[43] The shock for French explorers was that there was little that they recognized as edible food and on Baudin's voyages they seemed unable to source sufficient endogenous provisions to meet their dietary needs, being unprepared for the conditions they found.

While the French continued to explore the coastlines of Terra Australis, much of the British effort at this time focused on establishing colonies and settlements. Even so, between 1818 and 1822, Philip Parker King was charged with the responsibility of finalizing the charting of the northern coast of Australia.[44] While he faced the same challenges as previous explorers, he went with the confidence of assumed ownership. As he explored the northwestern coastline of Western Australia around the lands of the Jaburrara and their neighbors, this confidence extended to taking people captive and trying to use food to persuade them to be friendly:

26 February 1818: On the boat's coming up with the nearest Indian, he left his log and, diving under the boat's bottom, swam astern; this he did whenever the boat approached

[38]Flinders (1814, Vol. 2, 156).
[39]Toft (2002).
[40]Péron (1807).
[41]Péron (1809).
[42]Scott (1911).
[43]Baudin (1974).
[44]King (1827, Vol. 1, Preface).

him, and it was four or five minutes before he was caught … Biscuit was given to him, which, as soon as he tasted, he spat out, but some sugared water being offered to him, he drank the whole…

Given such kidnapping, people living on the island now named Goodwyn Island (possibly Jaburrara) resisted his attempts to find fresh water and food.[45] Later in his journey, he was more successful in accessing food and water but Tiwi only gave information in return for objects they desired[46]:

17 May 1818: On pulling near the beach the whole party came down and waded into the water towards us; and, in exchange for a few chisels and files, gave us two baskets, one containing fresh water and the other was full of the fruit of the sago-palm, which grows here in great abundance.

This seemingly small and unremarkable exchange in fact marks an important rupture in the colonization efforts of the British. In previous encounters involving the newcomers seeking food, they had been killed in their efforts, had killed inhabitants, had their food rejected, or they had rejected food offered by inhabitants, and more recently they had taken people hostage to force them to reveal sources of food or drinking water. Swirling around these small, unnoticed food events, Indigenous sovereignty over their estates and waterways had been superimposed by British claim to the landmass of Terra Australis, Norfolk Island, and Van Dieman's Land. Both inhabitants and newcomers were acting according to their understanding of their rights to the resources of these lands and waterways and, increasingly, British explorers were asserting their ownership and authority with guns and violence. And yet, in this instance, Tiwi managed to negotiate an exchange of goods in a way that was remarkable, given the context. There were many such individual examples where exchanges of food for other desired goods were negotiated even as the larger social structures were being transformed forever.

In addition to asserting British claim of the northern part of Australia, Philip Parker King was also charged with the responsibility to assess the land for agricultural purposes. Alan Cunningham, one of the Sydney colony's famous seed collectors, was a member of his party exploring the Goulburn Islands, the estates of Warruwi, and Cunningham planted peaches, apricots, loquats, lemons, herbs and spices.[47] Even in these early times, formative opinions were being made about the need to stop inhabitants burning the land because such practices would destroy the exogenous plants and vegetables favored by newcomers. In this respect Cunningham, and others who will be discussed more fully in Chap. 6, acted as transitional knowledge holders. On the one hand, Cunningham and the other seed collectors were sending information to back Britain about endogenous flora and fauna for Banks. At the same time, they were supporting newcomers to establish what could be cultivated of their familiar, exogenous, foods. Both ironically and

[45]King (1827, Vol. 1, Chapter 1).
[46]King (1827, Vol. 1, Chapter 2).
[47]King (1827, Vol. 1, Chapter 2).

devastatingly, their work enabled the very practices that forced many of the endogenous, so called 'exotic' flora and fauna that were making Banks globally famous to the point of extinction.

The northern and western coasts of Australia continued to attract seafaring explorers until later in the nineteenth century. From 1837 to 1839, George Grey undertook an exploration of the northern parts of the western coast of Australia. On the early part of his journey, he used his schooner as his supply ship, exploring inland as far as was possible. They planned to carry as many provisions as was possible.[48] Because of this, they travelled on minimal provisions and his party was willing to substitute their carried provisions, for example with kangaroos and a boa constrictor snake when travelling across Worara country (Glenelg River). He noted that the snake was a lot like eel but tougher.[49] Not unlike the approach taken by Flinders on Kangaroo Island (discussed above), Grey left a detailed description of his method of catching and preparing turtles for food whilst on Bernier Island, on the lands of Malkana, writing that[50]:

> *25 February 1839: Whilst on our return we saw three large turtles among some seaweeds in shoal water; and, after a good deal of floundering about and some tumbles amongst the breakers, we succeeded in turning them, and then brought a party armed with axes,* etc. *and cut them up. One part we immediately converted into soup, and the remainder was immersed in a cask of pickle as a store against unforeseen misfortunes.*

Captain Owen Stanley undertook a coastal exploration to establish safe passage from the South Sea across to India via the Torres Strait. His journey, recorded by MacGillivray et al.,[51] reflected that this party was becoming more confident about their knowledge of endogenous foods, complaining that the provisions made available to them at Port Essington garrison, located on the estates of Iwaitja were very poor food.[52] These records also showed that explorers were developing their knowledge of flora and fauna, were able to procure it easily, had learnt to prepare it well, developing their palates for endogenous foods, as the following shows[53]:

> *Towards evening, finding among the contents of our game-bags several ducks, of two species–Anas superciliosa, the black duck of the colonists, the richest and best flavoured of all the Australian waterfowl, and A. punctata, or teal, we had them cooked bush fashion, for supper.*

More recent research such as that by Allen,[54] suggests that, 'Although the garrison hunted kangaroo and wallaby, fished, and ate shellfish; the Europeans were too few to threaten the economic basis of Indigenous Australian life'. While this

[48]Grey (1841/1983, Vol. 1, Chapter 8).
[49]Grey (1841/1983, Vol. 1, Chapter 9).
[50]Grey (1841/1983, Vol. 1, Chapter 14).
[51]MacGillivray et al. (1852).
[52]MacGillivray (1967, 138).
[53]MacGillivray (1967, 55).
[54]Allen (2008, 128).

might be so in the localized sense, the lands and waters of Iwaitja together with all Indigenous families, clans, and nations had been annexed by the English, heralding a loss of food sovereignty even as they managed to begin to trade with the newcomers and take advantage of whatever opportunities existed in such exchanges. Allen observes of Iwaitja that[55]:

> *...to some extent the Aborigines appear to have supplied the settlement with foodstuffs, collecting shellfish, turtle, and the hearts of the cabbage tree palm for the garrison although they could never be induced to work in the settlement for more than a few days at a time.*

The passage of time heralded some important changes emerging in the way that explorers were procuring, preparing, and managing their provisions. They had become more expert with using guns and dogs to procure food. Stanley's expedition had some success with birds but still found animals hard to catch. When stopped at Cape York, for example, his party relied on Yadhaigana to supply some of their diet.[56] There was still some difficulty hunting for kangaroos even with their guns and dogs.[57] The approach by explorers such as Parker and Stanley to inhabitants in northern Australia demonstrated their more cautious, even if presumptuous approach because of the numerical superiority of inhabitants on country that had not felt the full brunt of the colonial frontier as yet. Inhabitants expected Parker and Stanley to give something in return for what was needed by them and for any labor given by inhabitants. Clearly, inhabitants such as Badulgal were now more used to doing business with these newcomers, entering into negotiated exchanges that were developing agreed value symmetry between goods and labor, as the following record by MacGillivray showed[58]:

> *The natives, of whom there were usually a number encamped in the neighbourhood ... assisted the wooding and watering parties, brought off fish and portions of turtle to the ship, and accompanied us on our walks on shore. The usual remuneration for their services was biscuit, and, next to that, tobacco, besides which axes and knives were highly prized and occasionally given them.*

By way of distinction, some explorer parties such as the one led by Gregory and Gregory to the northern coast of Australia in 1855, planned to carry sufficient familiar provisions so as not to have to rely on endogenous supplies of food, as the following record showed[59]:

> *... flour, salt pork, preserved beef, rice, peas, preserved potatoes, sago, sugar, tea, coffee, vinegar, limejuice,* etc.*, calculated to supply the party on full rations for eighteen months.*

[55]Allen (2008, 128).

[56]MacGillivray (1967, 325).

[57]MacGillivray (1967, 320–321).

[58]MacGillivray (1967, 309–310).

[59]Gregory and Gregory (1884/2002, 133).

Decisions to carry full provisions or to supplement carried rations with locally accessed foods were taken by the leaders and sponsors of these expeditions. Some explorers regarded locally sourced food as giving them greater advantage to explore more thoroughly into country that was hard to access while carrying all the provisions that were needed. Other explorers recorded that they regarded the procurement of endogenous edible flora and fauna was both time consuming and often dangerous, because of their lack of knowledge and because of hostility shown towards them while trying to access food resources of inhabitants of the estates they entered. As became the case with the establishing colonies to be discussed in the next chapter, explorers began to learn how to carry what they needed of their more familiar exogenous foods, made possible in part because of the improved roads and the development of service towns along early exploration and stock routes.

Food Practices of Sea Explorers

Some observations arising from this analysis are worthy of note at this point. Seafaring explorers understood that their journeys would involve privations. They were provisioned with food that would survive long storage. It was generally highly salted, stale, and of poor nutritional value. Normal expectation would be that vessels would be able to re-stock and supplement their supplies in emerging trading ports along their routes, as the seventeenth and eighteenth century British and European colonization of the world took shape.

Their explorations of the landmass of Terra Australis took them to the edges of the known world, and into the unknown, well into the nineteenth century. In Australia, not only were there no established trading towns, neither were there cities or settlements they recognized. For the earliest seafaring explorers coming to the coasts of this unknown southern land, with their fresh water and food supplies at their lowest and poorest quality, they found they had little knowledge and few skills to access endogenous edible foods and the inhabitants were rarely willing to share their resources or knowledge.

Over time, a number of factors changed. The shape and extent of the landmass became better known and reports from previous voyages shared information with new exploratory parties. Maps were improved, plots of seeded gardens were left in the hope they would provide food for following explorers, fresh water spots were recorded, information about flora and fauna was conveyed back to Britain and Europe, and the available body of newcomer information about procuring and preparing edible endogenous foods grew. Cook and Dampier travelled with better nutritional information about how to stop scurvy, making them open to collecting endogenous edible greens as an important element of their journeys.

Until Cook's time (1770), Britain and France had both undertaken coastal explorations of Terra Australis. With the Revolution in France and the war between Britain and France occurring on the other side of the world, together with slow communications, Britain was able to claim possession of the eastern coast of

Australia. The French continued their explorations, as did the British. Finding fresh water and food continued to be an important underpinning to the success of these journeys. In 1788, with the establishment of the first British penal colony on the lands of Eora in Sydney, the relationship between France and Britain changed. By the beginning of the nineteenth century, as Baudin and Flinders crisscrossed explorations in their circumnavigations of Terra Australis, Britain was becoming more confident in her claim to the entire landmass and its resources. This they had substantially achieved by 1827. The British focused their efforts on establishing settlements, which needed fresh water and food. They were also eager to continue their coastal explorations and begin the work of inland exploration. The next chapter will examine the food security context of these new settlements, providing the impetus for expansion of colonies and settlements following overland explorers who expanded the frontiers of taste for the newcomers.

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Part II
Food Across the Colonial Frontier

The following chapters (Chaps. 5–8) examine food practices during the expansion of the frontier from different perspectives that provide insight into a variety of factors influencing contemporary postcolonial Australian foodways. The section develops the argument that nineteenth century explorers and early settlers grappled with meeting their food needs in a country where they did not understand the ecology or the potential of its fresh, edible foods. Preferring instead to establish what was familiar, they travelled with foods provisioned from government stores, relying heavily on wheat flour. The settlers who followed them relied on European cultivars and livestock in order to establish household food security as soon as was possible. Their journals leave traces of knowledge of foodways of the inhabitants they met and some were more willing than others to eat a broader range of endogenous edible foods than those carried and encountered by the seafarers who explored the coasts of Australia in the eighteenth century (Chap. 4).

Chapter 5
Surviving the Emergency Food Context

Abstract This chapter is the first of four chapters that examine 'Food across the colonial frontier' beginning with the first contact colonization and settlement period on the eastern coasts of New South Wales, examining the collision of human need for food in the early settlements and the resultant emergency food security context thus created. Analysis suggests that there was significant starvation that occurred for both inhabitants and newcomers but for different reasons. A number of issues emerge: diminishing nutrition of both inhabitants and newcomers over time, the question of whether everyone was eating from the same sources of food, and the increase in both stealing and exchanges of food in the first contact period. This chapter focuses on the food context in the early period of colonization in Australia, for about the first 15–20 years where there was significant starvation that occurred for both inhabitants and newcomers but for different reasons. It will examine this using the lens of the emergency food security context that Goodall defines as 'Continuity of food supply in the face of sudden disruptions'. This is a fragile, unstable period of encounter when colonial administrators, navy personnel, and their convicts arrived hungry and exhausted by long voyages into a land that did not bear any of the familiar hallmarks of the life they knew. For inhabitants living around Kundul, the impact must have been shocking. This wave of strangers, unlike previous groups of seafaring explorers, came with the intention to stay and first to build penal colonies and later settlements. All on board these vessels understood the pressing need to find food on their arrival to supplement, and eventually to replace, ship's provisions brought from Britain. The scarcity of food, either exogenous or endogenous, was sharpest during the early period of stabilization of this and then other penal colonies and settlements.

Keywords First contact · Emergency food security context · Diminishing nutrition · Food wars · Food stealing and exchange · Australia

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A Soil so barren and at the same time intirely void of the helps derived from cultivation could not be supposed to yield much towards the support of man.[1]

This chapter focuses on the food context in the early period of colonization in Australia, for about the first 15–20 years where there was significant starvation that occurred for both inhabitants and newcomers but for different reasons. It will examine this using the lens of the emergency food security context that Goodall defines as 'Continuity of food supply in the face of sudden disruptions'.[2] This is a fragile, unstable period of encounter when **colonial** administrators, navy personnel, and their convicts arrived hungry and exhausted by long voyages into a land that did not bear any of the familiar hallmarks of the life they knew. For inhabitants living around Kundul, the impact must have been shocking. This wave of strangers, unlike previous groups of seafaring explorers, came with the intention to stay and first to build penal colonies and later settlements. All on board these vessels understood the pressing need to find food on their arrival to supplement, and eventually to replace, ship's provisions brought from Britain. The scarcity of food, either exogenous or endogenous, was sharpest during the early period of stabilization of this and then other penal colonies and settlements.

The Emergency Food Context

The British decision, on advice from Banks, to establish penal colonies in New South Wales and Tasmania is surprising given his overall appraisal of its potential, as reflected in the opening quote above. The arrival of the British to settle caused an immediate emergency food crisis for both inhabitants and newcomers. This crisis extended as frontier extended, with the landmass of Australia became increasingly occupied by newcomers, their fences, and animals, who did not leave. While many other aspects of the colonization process have been examined by political scientists and historians, this book offers a novel thesis that food has been an under examined and barely theorized central factor in explaining the impact of colonization into the contemporary era. It argues that, for original inhabitants, the food security crisis forced on them by colonization has not been overcome.

The newcomers that arrived at Kundul, Botany Bay, by boat in January 1788 were not just another group of seafaring coastal explorers. Known as the First Fleet, under the command of Captain Arthur Phillip, around 1400 people arrived, mostly convicts but also a small group of civil officers and marines with orders to establish a penal colony on the traditional estates of coastal Eora and Dharug. The first site of

[1]Banks (1771).

[2]Goodall (2008, 1 & 9–10).

landing at Botany Bay was found to be unsuitable for settlement and the new Governor Phillip moved to Port Jackson (later known as Sydney) onto other lands of the Eora nation and established the first penal colony in Sydney Cove on 26 January 1788. There was an expectation that the food the First Fleet carried would last them until they were able to establish their own food supplies. Building on the scholarship of others such as Karskens, Flannery, and Perkins and Langton,[3] evidence from this sociohistorical study of food suggests that the newcomers were badly unprepared for the task, carrying with them very little in the way of tools for crop cultivation or animal husbandry or, indeed, any people who had much knowledge of food procurement, preparation, processing, or storage. They also found that the soil around Sydney Cove was poor and that they knew nothing of the local growing conditions. As the *Emigrant's Friend* surmised some 60 years later, '…in fact, every thing is peculiar.'[4]

Food Shortages at First Encounter

Between 1789 and 1791, the settlers at Sydney Cove were critically short of food. More convicts arrived, promised boats carrying food were wrecked at sea and failed to arrive, and the struggling penal colony had not managed to establish farms or a local economy. At the time, Mann noted that the food security crisis was the reason that the colony was so slow in its development.[5] Dunn and McCreadie later observe that, in Sydney, everyone was living on food rations, such was the lack of locally-available edible food, either endogenous or grown from European seeds and cultivars.[6] The hunger felt by newcomers, triggered by severe food rationing forced them to look to local, endogenous sources of food. Benefiting from knowledge passed on to them by explorers records and by word of mouth, they gained knowledge about local fish and seafood stocks, what sorts were edible, where they could be caught, and how they could be prepared for eating. Some of this knowledge had been gained by trial and error and some through communications with Eora (Cadigal, Wanegal, and Cammeraygal) and their neighbors to the north, Guring-gai, to the north west, Dharug, and to the south, Dharawal.

Collins reflected on behavior he had observed where hungry newcomers 'were in general supplied by the natives with fish or other food, being considered by them (for so their situation only could be construed) as unfortunate strangers thrown upon their shore from the mouth of the yawning deep, and entitled to their protection'.[7] This speaks to the contradictory nature of this early period where it would appear

[3]Karskens (2009), Flannery (1996, 2000), Perkins and Langton (2008).

[4]Unknown (1848/1974, 1 & 9–10).

[5]Mann (1811, 3).

[6]Dunn and McCreadie (2013).

[7]Collins (1798–1802a, 426).

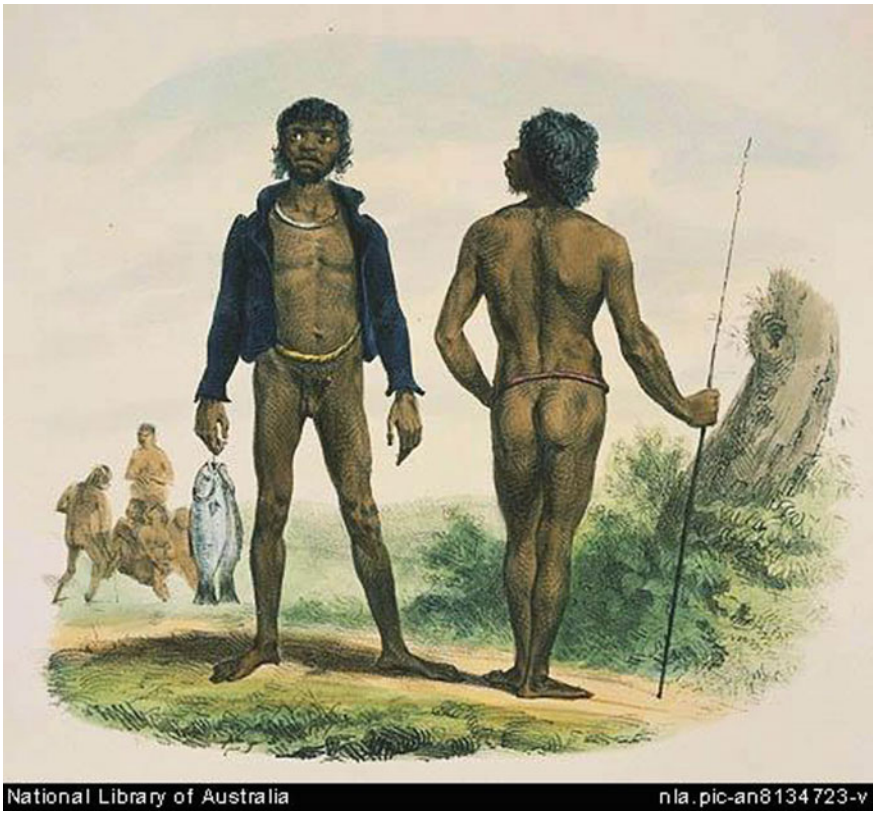

Fig. 5.1 *Naturels du Port du Roi Georges, naturels de la Baie Jervis, Nlle Hollande* (Raffet 1833). Image courtesy of the Bibliothèque Nationale de France and National Library of Australia

that Cadigal, along with others as depicted in this early image from a French expedition (Fig. 5.1), were still, at least at this point, trying to observe traditional cultural protocols regarding the sharing of food with strangers. Cadigal of the Sydney Cove area quickly realized that these newcomers were not explorers but intended to stay. As their sources of food supply diminish, they begin to take interest in the food procurement practices of these strangers and assert their customary right of shared access to the resources of their estates. Scholars rightly point to there being a developing exchange of goods between newcomers and inhabitants in this early contact period.[8]

Of note in the context of this chapter, analysis of explorer and early settler records suggest that newcomers wanted local, edible food but inhabitants refused newcomer exogenous food, showing very little interest in it as was noted in

[8]McBryde (1989), Russell (2001).

previous chapters, until they were starving. Inhabitants had shown interest in the buttons on the coats of explorers and in glass bottles and knives, for example, but their food was commonly rejected. This refusal for newcomer food coupled with traditional protocols towards the sharing of endogenous food resources and drinking water as civil observances could not last. Newcomers were killing Cadigal, fencing land, and trying desperately to establish reliable and familiar food supplies in gardens, paddocks, and fields.

As observed in earlier chapters, the centrality of food of the sea for both inhabitants and newcomers alike in this coastal settlement became a flash point for the almost immediate tensions and contests about food that developed between Eora and newcomers. The British were comfortable in their knowledge about fish and seafood. These sorts of food were not considered game by the newcomers, unlike their attitudes to endogenous larger animals, birds, and reptiles. In part, the methods used by newcomers to catch smaller fish using hauling nets or hand-fishing lines and to gather oysters and other seafood by hand were not dissimilar to methods used by inhabitants. In 1788, about five months after the establishment of the Sydney settlement, David Collins[9] observed that the fish supply had been depleted and Cadigal appeared to be in great want. In the July, inhabitants attacked some newcomers who had been fishing and 'took by force about half of what had been brought to shore'. This conflict over food resources offers insight into a profound collision of lifeways and the centrality of food to that change. As Sahlins[10] has argued:

> *Foodstuffs, incidentally, are not ordinarily divorced from the circuit of labour assistance. On the contrary, a meal is in the host of primitive societies the customary return for labour solicited for gardening, housebuilding, and other domestic tasks.…rather than a tentative move towards capitalism, it is perhaps better understood by a principle something to the opposite: that those who participate in productive effort have some claim on its outcome.*

As remarked above, Cadigal fought with the newcomers to ensure they were given half of the catch of fish. Relations became increasingly hostile as Eora realized that the land and resources upon which they depended were seriously disrupted by the on-going presence of these newcomers. As government stores brought by the First Fleet diminished, the penal colony of Sydney was forced to look to kangaroo as a meat substitute, adding to the pressures on resources from the seas and waterways already being felt by coastal dwellers. A source of growing frustration to the newcomers was their inability to catch kangaroo or any of bigger 'game', having no experience of hunting or preparing kangaroo meat. There were frequent reports of newcomers returning empty handed, angry that Eora had vastly superior hunting skills (Fig. 5.2).

[9]Collins (1798–1802a).

[10]Sahlins (1972).

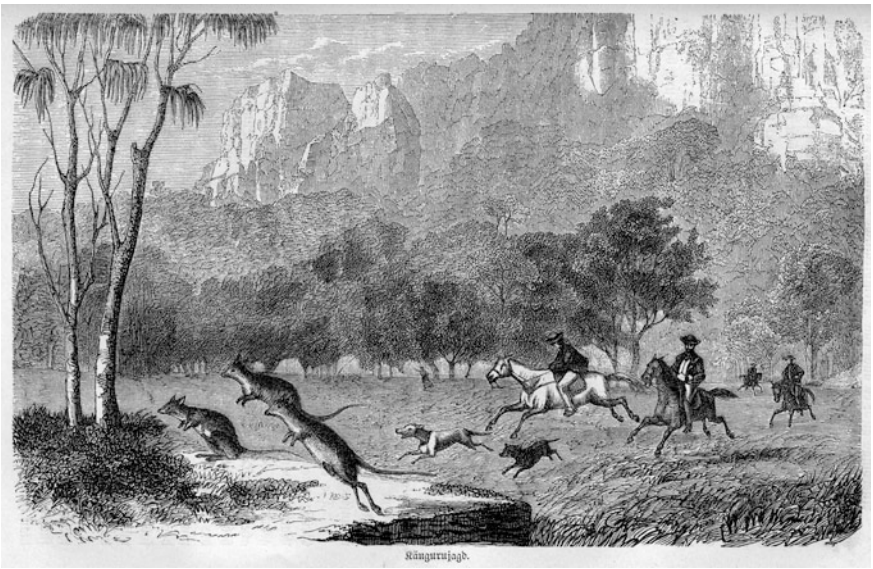

Fig. 5.2 *Kängurujago* (Christmann and Oberländer 1880, 282). Image courtesy of Monash Rare Books Collection, Monash University Library

(De)Stabilizing Food Resources in the Penal Colony

Over time, some newcomers developed their shooting skills and the penal colony began to be able to sell fresh kangaroo alongside more familiar meat products, albeit heavily salted and old. Mann recorded the development of a consciousness among the early colonists of the value of kangaroo both as a food source and in its value equivalence to more familiar meats such as beef, mutton, pork, or lamb. He wrote that[11]:

> *Animal food is to be procured at the following prices:—Beef 1s. 3d. per lb.; mutton 1s. 3d. per lb.; pork 1 s. per lb.; lamb 1s. 3d. per lb.; kangaroo 8d. per lb. (the flesh of this animal is somewhat similar in taste to English beef, but rather inferior, owing to the want of fat)*

In addition to learning about local fish and meat, foraging for endogenous vegetables and fruits was common in order to supplement the poor food available when government stores of food dwindled. Low has made an analysis of the foraging behaviors of newcomers, giving a useful list of greens and fruits foraged by convicts: Native Cherry (Exocarpos cupressiformis), New Zealand spinach (Tetragonia tetragoniodes), Currant Bush (Leptomeria acida), Native Sarsaparilla (Smilax glycophylla, also known as Sweet Tea), Sea celery and parsley (Apium prostratum), Australian Samphire (Sarcocornia quinqueflora), Grey Saltbush (Atriplex cinerea), Cabbage Palm (inner shoots) (Livistona Australis), Jackson Fig

[11]Mann (1811, 41).

(Ficus rubiginosa) (or Sandpaper Fig), Magenta Lillypilly (Syzgium paniculatum), Native Plum (Podocarpus spinulosus), Common Appleberry (Billardiera scandens).[12] Low notes, similarly to the passage above, that: 'So important was Native Sarsaparilla that the English risked death from hostile Aborigines to obtain it'.[13] Low further suggests that the foraged foods were chosen because they were recognised as similar but different from English varieties as both food and as potential medicine for dealing with scurvy. Arguably, their knowledge and interest in using greens for scurvy can be attributed to the lead taken by the earlier explorers Cook and Flinders to combat scurvy, with great success.[14]

For the newcomers, access to clean drinking water and water for farming was an issue from the outset and its scarcity contributed to the emergency food context. In May 1791, Arthur Phillip wrote (as cited in Hunter[15]):

> *The dry weather still continued, and though they had a few showers, the quantity of rain which fell in the month of April, was not sufficient to bring the dry ground into proper order for sowing the grain; a few acres, however, of what was in the best condition, were sown with wheat the last week in the month. This long continuance of dry weather, not only hurt their crops of corn very much, but the gardens likewise suffered greatly; many being sown a second and a third time, as the seed never vegetated, from the want of moisture in the soil; this was a double misfortune, for vegetables were not only growing scarce, but seed also.*

Because of the drought, Governor Phillip again was forced to tighten rations as the food supply of the struggling colony began to dwindle. He noted that: 'Little more than twelve months back, hogs and poultry were in great abundance, and were increasing very rapidly…but at this time [May 1791] there was seldom any to sell'.[16] In addition to the emergency being created by the presence of too many people trying to use the available water, there were severe droughts that occurred. As early as November 1790, Watkin Tench described the impact of drying conditions on the colony's food supplies, making vegetables scarce and planted crops such as potatoes and corn to fail.[17] The struggle to adapt English food cultivation methods is clear in the historical records (see for example, Tench[18] and Collins[19]). The focus of administrative concern was to make the colonies self-sufficient in the foods that were familiar to the people from Britain. Many archival items record food inventories, and track rations held in the government store, or record land under cultivation. For example, Cobley[20] recorded that on 1 May 1788 the livestock inventory in Sydney, brought with the newcomers on the First Fleet, stood at:

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[12]Low (1987–1988, 294–296).
[13]Low (1987–1988, 294–295).
[14]See also, Clarke (2008, 26).
[15]Hunter (1793/1968, Chapter XXI).
[16]Hunter (1793/1968, Chapter XXI).
[17]Tench (1791).
[18]Tench (1791).
[19]Collins (1798–1802a).
[20]Cobley (1791/1965, 154).

1 stallion, 3 mares, 3 colts, 2 bulls, 5 cows, 29 sheep, 19 goats, 49 hogs, 25 pigs, 5 rabbits, 18 turkeys, 29 geese, 35 ducks, 122 fowls, and 87 chickens

This source also records that 1 bull and 4 cows strayed into bush and were 'lost' for 7 years, only being found in November 1795. Cobley also reported that on 30 September 1788, Andrew Miller's inventory of stores was[21]:

Flour	414,176 lb	52 weeks ration	Pork	214,344 lb	128 weeks ration
Rice	51,330 lb	15 weeks ration	Pease	2305 bushels	58 weeks ration
Beef	127,606 lb	43 weeks ration	Butter	15,450 lb	49 weeks ration

This was based on 698 men, 193 women, and 42 children being victualed in the Sydney Cove settlement. Norfolk Island, also established in 1788, had provisions for 20 months for 44 men and 16 women. This penal settlement was envisaged to be a farm, supplying Sydney with grain and vegetables during its early years of near-starvation. However, crops often failed there due to the salty wind, rats, caterpillars, and the Norfolk parrot. Convicts were also sent to Van Diemen's land from 1803, beginning at Risdon Cove and later Launceston. Marshall has observed that[22]:

At the time of the European settlement of Australia, food was largely the product of agriculture and the farmhouse. The British settlers led by Bowen and Collins in 1803–04 brought with them, and strove to reproduce (in the face of climatic and other difficulties), European agricultural food production.

The diet of the earliest settlers was monotonous and inadequate, with numerous crises of both local and imported supply. The stores issued at Sullivan's Cove were initially limited to beef or pork (later supplemented by locally caught fish, kangaroo, emu, and seafood), flour or wheat and sugar.

In Hobart in 1804, 'the rations issued to all the people were as follows: Beef, 7 lbs., or pork, 4 lbs.; flour 7 lbs.; sugar, 6 ozs per week'.[23] Hunger and starvation were rife in these new penal colonies. All the while, the original inhabitants were undoubtedly trying both to make sense of the behavior of the newcomers and to develop a response to the diminishment and theft of their resources. The newcomers had created an emergency food crisis beyond what inhabitants might previously have experienced on their lands because of variable food supplies and sometimes-harsh seasonal disruptions. As discussed in the previous chapter, food scarcities of certain types of foods were not uncommon experiences for inhabitants but such was their knowledge and skill that they learned the seasonal patterns, understood the changes in weather conditions, and adjusted their movements and food procurement practices accordingly across their estates.

[21]Cobley (1791/1965, 234).

[22]Marshall (2006).

[23]Australian Bureau of Statistics (2001).

The press of newcomers, their willingness to use guns to kill animals, birds, reptiles, and even people in order to get access to food, and their practice of taking as much food as they could catch or forage increased the likelihood that Eora would starve. Conflicts took place during hunting and foraging expeditions where Cadigal and their neighbors came across newcomers and tried to stop them, sometimes successfully, from taking what they understood to be their food and drinkable water.

Madley recorded that during the winter of 1803–1804, the newcomers to the lands and waterways of Paredareme (Derwent River settlement) in Tasmania almost starved, depending on procuring emu, swan, wallaby, and kangaroo and commonly failing to do so.[24] Competition for the decreasing game supply then led to some of the first violent encounters between Paredareme and newcomers. Ryan observed that the first conflict between the newcomers and inhabitants was over kangaroo and oysters.[25] Similarly, as discussed above, conflicts in the Sydney colony over access to food occurred regularly.[26] In both penal colonies, inhabitants and newcomers were experiencing their own forms of emergency food crisis as they competed for available food resources. Even though each group had different food preferences, skills, and ways of accessing and processing hunted, fished, and foraged foods, the pressure on these food resources was unsustainable.

All colonists and post-settlement sea and land explorer parties were expected to establish local supplies of edible, recognizable foods that would eventually be able to make further exploration and settlement of these new colonies possible, and enable them to become self-sufficient of England, as Favenc[27] observed:

> *Captain King was further instructed to take from Port Jackson seeds of all vegetables that he considered most useful to propagate on the coasts to be visited, and to plant them not only in the best situations for their preservation, but that, also, they might be in sight and reach of succeeding navigators.*

The newcomers imagined and hoped that they were only eating local foods until they could establish recognizable, exogenously derived sources of meat, grain, vegetables, and fruit. Even so, early colonial records by both Collins and Tench[28] demonstrated that newcomers were quickly depleting fish stocks in the bays and rivers because of their net hauling methods and were taking too many shellfish. These records also show the impact of newcomers taking over cleared grasslands for grazing the cattle and sheep they had brought with them on the ships. Desperate to grow these stocks of familiar meat, such grasslands were seen as ideal because they were already cleared. Given the emergency food security context, their hunger, and the hardship they were experiencing, it is likely that even if they had understood the worldview of inhabitants, that they were grazing their livestock on

[24]Madley (2004).

[25]Ryan (1981).

[26]Collins (1798–1802a).

[27]Favenc (1888, Chapter XVII).

[28]Collins (1798–1802b), Tench (1791).

grasslands that had been created by Eora, Dharug, Dharawal, and other lower north coast clans to attract animals such as kangaroo (so that they could be caught and eaten), they would have asserted their right to do so anyway. The newcomers also fenced off tracts of land to stop their stocks from wandering, using methods of agriculture that were new to inhabitants.

There were also rare examples where the records left by newcomers showed some insight into how such open grasslands had come into being. Mitchell, in a later period, reflected on the food security crisis being forced on inhabitants of the lands of Dharug, Wiradjuri, and Yorta Yorta that he crossed:[29]

> *The extensive burning by the natives, a work of considerable labour, and performed in dry warm weather, left tracts in the open forest, which had become green as an emerald with the young crop of grass. These plains were thickly imprinted with the feet of kangaroos, and the work is undertaken by the natives to attract these animals to such places. How natural must be the aversion of the natives to the intrusion of another race of men with cattle: people who recognise no right in the aborigines to either the grass they have thus worked from infancy, nor to the kangaroos they have hunted with their fathers.*

Eora, starved off their lands and waterways, began to take from these new food sources, thereby arousing the wrath of the newcomers. To Eora, it must have appeared to be a fair exchange for the loss of their traditional food resources. As Collins reported in Sydney Cove, efforts to establish food gardens and stocks of cattle and sheep were severely hampered by Cadigal, Wanegal, and Cammeraygal, exacerbating the colony's emergency food context.[30] Paterson also recounted how inhabitants raided fledgling plots of corn being cultivated by settlers, possibly on Eora or Guring-gai country.[31]

One type of food that was a staple for newcomers and mostly absent from the diet of coastal inhabitants was cereal grain crops, rice, and Indian corn, together with their many by-products. While flora such as the nardoo plant and various other seeds, bulbs, and roots that could be seasonally sourced in order to make flat breads were familiar to inhabitants across the different ecological systems of Australia, these new fields of fenced off crops were new to inhabitants. For the newcomers, they had visions of reproducing the agricultural fields of wheat, corn, and barley crops that were common back home; rice was sometimes used as a substitute during times of rationing when it could be brought on the supply ships but was difficult to grow around Sydney. It took some time for the local cultivation of grain crops to become reliable. At first Indian corn was regarded as the easiest crop to raise.[32] Collins provided a detailed account of the problems faced by the colony as they tried to raise crops for human and animal consumption[33]:

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[29]Mitchell (1848/2003, 151).

[30]Collins (1798–1802a, 364).

[31]Paterson (1811, 413).

[32]Collins (1798–1802a, 82).

[33]Collins (1798–1802a, 41).

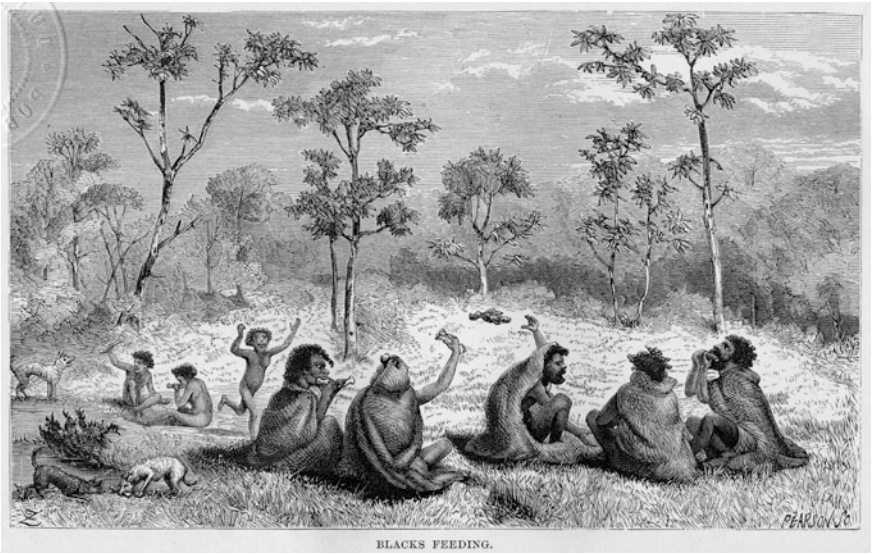

Fig. 5.3 *Blacks feeding* (Baden-Powell 1872, 243). Image courtesy of Monash Rare Books Collection, Monash University Library

> *The seed-wheat that was sown here did not turn out any better than that at Norfolk Island; in some places, the ground was twice cropped, and there was reason to apprehend a failure of seed for the next year … The crops of Indian corn in general turned out very productive. An officer who held an allotment of an hundred acres near Parramatta, from each acre of nineteen, on a light sandy soil, gathered fifty bushels of shelled corn…*

By the late 1790s, John Hunter observed that Cadigal increasingly came to rely on easier access to food that came from eating flour-based products, their normal food stocks depleted, and having been forced off their lands. Their hunger eventually forced them into eating exogenous foods. Hunter remarked that, 'They were now become exceedingly fond of bread, which when we came here first they could not bear to put into their mouths; and if ever they did, it was out of civility to those who offered it'.[34] As will be discussed later, the entry of starchy, grain-based carbohydrates into the diet of Eora and Paredareme was something repeated as the colonial frontier expanded, causing enduring change to the diet of Australian Indigenous peoples, forced as their ancestors were from a broad range to a narrower and nutritionally different range of foods in their diet (Fig. 5.3).

There was an additional threat to food security beyond the obvious tensions between inhabitants and newcomers. The newcomers were not a united group. There were numerically fewer administrators and guards, with the majority of the population comprising convicts. Under Governor Philip, history records that despite attempts to establish reliable sources of food, starving convicts were breaking into

[34]Hunter (1793/1968, 139).

stores and gardens for food. Convicts began dying of starvation and competition for food was fierce. Convict labor was focused on survival: gathering food, then growing food where possible, and building shelters. Early farming efforts at Farm Cove failed. People of early penal settlements of Norfolk Island and Van Diemen's Land suffered the same starvation as Sydney in the early years and convicts were given guns to hunt kangaroos to replenish the failing government stores. This brought convicts into direct competition with the inhabitants. Convicts had guns and Aborigines had spears. Even with guns, the convicts were not very successful as kangaroo hunters. The guns were of poor quality and the convicts had no experience of hunting kangaroo. In some cases, the records show that convicts turned their guns on Aborigines in order to steal their kangaroo meat, with devastating consequences.

The First Food Wars?

Conflict between inhabitants and newcomers occurred across the world as European and British powers fought for the control of land and resources. Both needed natural resources and land to achieve their versions of economic sustainability. In the case of the colonization of Australia, competition for food was a conquest in which newcomers and their advocates threatened the foundations of Indigenous food security, even as they desperately sought to establish their own. Madley,[35] while not specifically focusing on food resources, has noted that across the colonized world Indigenous peoples fought, and continue to fight, to protect their traditional modes of production and their versions of economic well-being.

This research suggests that his general thesis can be argued in the particular case both of Australia and of its endogenous food resources. Conflicts between inhabitants and newcomers, sporadic during the time of shorter encounters with explorers, became constant with arrival of the British who intended to settle there. During the initial years of the establishment of the penal colony in Port Jackson, imported food supplies rarely met the nutritional needs of newcomers. Provisions from Britain and India were delivered infrequently. According to Watson,[36] often grain and salted meat arrived water-damaged, weevil infested, or wholly inedible. Newcomers faced starvation and used unfamiliar foods that they were able to stomach. Clarke observed that, '…the level of hardship that the Europeans experienced determined whether and when they consumed bush tucker'.[37] By the turn of the century, there is evidence that the newcomers were still relying on locally available animals, fish, seafood, and birds to ward off starvation but that they had substantially survived their emergency food crisis and were beginning to establish their gardens and farms.

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[35]Madley (2004).

[36]Watson (1921, Series III, 361 & 392).

[37]Clarke (2008, 41).

Eora were in constant struggle with the newcomers in order to gain access to their traditional sources of food and for there to be enough available when they did achieve access. They also began eating the food of the newcomers. From the above account, it is evident that Eora and their neighbors began procuring beef, mutton, Indian corn, potatoes, and bread to fend off starvation.

Diminishing Nutrition

The first of the themes to emerge from analysis of the documents relating to early explorations and the first contact period is that all parties contesting limited water and food resources were hungry, starving, and in some cases died because of diminished nutrition. The seafaring explorers' journals and early accounts of the colony paid only slight attention to the small numbers of people they found living around the coastal fringes of Terra Australis. In fact, the lack of apparent population provided some of the justification for the newcomers thinking the land was empty. For traditional owners, meeting their water and food needs involved employing skills and knowledge developed over many thousands of years, calibrated carefully to selectively manage and cultivate the best possible ecological and nutritional balances to ensure drinkable water and tasty, edible food resources into the future. Suddenly, the world of Eora was thrown into an emergency food security crisis with so many newcomers arriving and competing for these carefully managed and cultivated resources, depleting available stocks rapidly and stopping the seasonal movement of Eora across their land and marine estates.

It was also a food crisis for the newcomers. They had no knowledge of the edible local foods, did not know how to procure them, and had no knowledge of how to best prepare many of them for eating. For them, successfully cultivated crops had higher yields than what they saw as wild, native foods and the priority of the new colony was survival, rather than the utilization of endogenous edible flora and fauna. Amidst the emergency food security crisis, their main goal was to clear the land and establish reliable sources of familiar meat, grain, vegetables, and fruits, sources of edible food that have been bred, cultivated, and developed to satisfy the British and European palate over millennium. As Cribb and Cribb observe[38]:

> *In Europe and Asia, for example, the main food plants have had the benefit of many centuries of cultivation which in many cases has led, through selection and hybridisation, to the production of forms vastly superior to those in the wild.*

The disadvantages of these cultivars in the Australian context are only now becoming apparent; problems such as the higher water demands, crop failures, the continuous need for fertilizer, herbicides, and pesticides, with subsequent damage to soil structure, waterways, nutritional value, and to the general ecological balance.

[38]Cribb and Cribb (1974, 16).

At the time, the cultivation of these crops enabled the colony to grow and prosper, moving it from an emergency food security crisis towards establishing household food security. Arguably, the early decisions made by newcomers who became settlers has had profound influence on modern Australian food choices and this book will suggest that the continued over-reliance on introduced foods has diminished the ecological balance of the continent and, by extension, the potential nutritional quality of the Australian diet. As traditional owners, now known as the Indigenous people of Australia (Indigenous Australian and Torres Strait Islander people) had already learnt, there are serious ecological limits in Australia that threaten the sustainability of fresh water and edible food on this landmass, and diminished nutritional value of food is one such consideration.

The Question of Eating Different Foods

The second theme to emerge from this analysis relies on an understanding of the use of the terms endogenous and Indigenous in this book. Indigenous people have developed thousands of years of cultural observances and food cultivation and management practices around all the different kinds of edible foods available to them on their estates. Some explorer and settler records and contemporary anthropological research demonstrate that there were food avoidances practiced by different families and language groups at different times depending on seniority, gender, and need. Indeed, under ideal circumstances, individuals would also have had preferences about particular foods.

The newcomers brought British cultural preferences, and outsider food cultivation and management practices, with them that were influenced by British mores about class, race, and gender. Even in their foraging and hunting attempts, they seemed more likely to rely on their knowledge of a starkly different food context to choose the foods they tried to eat. Scholars such as Low have gone so far as to suggest that it is possible that inhabitants and newcomers may have been attracted to different sorts of foods because of their different food preferences.[39] He speculates, for example, that seashore greens and fruits that were foraged by newcomers had a high salt content that would be made less salty by boiling, a technique that was commonly used by newcomers as a food preparation method.[40] He argues that these foods would have been scorned by Eora because they did not boil plants and these foods would therefore be too salty to taste unboiled. Like Low, Dunn and McCreadie argue that both newcomers and original inhabitants were trying to find sufficient endogenous food to eat, but that 'while the natives subsisted on local plants and fish, the settlers found few of the plants to be appetizing. As the settlers appear to have been poor anglers, most of their food had to come from the supplies

[39]Low (1987–1988, 293).
[40]Low (1987–1988).

brought with them on the ships … Rats, dogs, crows, an occasional kangaroo or emu were to be used to supplement the food'.[41]

There is evidence to dispute these propositions. There are historical records of women gathering sea greens to eat. Given that earth ovens were the common form of cooking food in coastal areas, where food was wrapped in wet vegetation to steam cook, it is far more likely that both groups were gathering sea greens and other coastal flora but were cooking them using different methods. It is also possible that inhabitants tolerated highly salty sea greens such as Warragul greens far better than newcomers did. Such speculation is also contested by stories that were shared with me in such places as Tasmania by ancestors of the Lyluequonny (Recherché Bay) who retold stories of the old people showing visiting explorers where they could gather sea greens and other edible, seasonal vegetables.

It is unlikely, therefore, that each group was accessing different resources. This book argues that fish and seafood were highly contested sources of food and that the first food wars were about foods from the sea and coasts. Certainly, inhabitants had more knowledge of the whereabouts, seasonal availability, and edibility of particular meat, birds, fish and shellfish, vegetables, fruits, honey, salt, and fungi. They also had a greater variety of methods and more skill in procuring these foods and had perfected methods to prepare such foods to suit their taste. If one considers the extensive array of foods eaten by inhabitants (Chaps. 2 and 3), it is unlikely that there were edible foods that were not eaten except for cultural reasons, as discussed above, or because of such reasons as individual preference or seasonality. Therefore, it is important to have conceptual clarity about using the descriptor *endogenous* food to describe local foods that are edible, being local food that can be safely eaten by all humans.

There is no evidence that inhabitants and traditional owners were eating different sorts of endogenous food. Each group was seeking out the same endogenous foods during this crisis period where everyone was starving. Arguably, each group was sourcing these foods in different ways, using different food preparation methods, and possibly, there were even differences in preference about the taste of foods by particular clans or newcomer groups borne of cultural habits.

Food Exchanges and Stealing

The third theme to be explored here is the centrality of food as part of the frontier war that spread out across the vastness of the continent, specifically the evidence about food exchange behaviors and of stealing. Analysis of the records indicates that there were two broad patterns of exchange: rare exchanges, either transactive or relational, that were considered to be balanced by both parties, and more common exchange events that were considered by one side or the other to be unbalanced,

[41]Dunn and McCreadie (2013).

thereby inducing cycles of stealing and punishments in order to achieve a satisfaction in, or resolution of, the transaction. These analyses reveal the extent of the legacy of starvation and suffering that occurred during this first 15–20 years and the enduring impact of these experiences on the ecological and social shape of contemporary Indigenous Australian-settler relations. There is something terrible about people starving to death because of lack of food that underpins this early emergency food security crisis caused by the British decision to colonize Australia. The stealing of food was a common issue for newcomers and inhabitants alike. Eora stole food from newcomers, newcomers stole food from Eora, convicts stole food from wherever they could find it; and, there are many administrative pronouncements that forbade the stealing of food, so endemic was the practice.

The first claim of unbalanced exchange rests with Indigenous people, as demonstrated by the situation of Cadigal of Sydney Cove who bore the brunt of early attempts by the British to establish their penal colony. Though it took years to become legally established, the British claim to the east coast of Australia by Cook did not extinguish the *sui generis* rights of Indigenous Australian people. As discussed above, people had managed their estates for thousands of years. From the time of the seafaring explorers, traditional owners had made it clear that they wanted these people to move on. There were many examples in the journal records of people telling explorers to go away. Except for rare records of people observing customary protocols towards a visiting stranger, there is a marked reluctance on the part of traditional owners to share information about fresh water sources or food resources or, indeed, to eat food with explorers.

This cautious reluctance turned to hostility with the establishment of the penal colony in Sydney Cove. Between 1790 and 1810, clanspeople of Cadigal in the Sydney area, led by Pemulwuy of the Bidjigal clan, undertook a campaign of resistance against the English colonizers in a series of attacks.[42] In 1802, Governor King reported to Britain of coastal Eora and Dharug that not all inhabitants had become 'domesticated'.[43] For the traditional owners, there was no doubt that the newcomers were stealing their food resources. In some cases, they were able to make the newcomers share what they had taken. Even so, the violence that arose between newcomers and inhabitants can be seen as a specific and new form of warfare. Connor describes the general situation when he argues that[44]:

> *The British took land that had not occurred in traditional Indigenous Australian warfare, and used it to grow crops and raise stock. The Aborigines found that these introduced crops and animals were the means by which settlers could most effectively be attacked. Previously, Aborigines had stopped fighting when they had to gather food, but now food gathering became a form of warfare and the Aborigines developed effective tactics to raid farmhouses and farms.*

[42]Perkins and Langton (2008, 25).

[43]Watson and Australia Parliament Library Committee (1914, 582).

[44]Connor (2002, 20–21).

As the years passed and food supplies did not increase quickly enough to meet need, the records show that in some cases convicts turned their guns on Aborigines in order to steal their food. It is important to recognize that for many Indigenous people of Australia, the initial theft of land and resources with no balancing of the exchange will only now be resolved through some compensation mechanism. As Thomas has argued more broadly of exchange processes under the conditions of colonialism[45]:

> *The properties of exchange relations derive from broader cultural structures and premises ... Exchange thus mediates conditions that are not, or are not wholly, constituted within the immediate frame of exchange.*

For the many people who starved because of loss of access to their fresh water and food resources it is too late but descendants of these ancestors continue to press their claim.

The second claim of theft comes from newcomers. The newcomers involved in the first period of occupation of Sydney Cove were not thinking about the rights of the traditional owners. They were coming to found a penal colony or to live as a convict until they had served their sentence. They arrived without enough food and were thrown into finding edible local food to supplement their rations. The records suggest that they took as much as they could of anything they could find to eat. It is plausible to suggest that they were only dimly aware of the inhabitants except when they came into contest with them over food and water. Initial struggles over fish and seafood expanded to contests over fresh water and endogenous sources of meat, birds, vegetables, and fruits.

As the newcomers established their colonies in the growing town of Sydney, on Norfolk Island, and then Risdon Cove and Launceston, they became more successful at developing their gardens, farms, and agricultural tracts for growing grain and running livestock. The original inhabitants, pushed to the margins of their estates and into the traditional estates of adjacent clans, began to take the new food resources of the settlers. For the newcomers who had toiled to establish these food resources, this taking of their precious cultivated foods was regarded as theft, rather than as a balancing of the exchange between the two groups over time. Their punishment of the original inhabitants was swift and often fatal. In 1790, for example, Bangai was shot and killed for stealing potatoes from a garden.[46] In 1795, Collins described the open war had commenced between the natives and the settlers over the Dharug stealing corn[47] and Connor names this practice more generally as 'corn raids' charting numerous attacks and responses throughout the period of 1795–1805.[48] Newcomers killing people for stealing their food demonstrates their desperation and their determination to establish household food security for their

[45]Thomas (1991, 8–9).

[46]Connor (2002, 26).

[47]Collins (1798–1802a, Chapter XXVIII, May 1795).

[48]Connor (2002, 40–41).

new settlements, and also heralds a hardening attitude of the colonists towards inhabitants by the early nineteenth century. Such hardened attitudes survive into the contemporary era in the views and attitudes held by descendants of these newcomers.

The question of who was stealing from whom is one that endures to this day. At the time, the stakes were very high. People did not steal food for the habit of doing so but because they were all starving. Sometimes stealing done by both groups was tolerated by the administrators. Interestingly, the theoretical contribution about tolerated theft developed by Bliege Bird and Bird, in which the cost of not sharing is too high to pay, provides an interesting possible lens by which to understand the method employed by colonial administrators to try to manage relations between the two groups when conflicts over food resources escalated.[49]

Conclusion

Long before British settlers approached the shores of Australia, people lived and thrived in diverse ecosystems that they had developed to meet their food needs. They ate foods that their ancestors had learnt about and cultivated for thousands of years. As Bruneteau, a contemporary French connoisseur of Australian Indigenous foodways observes: 'As hunters and gatherers, Indigenous Australian people trapped and hunted game, collected fruit, harvested nuts and berries, and fished the bounty of the ocean with great success.'[50] The land, sea, and waterways were able to support people on a rich and varied diet albeit with seasonal variability and scarcities.

However, newcomers yearned for their familiar foods, and sought at every opportunity to introduce exogenous, Britain and European cultivars and animal stocks. In many ways, this was not surprising, as the flavors of endogenous foods were very different and quite intense to the newcomer palate. Cribb and Cribb cite the eminent English botanist, J.D. Hooker, writing of Australian edible plants, who observed that many of them were 'eatable but not worth eating'.[51]

So how may we begin to understand the impact of hunger and starvation in the emergency food security crisis that enveloped this first invasion and settlement period of Australian history? Both groups responded by mobilizing food knowledge that was relevant to their needs and capacities. Eora had no need to know the food knowledge of the newcomers in the initial period but the newcomers had urgent need to know about edible endogenous foods and sources of fresh water. This they mostly learnt by trial and error. Eora variously refused or shared their knowledge of food procurement, preparation, and cooking methods but the evidence suggests that

[49]Bliege Bird and Bird (1997, 50).

[50]Bruneteau (1996, 8).

[51]Cribb and Cribb (1974, 13).

the newcomers preferred their own methods, in particular of food procurement and preparation.

As the newcomers became settlers, and clearly not visitors, and were more numerous, the pressure on local food and water resources caused severe food shortages for Eora and settlers alike. Cadigal experienced a significant diminishment of their dietary nutrition at this time whereas it is possible that on colonial rations supplemented by endogenous foods, convicts at least were getting access to better nutrition and nutritional opportunities than if they had remained in England. Similar to other cases around the world, as the original inhabitants were forced off their estates, they began to rely more heavily on settler's food than their traditional resources with deleterious results in health.

Of note also, this research found that there was strong evidence of mutual incomprehensibility of each group around cultural practices regarding access to food. For traditional owners, they had followed cultural protocols about sharing with the newcomers where this was possible and in return, took to demanding a share of food taken from their land and waterways by the newcomers. Whatever the food, traditional owners expected their share. For the explorers and early colonists who were reliant on endogenous edible foods to supplement their meagre rations, some traded items with traditional owners for food using their cultural logic and sometimes shared their catch.

In conclusion, this chapter has examined how food knowledge of Eora and the newcomers to Australia was changed during this 15–20 year period of the establishment of the penal colony under the conditions of an emergency food security crisis. It has been argued that the settlers in Sydney Cove began to emerge from this crisis at the turn of the century, starting to achieve relative household food security while many Eora and their neighbors, now identified by the collective descriptor 'Aborigines', though surviving starvation, remained on the economic margins of the emerging colony. They became progressively locked out of their traditional estates, unable to access their normal foods and fresh water, and were forced into the cash economy as mendicants. All Australian Indigenous people lost their food sovereignty at this time. For most Indigenous people, they would remain in an emergency food security crisis for generations to come, a legacy that haunts postcolonial Australia. There has never been recognition by the state of Australia of the need to balance the account.

The next section, 'Expanding the Frontiers of Taste: Exploration, Dispossession, and Household Food Security', examines food practices during the expansion of the frontier inland from the early penal settlements. The British vied with the French to establish themselves as the new possessors of the great southern lands, making inland expeditions that pushed the limits of their knowledge about edible food, its portability, and its viability in an increasingly barren and seemingly hostile environment.

The early exploratory forays out from the Sydney penal colony brought back information about both the growing technical knowledge that expedition leaders had about what food provisions to carry, how to establish reliable supply lines, and what quantities were needed. They also brought back information about what inland

flora and fauna might be considered edible endogenous food even if only at starvation's door, how to procure it, and how to prepare it for consumption. This information would enable the rapid expansion of the frontier, repeatedly reproducing the emergency food security crisis between inhabitants and newcomers as the frontier spread.

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Chapter 6
Provisions, Seed Collectors, and New Foods

Abstract This chapter, the second chapter of section two 'Food across the Colonial Frontier' examines food practices during the expansion of the frontier in a number of locations that provide insight into the variety of factors influencing contemporary postcolonial Australian foodways. Examining the expansion out from Sydney through the letters and journals of early explorer parties, seed collectors, and early colonial settlers, a number of themes emerged. First, the newcomers had begun to secure food for themselves at the expense of inhabitants but they had also exhausted some local food supplies. Under the pressure to find more food and arable land, explorer parties were sent out from the first settlement. The first issue facing them was the need to secure reliable food provisions for their journeys, something that took them many years to develop. Second, these explorer parties had little knowledge or understanding of the local ecology and were often blind to the available food resources around them. Third, they brought new sources of food onto the traditional estates of inhabitants that began the ecological transformation of Australia that continues into the modern era. As the penal colony became more food secure, and its population of arriving administrators, convicts, and settlers swelled, newcomers looked to the horizons and of expansion of land for new settlements. A significant event that pushed the settler colonists inland was a severe drought in 1813 that caused significant depletion in food for people and animals. Oxley noted that recognition of the success of Blaxland, Lawson, and Wentworth in finding a route from Sydney across Dharug country towards a western mountain range that seemed impenetrable was attributed to the fact that they made it possible for settlers to be able to expand the agricultural lands and pastures for their growing stocks and herds. The approach taken by the colonial administrators and settlers to overland exploration in some cases relied on supplementing government food supplies with endogenous food, included trying to fathom the knowledge about edible local foods and the methods of procuring them from Indigenous Australian people who travelled with them or inhabitants they met. As one example, Hovell and Hume used a mix of carried provisions and locally sourced foods procured by a guide who travelled with them, Tommy; he used a short stick to kill small wallabies that were then fed to the dogs. Some explorations avoided relying on endogenous foods, preferring rather to carry and consume more familiar, exogenous forms of food.

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Keywords Early sydney history · Frontier expansion · Endogenous food · Exogenous food · Overland exploration · Food scarcity

He who will not labour must not eat.[1]

This chapter examines food in the context of the development of community and household security in early colonial settlements around Sydney, the explorations overland, and attempts by both inhabitants and newcomers to (re)establish food security on the frontier. As the penal colony became more food secure, and its population of arriving administrators, convicts, and settlers swelled, newcomers looked to the horizons and of expansion of land for new settlements. A significant event that pushed the settler colonists inland was a severe drought in 1813 that caused significant depletion in food for people and animals. Oxley noted that recognition of the success of Blaxland, Lawson, and Wentworth in finding a route from Sydney across Dharug country towards a western mountain range that seemed impenetrable was attributed to the fact that they made it possible for settlers to be able to expand the agricultural lands and pastures for their growing stocks and herds.[2]

The approach taken by the colonial administrators and settlers to overland exploration in some cases relied on supplementing government food supplies with endogenous food, included trying to fathom the knowledge about edible local foods and the methods of procuring them from Indigenous Australian people who travelled with them or inhabitants they met. As one example, Hovell and Hume used a mix of carried provisions and locally sourced foods procured by a native guide who travelled with them, Tommy; he used a short stick to kill small wallabies that were then fed to the dogs.[3] Some explorations avoided relying on endogenous foods, preferring rather to carry and consume more familiar, exogenous forms of food. Carron, for example, recorded that[4]:

> *Two more of our horses fell several times this day; one of them being very old, and so weak that we were obliged to lift him up. We now made up our minds for the first time, to make our horses, when too weak to travel, available for food; we therefore killed him, and took meat enough from his carcass to serve our party for two days, and by this means we saved a sheep. We boiled the heart, liver, and a piece of the meat to serve us for our breakfast next day.*

Seafaring explorers' journals had left various opinions about what foods might be edible along the coasts of Australia but said little about the challenges that would be faced as the frontier moved from coastal settlements towards the inland of Australia. As was argued in Chap. 4, explorers were doing more than just exploring

[1]Samuel Marsden, Vol. XII, 263.

[2]Oxley (1820, Introduction).

[3]Bland et al. (1965, 31).

[4]Carron (1849/1965, 23).

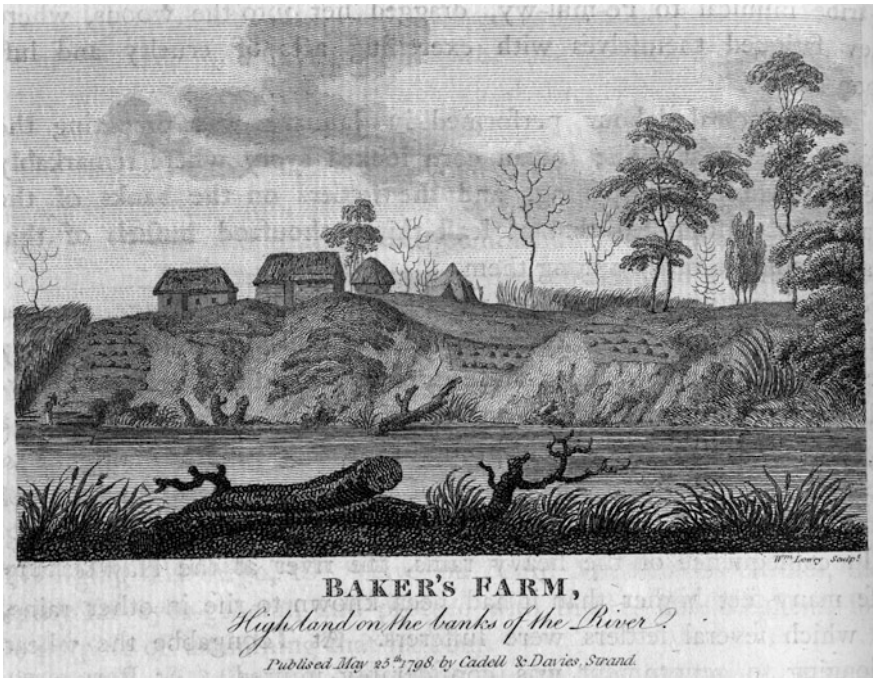

Fig. 6.1 Baker's Farm (Collins 1798–1802, 402). Image courtesy of Monash Rare Books Collection, Monash University Library

the country out of curiosity. They were examining the country for information that would enable their sponsors to decide on the best places to expand penal colonies, settlements, and to develop commercial opportunities. Chapter 5 demonstrated that the newcomers were beginning to achieve some level of community and household food security by the early part of the nineteenth century, concomitant with the loss of food security and the ongoing emergency food security crisis that faced Eora and their neighbors (Fig. 6.1).

In a pattern was to be repeated across the landmass of Australia and the surrounding islands that were also subsumed into the emerging nation of Australia, small newcomer colonies grew into settlements, the settler colonists turned their sights inland and further up and down the surrounding coasts in order to expand grazing and agricultural lands. A new class of explorers that included surveyors, prospectors, flora and fauna collectors, road builders, and administrators were instructed to keep detailed journals about any edible endogenous flora and fauna.[5] An early explorer out of Sydney, Barrallier made a very positive assessment of

[5]See, for example, Campbell (1816, 168).

Dharug country for Governor King. It is notable that he assumed that new settlers would rely on endogenous food[6]:

> *12 November 1802: There are a great quantity of kangaroos of different kinds in this plain which are not very shy. I think it would be suitable for the establishment of about 300 men who would devote themselves to the culture of the land … Such wild animals as the warring, kangaroo, opossum, wombat, &c., would afford to these colonists a great variety of food, without mentioning all the varieties of fish swarming in the rivers.*

Explorers were also commencing a program that continues to this day of changing the ecology of the landmass. In early 1801, for example, Lieutenant James Grant was sent on a sea exploration south from Sydney. Accompanying him, amongst others, were Euranbie and his wife Worogan, Francis Barrallier, and George Caley.[7] Like the French explorers of Tasmania, Grant decided to plant a garden on the estates of Boonwurrung on what is now known as Churchill's Island. He recorded that[8]:

> *The ground was now prepared, and I sowed my several sorts of seeds, together with wheat, Indian corn and peas, some grains of rice, and some coffee berries; and I did not forget to plant potatoes.*

Many years later, planting a food supply garden for future explorer parties to use was still the practice of some explorers (and some, like Grant, with an eye to future settlement). Hovell and Hume, for example, also recorded that as they crossed Dharug, Gundungurra, Ngunawal, and Wiradjuri estates they sowed clover seed and planted a few peach stones.[9] Others released animals such as goats, sheep, and cattle and some sowed seeds for fruits and vegetables. Some of these practices echoed those used by earlier coastal explorers in the hope that return journeys would provide them with stocks of edible, recognizable foods to supplement their travel rations. For others it became an act of proving future ownership through evidence of cultivation of the land. These explorers were not ignorant of the impact of their actions on inhabitants they met. For example, Giles recorded a conflict with a Pitjantjatjara man (or possibly a neighboring Yankunytjatjara or Luritja man) he encountered at Christmas 1873, reflecting that the actions of Giles and his party had deprived 'him and his friends of their natural, lawful food'.[10] Even with this insight, Giles shoots at this man to get him to leave them in peace to enjoy their Christmas celebrations in the place they had chosen for their camp. Without irony, Giles and his party then settled down to their meal of wallaby and fried chops.[11]

Such records show that explorers were carrying provisions they had been able to source from the settled penal colonies of Sydney and its surrounds. These early

[6]Barrallier (1802).

[7]Grant (1803).

[8]Arcand (1972).

[9]Bland et al. (1965, Monday November 1st 1824).

[10]Giles and Bosanquet (1986, Chapter 2.6).

[11]Giles and Bosanquet (1986).

settlements were beginning to overcome the initial period of emergency food crisis and had begun to achieve a level of community and household food security that was able to produce a surplus of supplies such as wheat, pork, lamb, and salt. This surplus was then able to help develop the economic base of the new colonies and provision its expansion. Food was an ongoing consideration as colonial administrators, investors, and settlers strove to widen their reach. Food surpluses grew slowly, to the frustration of some. Mann, for example, lamented the limits to successful exploration arose because of his lack of skill and insufficient food provisions, when recording on a trip across Dharug estates.[12] In the early days of overland exploration, journeys were also limited by lack of roads and with no resupply depots. For example, Oxley reported that the exploration done by Blaxland and his team was hampered by, 'Their provisions being nearly expended, they returned to Sydney, after an absence of little more than a month.'[13] Oxley's 1817 expedition also suffered from being incorrectly provisioned and this had negative consequences for the management of his carried food supplies.[14] In 1824, Hovell and Hume ran short of supplies, thereby restricting their ability to explore further onto Wiradjuri country. Atypically, they were able to add to their diminishing provisions by procuring kangaroo and fish to eat.[15]

Cooper and McLaren have analyzed the changing dietary habits of explorers that undertook land expeditions to expand the frontier beyond the new settlement in Sydney during the late eighteenth and nineteenth centuries.[16] They found that pack animals were expensive, especially horses, and many exploration parties were restricted in the numbers of these they could take. They also found that explorers were obliged to carry water and food with them because they lacked the knowledge to find reliable fresh water; neither, they argued, did they have the hunting and foraging skills that would have allowed them to live off the land. In addition, they observe that knowledge of food preservation and storage had not yet been developed for the sorts of foods they needed.[17] They found that by the mid-1800s as colonial stocks of food and numbers of horses and other animals such as sheep and cattle increased, overland explorers were able to carry more provisions such as flour, pork, sugar, tea, biscuits, and sometimes tins of preserved meat.[18] They also observed that explorer parties were by this time also able to establish supply depots. Analysis of the explorer journals supports their findings. Explorers' journals that provided day-by-day accounts gave information, maps, and sometimes detailed drawings of flora and fauna that enabled subsequent parties to plan their water and

[12]Mann (1811, 31).
[13]Oxley (1820).
[14]Oxley (1820).
[15]Bland et al. (1965).
[16]Cooper and McLaren (1997).
[17]Cooper and McLaren (1997).
[18]Cooper and McLaren (1997, 100).

food provisions more accurately. In this way, they learnt how to extend the British frontier without needing to rely on endogenous food sources.

Three interpolated activities were occurring: first, explorer provisions were becoming more reliably available; second, some effort was being made to understand the ecology of the environs of the Sydney Cove region; and, third, Eora and surrounding peoples were watching new flora and fauna being introduced onto their lands and waterways by settler farmers and witnessing the beginnings of a slow but persistent ecological transformation of their country.

Securing Reliability in Exploration Food Provisioning

One of the earliest explorers to set out from Sydney was Francis Barrallier. In November 1802, he was directed by Governor King to endeavor to find a way over the mountains to the west of the settlements across Dharug country. Even though he was unsuccessful, he was recognized as 'a man of pleasant personality, an able engineer, and a brave and competent explorer'. During his journey in the mountains, he managed his small party well and was known to be on good terms with clans and family groups of Eora and Dharug.[19] His discussions about food and its procurement are intertwined with the knowledge shared with him by the guides who accompanied him.[20] His journals provided insight into the sorts of colonial food supplies carried by the explorer and his team in 1802, such that 'A soup made of boiled rice, with pickled pork' could be made, that flour was a staple, and that he was supplementing these rations by shooting eel to eat.[21] In 1804, another expedition was funded by Banks to send his man, Caley, to find a way over the western mountainous ranges. Caley recorded taking the following provisions[22]:

> *Biscuits, 65lb of the best quality except for 9lb; Flour, 22lb; Rice, 16lb; Portable Soup, 10 ¾ lbs.; Pork, 48lb; Sugar; 22lb; Tea, 3lb; a total of 186 ¾ lbs.*

The next government-sponsored journey to find a way over the mountains was one undertaken by Blaxland, Lawson, and Wentworth in 1813. This time, they were able to cross the mountains, opening up the inland to exploration and settlement. Learning from previous attempts, they had planned for carrying all provisions for the journey, to be as self-sufficient as possible. Their journey also heralded that the newcomers were developing their hunting techniques for procuring animal meats

[19]Serle (1949a).

[20]Barrallier leaves the following information about the guides: Wooglemai, in the natives' language, signifies "one-eyed". This native knew Gogy, as he used to go from time to time to Parramatta and Prospect Hill. The mountaineer called Bungin was an inhabitant of the South, and had left the Canambaigle (?Dharambagal) tribe because they wanted to kill him.

[21]Barrallier (1802, various).

[22]Caley's Journals and Notes—National Herbarium, Kew Gardens; Mitchell Library, NSW; also cited in Currey (1966, 111).

such as kangaroo to supplement their colonial food supplies. Blaxland, Lawson, and Wentworth insisted on including in their party someone with experience of hunting kangaroos in the mountains, someone known to use dogs to bring down kangaroos. Such was the success of this new method of procurement that from 12 to 29 May 1813, Blaxland recorded killing four kangaroos.[23] Later in 1813, Evans was sent to follow the route left by Blaxland, Lawson, and Wentworth. He also relied on dogs to bring down kangaroos for food. He also recorded his success with catching fish, and he managed to shoot ducks for food. Mostly, he was able to rely on provisions of eight weeks sent with him by the Governor. He, like others, made special mention of the case of roast beef his party consumed on Christmas Day.[24] The Governor, from Evans' records, was able to surmise that there was plentiful endogenous animal, bird, and marine food resources available around Bathurst on Wiradjuri estates.[25]

In 1817, John Oxley headed an overland expedition that explored the inland river system over the mountains and across the western plains from Sydney. His journals are a mix of records about careful management of his colonial food supplies, as discussed above, and supplementing these with endogenous animals, birds, fish, and even a snake was tried by some of his party.[26] He adopted the practice, now familiar to overland explorers, to use dogs and guns to procure large animals, birds and reptiles as food to eat. Between May and June, 1817, his party shot or caught two black swans, several kangaroo rats, three kangaroos, and two emus. By July, he was expressing caution about his carried provisions, recording that they were running short of flour. A week later, without access to fish because of the weather turning cold, his party again turned to catching game. Between July and August 1817, his party shot five kangaroos and six emus but, as Cooper and McLaren have also noted, the additional problem Oxley's party then faced was that they ran out of gunshot.[27] Even though they supplemented their carried provisions with endogenous foods, they were forced to implement food rations because they were unable to procure sufficient fresh food because of their lack of skills and knowledge. Oxley's second journey overland exploring the river system returned via the coast north of Sydney across Biripi or possible Ngaku country at what is now known as Port Macquarie. This was a journey undertaken at a time of year when there was plenty of endogenous food available.[28] Of note, Oxley's journals described his food procurement activities catching kangaroos, fish and swans as seeking out 'game', undertaken by 'sportsmen' rather than using the descriptor 'hunting'. He also failed to recognise that he was crossing the estates of Dharug and

[23]Blaxland (1814).
[24]Evans (1813).
[25]Evans (1813, 42).
[26]Oxley (1820).
[27]Cooper and McLaren (1997).
[28]Oxley (1820).

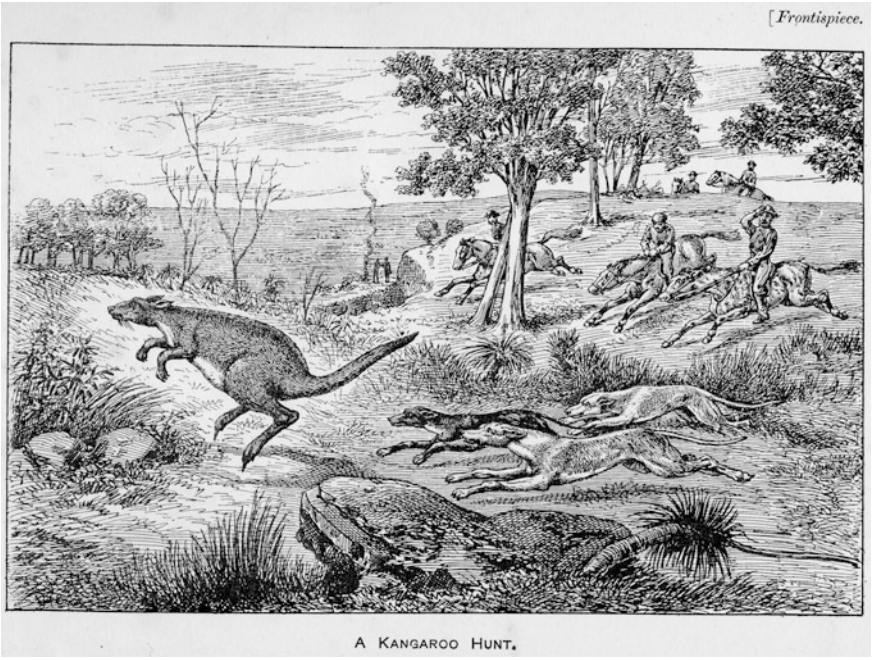

Fig. 6.2 *Kangaroo hunt* (Arthur 1894, Frontispiece). Image courtesy of Monash Rare Books Collection, Monash University Library

Wiradjuri. He opined, for example, that, 'Fish, flesh, and fowl are abundant, but there are no human beings to enjoy them but ourselves…' (Fig. 6.2).

As argued previously, the estates of Dharug and Wiradjuri are extensive and it is probable that the clans of this area were living in another part of their estate even as they were probably aware that Oxley's party was travelling across their lands.

Similar to his first exploration, Oxley again supplemented his carried provisions by using dogs to hunt for kangaroo. Between August and October, they exhausted the dogs to such an extent that two died and the explorers were required to kill kangaroo using guns. They managed to catch emus, ducks, and fish to supplement their rations but were less successful catching kangaroo without their dogs. By October 1818, they had arrived on Ngaku country at the coast where they were able to kill a shark. In a rare instance of Oxley trying to share their catch with inhabitants, his offer was rejected by Ngaku:

> *11 October 1818: [On reaching Port Macquarie] The port abounds with fish: the sharks were larger and more numerous than I ever before observed in any place. We caught one very large one, which we offered to the natives, but they would not touch it. making signs that it would make them ill: our people however found no bad effects from eating it.*

Similar to Evans in 1813,[29] at the conclusion of his explorations Oxley wrote a glowing general summary of the potential of settlement on Dharug and Wiradjuri estates, across the Bathurst region.[30]

In 1824, after 10 intervening years of newcomers spreading out across the lands opened up by explorers, establishing small settlements and farms, Hume and Hovell were charged with leading an expedition to find new grazing land in the south of the colony, and to find an answer to the mystery of where New South Wales's western rivers flowed. This overland expedition out from Sydney towards the southern coast was the first to take a herd of cattle with them. Their colonial food provisions for the journey consisted of '…twelve hundred pounds of flour, three hundred and fifty pounds of pork, one hundred and seventy pounds of sugar, thirty-eight pounds of tea and coffee … twenty pounds of salt…'.[31] They were also prepared to supplement their supplies with endogenous food where possible. As was the emerging explorer method for doing so, they took with them both dogs and guns to hunt for meat. They were prepared for fishing. Between October 1824 and January 1825, Hovell and Hume's party shot or caught ten kangaroos, four lobsters, a large black snake, 'an ample supply of black swans and ducks', and many fish. Like Oxley, they completely exhausted their dogs. By early December 1824, they had all but exhausted their provisions, and having lost some of the dogs and others being injured, their records demonstrated how dependent these explorer parties were for the dogs to be able to bring down kangaroos for meat. By January 1825, they had run out of their carried provisions and were reliant on catching fish.

The other point of note is that wheat flour had become the staple endurance food for this type of expedition, something that overland explorers used for food almost to the exclusion of everything else as they pushed themselves and their teams further and further across unfamiliar lands surrounded by often-incomprehensible terrains and ecosystems. Few explorers in this period bothered to record information about endogenous sources of food. Unusually, Hume and Hovell maintained their practice of sourcing out edible fresh flora, noting both its abundance and tastiness[32]:

> *15 November 1824: The fern, the currajong, and the flax, flourish here in abundance; and the peppermint plant, (which they had not seen in any other part of the Colony) seems to surpass, both in odour and taste, the species that is generally produced in our gardens.*

In 1829, by the time Sturt set out, he was following in the footsteps of previous explorers. Like explorers before him, Sturt relied heavily on dogs and guns to

[29]Evans (1813).

[30]Oxley (1820, 175).

[31]Bland et al. (1965, Appendix 1, 82).

[32]Bland et al. (1965).

procure ducks, emus, and kangaroos for food to supplement their supplies.[33] Like earlier expeditions, Sturt's group did not have the skill to kill the kangaroo. His detailed note showed his lack of skill[34]:

> *I was walking quietly through it, when I heard a rustling noise, and looking in the direction whence it proceeded, I observed a small kangaroo approaching me. Having a stick in my hand, and being aware that I was in one of their paths, I stood still until the animal came close up to me, without apparently being aware of my presence. I then gave it a blow on the side of the head, and made it reel to one side, but the stick, being rotten, broke with the force of the blow, and thus disappointed me of a good meal.*

Despite the obvious lack of skill to catch fresh meat, his records demonstrated that exploration parties were learning how to manage their pack animals and supplies.[35] Importantly, this might also have been the first time that overland explorers travelled with sheep that could be eaten along the journey, something that gave them a source of easily killed, fresh, food. Sturt's concluding remarks to his first journey across Wiradjuri country, down the Macquarie River, and into the western interior of Wayilwan and Ngiyampaa country in 1828 and 1829 highlighted that the greatest difficulty for overland explorers was the limitations that were imposed by the need to carry food supplies.

Sturt made a strong argument for the need to establish reliable depots in which to store provisions.[36] There were neither sufficient settlements to develop this idea further for a number of years nor did inhabitants want explorers' food depots on their estates. Inhabitants had been watching these overland expeditions over the years and Sturt faced opposition from people as he attempted to establish supply depots in his early journeys. On his later journeys, the resistance of inhabitants had been overcome because of the greater number of newcomers who followed the expanding frontier to establish settlements, farms, and depots. These settlements and depots were able to produce increasingly reliable supplies of familiar foods, both brought in from Sydney and locally grown and raised. This emerging community and household food security of settlers allowed the explorers further range, providing them with the option to double back and take on more provisions if their food supplies dwindled or if they were unable to source endogenous foods or drinkable water to supplement their supplies. These staging posts and small settlements were to become important in the overland explorations that moved towards the harsher and drier center of the continent.

[33]Sturt (1963, Chapter II, 71–72).
[34]Sturt (1963, Chapter V, 223–224).
[35]Sturt (1963, Chapter VI, 130).
[36]Sturt (1963, Chapter VI, 129).

Understanding the Local Ecology

The following discussion focuses on the specimen collectors sent by Joseph Banks, in particular George Caley, who was both an overland explorer and a settler, experiencing the frontier food conditions but in some ways able to step across the divide between inhabitants and newcomers. This section also discusses efforts of some settlers to engage with endogenous sources of food while others worked as quickly as possible to establish familiar, exogenously derived sources of food, experimenting first in the Sydney settlements and then expanding to better agricultural land as it was opened by frontier settlers.

By the early nineteenth century, newcomers were arriving in the colony with the intention of establishing gardens and farms stocked with exogenous cultivars and livestock from England. In one example, George Suttor and his wife had knowledge of gardening and botany and were sent to the new colony by Joseph Banks with a collection of trees and plants including grape vines, apples, pears, and hops.[37] It was agreed that Suttor was to be given a grant of land, and he settled at Chelsea Farm, Baulkham Hills. After a few years, he was sending oranges[38] and lemons to Sydney, obtaining good prices for them, and had become a successful settler.[39] Curiosity about endogenous sources of food can be traced in part back to the interests of some of the early explorers. Mentioned above, Francis Barrallier was an early explorer of lands beyond the Sydney Cove settlement. Like Caley, he was interested in developing positive relations with individual inhabitants, families, and clans of Eora and Dharug. He was sent by the Governor as an emissary as part of his exploration duties. Unlike Caley, Barrallier seemed to compartmentalize his knowledge of food resources that were available to him. In late November 1802, he recorded for example that:

> *28 November 1802: Our provisions were nearly exhausted. The small quantity of rice and flour left did not allow of my continuing to advance in a country offering* ***absolutely no resource (my emphasis).***

This is in contradiction to his earlier and later entries that show clearly that Gogy, Bunjin, Wooglemai, and other inhabitants sought out edible food for the explorers and found fresh water for them to drink. Barrallier's reliance on inhabitants to procure food resources for his group included detaining people against their will.[40] People like Barrallier brought information back to the French and the English newcomers who mingled in Sydney at this time, sharing knowledge and resources of their discoveries, even as they eyed each other warily. Baudin, for example, reported to back to France that[41]:

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[37]Currey (1966, 13).

[38]O.Z. (1941, 11).

[39]Serle (1949b).

[40]Andrews (1862).

[41]Baudin et al. (1802/2001, 13).

> *Par contre, les Anglais y ont installé sur la côte est un début de colonie. Port-Jackson (l'actuelle Sydney) se développe, et l'implantation de colons, pour la plupart forçats déportés, commence à donner des résultats pour l'implantation des cultures et de l'élevage. La récolte de la graisse des phoques à trompe est aussi d'un bon rapport commercial.*
>
> *[Trans. However, the British have established a colony on the eastern coast. Port Jackson [now, Sydney] is growing, and the settlement, with most of the settlers being deported convicts, is starting to get results with crop and cattle farming. Oil rendered from elephant seal blubber is also proving commercially valuable.]*

Baudin's report demonstrated that the British were experiencing some success with crop and livestock cultivation. Governor King was trying to keep the price of food low despite opposition from his officers and others who were able to make high profits from their control of foods arriving by ship from England. Importantly, his communication with the British government heralded for the first time that household food security for the newcomers was emerging. On 9 November 1802, fourteen years after the first landing on Sydney Cove, King was able to write optimistically that[42]:

> *I beg leave to state most explicitly that this colony has not, nor can have further occasion for grain or flour being sent from England whatever accidents may happen to the crops, as the resources in vegetables are great, now that the settlers are turning their attention to gardening, and long before any supplies could possibly arrive the ensuing harvest of wheat and maize could be got in, and having a crop of each at different times of the year secures one if the other should fail.*

Even though he felt that it was still necessary to import salted meat, he was otherwise optimistic that the colony now had sufficient stores and onward food production to be self-sufficient of Britain. At this time, there was still sea exploration continuing and growing interest in expanding the colonial reach. Currey[43] cites records of a visit made by the French naturalist Péron (April 1802) and his colleague Lesueur when they visited Parramatta (Péron 1809).[44] They reported that Caley, one of Joseph Bank's seed collectors, had been sending specimens back to England that allowed the English to be publishing important volumes about the botanical character of the flora of this new colony. The French, too, wanted to be recognized for their discoveries and reported that this French expedition had killed and prepared no less than 200 birds and 68 quadrupeds. Péron also collected many specimens on this part of his voyage (with Caley's help at some points).[45] Important to note, these collectors of specimens to send back to Europe were, like their settler counterparts, also diminishing the available supply of important endogenous foods relied on by inhabitants.

It was not only scientific interest in Britain and Europe driving the intent to collect and classify local flora and fauna. Joseph Banks became the patron and

[42]Watson and Australia Parliament Library Committee (1914, 602).
[43]Currey (1966, 51–53).
[44]Péron (1809).
[45]Currey (1966, 52).

sponsor of the development of botanical classification in New South Wales and other British colonies, sending people with some expertise such as Caley, and other collectors such as Brown and Cunningham, who had an interest in endogenous flora and fauna. Their records of this knowledge provide insight into some of the endogenous foods being used by settlers to supplement their European-focused diet. Currey cites Caley, for example, who understood that Banks 'was enthusiastic about sending an expedition to New South Wales, though he thought that the discovery of new plants was not the discourse, but other matters of to the colony was the object to be gained thus'.[46]

George Caley was a botanist who arrived in Sydney in 1800. At that time, settlements of Sydney and Parramatta had been established. There were about 5000 newcomers and they had put about 9000 acres of land under cultivation but as Governor Hunter had reported, the colony was not yet self-sufficient because of floods that had destroyed two years supply of food. The settlement was on short rations of meat.[47] Caley's own small garden was flooded and he noted how constrained he would have been without this produce.[48] He recorded his food allowance for the week as[49]:

> *4 lb. of salt pork, 10lbs. of wheat, 6 lb. of Indian corn, and 4 oz. of sugar… in lieu of salt pork, 7 lb. of beef. A few times fresh pork and beef have been issues, all wheat without Indian corn, and twice 7 lb. of what ground into flour without being sifted in lieu of grain have been given…*

Notably, Mann's list reported in 1809, nearly 10 years later, showed remarkable similarity in type and quantity of rationed foods[50]:

> *The following is to be considered as a full weekly Ration, which is issued from the stores whenever there is a sufficiency without a prospect of want, to those who are in the employ of government:—Seven pounds of salt beef, or four pounds of salt pork; eight pounds of flour or meal, or an addition of a quarter of a pound of wheat to each pound, if it cannot be ground; pease or other pulse, three pounds; six ounces of sugar in lieu of butter. The same quantity is to be given by their employer to those who are indented to settlers, &c.; but as frequent alterations are necessarily made, according to the pressure of circumstances, the deficiency is generally made up with maize.*

Caley settled into his role, was given a convict to help him manage his garden, travelled with overland explorers such as Grant and Barrallier when asked to do so, undertook some expeditions himself (as discussed above), and regularly reported his discoveries to Banks. He was concerned about the hostility shown to inhabitants by the settlers and, in a letter to Banks in 1801, he reported his intention to:

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[46]Currey (1966, 9).

[47]Currey (1966, 34).

[48]Webb (1995, 30).

[49]Letter from Caley to Banks, December 22, 1800, Banks Papers, Mitchell Library; also cited in Currey (1966, 42).

[50]Mann (1811, 43).

> *...keep a bush native constant soon, as they can trace anything so well in the woods, and can climb trees with such ease, whereby they will be very useful to me and shall gain a better knowledge of them.*[51]

Happy to learn as much as possible from inhabitants about their language, his approach was marked in its openness to knowledge held by people he met. Banks had requested that he find out about flora and fauna and it was to Eora and Dharug that Caley turned. He wrote in a letter to Withering that[52]:

> *Though they are wretched beings, without the least clothing, yet they are possessed of some qualities, that a person who was not an eyewitness would scarce credit; this is the manner that they obtain their food. I mean to get acquainted with as many of them as I can in order to learn their customs.*

His records reflected the parallel worldview in existence during his time where it was still possible to record the names of flora and fauna given to him in local language and to record settlers' names for the same flora and fauna. He also developed skills that allowed him and his explorer parties to source endogenous foods. Unlike other groups that made early attempts to cross Dharug country, in 1804 Caley returned from his trip before his carried provisions were completely exhausted. He also applied new scientific taxonomy where possible to fit these new species of flora and fauna into an emerging, all-encompassing, global classification system, sometime disagreeing with previous classifications or giving what he was told were the correct Indigenous Australian names. For example, during his expeditions out from Sydney, he recorded a number of names used by inhabitants and guides for kangaroos: *Patagorang* (the Great Forest Kangaroo); *Cunimang* (the Kangaroo Rat); *Walaby* (the Brush Kangaroo); *Pattymelon* (a smaller reddish colored kind), and one called a *Betony.*[53] He also sent many specimens of birds back to Banks, keeping careful notes about Moru or Wirwin (Whistling Hawk), Buck'Buck (Owl or Cuckoo), Berrin'nin (Welcome Swallow), Natay'kin (Dollar Bird), and Wawguljelly (Emu Wren) to name a few from his records.[54] On a trip to survey an area called 'Cow Pastures', Caley was told about a large *Walbunga* in progress which he explained as 'catching kangaroos by setting the place on fire and by placing themselves in the direction the animal is forced to pass and by throwing spears at it as it passes along'.[55] (See, for example, Fig. 6.3, that demonstrates this practice still being used into the twentieth century).

Clarke argues that information recorded by the collectors such as Caley leaves a sometimes confusing record that is an amalgam of early settler names for flora and fauna, often erroneously matched to similar looking or tasting European foods, and

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[51]Letter from Caley to Banks, August 25, 1801, Banks Papers, Mitchell Library; also cited in Currey (1966, 49).

[52]Caley to Withering, 12 October 1800, Mitchell Library, Ac.49; Cited in Webb (1995, 32).

[53]Letter from Caley to Banks, June 1, 1802, Banks Papers, Mitchell Library; also cited in Currey (1966, 69).

[54]Caley's Journals and Letters, National Herbarium, Kew Gardens, London; Also cited in Currey (1966, Appendix 1).

[55]Currey (1966, 102).

Fig. 6.3 *The maala drive* (Finlayson 1935, 65). Image courtesy of Monash Rare Books Collection, Monash University Library

of names given by inhabitants but mostly with no careful record made of the language spoken by inhabitants. Clarke further observes, as was noted above, that because of their botanical and zoological training, these men were also trying to insert these new plants and animals into the emerging preference to use botanical Latin, linking everything in evolutionary terms.[56] Even so, the records left by Caley provide a precious source of knowledge given to him by inhabitants about endogenous flora and fauna.

In these early years, Caley also reported to Banks on the state of the development of the colony, and in particular on the state of food resources such as livestock that had been brought on ships from Britain in the early years. He reported that cows were breeding fast and well, sheep were increasing in numbers but not breeding well, goat numbers were declining but, in general, the numbers of pigs were increasing well.[57] He was, overall, unimpressed by the methods used to farm crops of wheat, corn, and barley and reminded Banks that home gardens were in their 'infant state'. He reported that cabbages were the commonly grown vegetable, the potatoes were poor, but beginning to breed better, and that onion crops did not

[56]Clarke (2008).

[57]Currey (1966, 79).

bear good seed. He also noted that grapes did not do well but that apples, figs, and even peaches were found to be doing well.[58] By 1809, Mann was able to give a detailed accounting of land under cultivation, numbers of livestock, the state of agricultural production, the price of items of food, and even an early gardening guide for the new colony.[59] Earlier food monopolies controlled by officers that had challenged the early Governors Hunter and King had been curtailed substantially as shown by the following numbers[60]:

> *Belonging to the Crown—100 acres in wheat.*
>
> *Belonging to Officers—326½ acres of wheat, 178 acres of maize, 22½ acres of barley, 13 acres of oats, 13/4 acres of pease and beans, 191/4 acres of potatoes, 65 acres of orchard, and 6 acres of flax and hemp.*
>
> *Belonging to Settlers—6460½ acres of wheat, 32111/4 acres of maize, 512 acres of barley, 79½ acres of oats, 983/4 acres of pease and beans, 2813/4 acres of potatoes, 13 acres of turnips, 4811/4 acres of garden and orchard, and 28½ acres of flax, hemp, and hops.*
>
> *Total.—6887 acres of wheat, 33891/4 acres of maize, 534½ acres of barley, 92½ acres of oats, 100½ acres of pease and beans, 301 acres of potatoes, 13 acres of turnips, 5461/4 acres of orchard and garden, 34½ acres of flax, hemp, and hops.*

Supply of key items used in the production of foods such as salt was also becoming reliable and windmills were being built that enabled corn to be ground in large quantities. The work of the seed collectors coincided with the stabilization of both household and community food security for the newcomers who had now entrenched themselves as settlers. Finally independent of provisions sent from Britain, the work of the seed and specimen collectors could be viewed more benevolently as Caley and Cunningham sought to record the knowledge held by inhabitants as they classified and categorized the new colony.

New Foods on Traditional Estates

The efforts of the settlers to consolidate their household and community food security needs, defined by Goodall as, 'A household or community's ability to access food (particularly healthy food), given physical and income constraints' were in direct opposition to the needs of the inhabitants.[61] Settlers were systematically changing the food ecology, pushing most Eora and Dharug off their traditional estates.[62] Collins provided evidence that those in the settlements certainly knew as much as the earlier coastal explorers about the foodways of the Eora and

[58]Caley's Account of the Colony was included in Bladen (1979, Volume 5).
[59]Mann (1811, 40).
[60]Mann (1811, 37).
[61]Goodall (2008, 1).
[62]Forster (1786/2008).

other inhabitants as they moved inland to explore further.[63] By 1802, the Historical Records of Australia provide evidence of the official attempt to drive Eora and others from what had become settlers' properties. In addition to the proclamation that was forwarded to the British Government by Governor King as Enclosure No. 1, the original order book, a draft proclamation, in the handwriting of Chapman, secretary to the governor recorded that[64]:

> *... it was directed by the General Orders of the 1st May, 1801, that the natives should be driven from the settler's habitations in the districts of Parramatta, George's River, and Prospect Hill by firing at them ...*

There is record that some Eora, Dharug, and others took up opportunity to establish farms and gain employment in the new settlements. By 1809, Mann recorded that some were working on farms and others on ships.[65] His observed that many other Eora tried to continue to live their usual lives in the face of what was occurring around them.[66] As the quote at the beginning of this chapter bleakly asserts, for those who were unable or unwilling to enter into the new colonial economy, the results were devastating. Even so, a new feature of food procurement was also emerging. Farms and grazing lands that were being established on the traditional estates of Eora and Dharug held new forms of food—sheep, cattle, cereal grains, and vegetables, and in particular Indian corn. As argued in Chap. 5, when Eora and others started to take food from grazing paddocks, farms, and gardens, there was outcry from the newcomers. These settlers accused inhabitants of stealing.

Analysis of the records left by Barrallier, Caley, Mann, Oxley, and Sturt suggest that the reason that the explorers and settlers could make this claim was that they regarded food hunted and harvested in nature as wild and owned by no one. They did not recognize the careful management and selection of food resources that had been occurring one these lands for millennia. Neither did they understand the *sui generis* rights of the inhabitants on whose lands and seas they hunted, fished, and settled their colonies. In stark contrast, settlers regarded food produced in farms and gardens as 'owned' by them, for their private consumption, or to be sold by them for their private profit. Sharing of food resources, as determined by inhabitants, became stealing and inhabitants were incarcerated and killed for taking sheep and the produce of farms and gardens. For Eora and Dharug this must have been incomprehensible. Why could their food and water resources be exhausted without recognition and yet they were expected to starve while the settlers took over their land for production of these new foods?

[63]Collins (1798–1802, Vol. 1, Appendix 4).

[64]Watson and Australia Parliament Library Committee (1914, 800).

[65]Mann (1811, 47).

[66]Mann (1811).

Beginnings of the Ecological Transformation

There is far more data available about the changing food security context of the newcomers as they became settlers on the lands of Eora, Dharug, and their neighbors. It is only possible to speculate on the fate of inhabitants at each stage of the first contact period as the frontier spread out from early penal colonies. From examination of various historical records, it can be gleaned that it became increasingly difficult for Eora and surrounding inhabitants to secure access to their estates and therefore they were seriously hampered in their efforts to find sufficient customary food to eat. Consideration of the change in estimated populations provides one insight. The estimated population of inhabitants in NSW in 1788 of 48,000[67] was about 98.9 % of the total population with the newcomers being only an estimated 859 people (1.9 %).[68] By 1801, settlers numbers had grown ten-fold (estimated to be about 10,096 people) but there are no accurate estimates of the numbers of inhabitants still living in NSW, nor how many had died.[69] Mulvaney and White quote Governor Philip as estimating there to be approximately 1500 people inhabiting the coastal bays around Sydney. One hundred years later, what is known is that by 1901, when the NSW Indigenous Australian population was estimated to be at its lowest (approximately 7434 people[70]), there were 1,375,455 settlers. Not only had the population of inhabitants been reduced to only about 0.5 % of the population of NSW but the land and waterways were now feeding over twenty-eight times the number of people estimated to be living from the land and its waterways in 1788.

In NSW, by 1901, 99.5 % of the inhabitant *quod fieri* Indigenous Australian[71] population had been decimated after 113 years of contact with newcomers *quod fieri* settlers.[72] As the statistics suggest, and as I have argued elsewhere,[73] an emergency food security crisis was caused by the British through their decision to establish a penal colony at Port Jackson. The British government made no acknowledgement that there were people already living on these lands, and even for those sent to the new penal colony, the British demonstrated a lack of planning and preparation that consigned many convicts to a life of starvation and death. Even though it was hard for everyone, the dramatic drop in the Australian Indigenous population and equally dramatic increase in the settler population can be attributed, in part, to how each survived the emergency food security crisis, and began to stabilize their respective food security contexts. While the settler population moved from an emergency context in 1788 to a relatively secure one by 1901, the

[67]Parks (2007).

[68]Australian Bureau of Statistics (2014).

[69]Attenbrow (2010, 21).

[70]Parks (2007).

[71]*Quod fieri* is used here to mark the people *on their way to becoming* Aborigines.

[72]*Quod fieri* is used here similarly to mark the newcomers *on their way to becoming* settlers.

[73]Ma Rhea (2014).

emergency food security context of Indigenous Australian people has continued, with significant numbers barely managing to achieve household and community food security into the present era.

As easily available endogenous food resources diminished and the grazing lands, farms, and gardens of settlers became more productive, Eora, Dharug and others' food knowledge and the use of endogenous foods lessened in importance for the new colony. What this analysis demonstrates is that the Eora and surrounding peoples lost their food sovereignty in the face of the claims of the colonizing peoples. This loss of food sovereignty and, by default, food security meant diminishing quantities of available food and diminished nutrition because the penal colonies and settlements were competing for available endogenous foods and offering wheat based bread products in return.

Low's[74] argument that coastal Eora and Dharug were procuring and eating different foods to those of the newcomers does not seem to be supported by the available data. Some flora and fauna were differently used for food by each group but competition for key food endogenous resources such as fish saw fish stocks deplete rapidly and with serious consequences for Eora (as noted by Collins[75] almost immediately on settlement of the penal colony). The most pressing argument to be made from this analysis is that the events of the first 15–20 years after the establishment of the penal colony in Sydney heralded a transformation of the ecology of Australia. British and European livestock and myriad cultivars were imposed on the landscape, transforming not only the edible foods but the very ecosystems in which they existed into a semblance of the old country. On the one hand, this can be regarded as an extraordinary feat of great achievement. On the other, it reflects the almost total rejection of what was the land and waterways before colonization.

Conclusion

This chapter provides insight into the emerging household and community food security that was being achieved by the settlers. As population pressure on the early settlements grew, explorers were able to be provisioned by food surpluses that had been achieved. Some early explorers learnt that Eora and others had developed complex ecological adaptations that gave them skills and knowledge to optimize food procurement and preparation in order to sustain life. Almost beyond understanding in the modern view of food, the concept and food practices associated with subsistence were shown respect by some such as Caley. Even as he developed some skills to procure endogenous flora and fauna, the majority of settlers were intent to reestablish their familiar foods from Britain and Europe. Early colonial attempts to

[74]Attenbrow (2010).

[75]Collins (1798–1802).

establish reliable, familiar food resources has, over time, led to a precarious transformation of the ecology of Australia. In food terms, it has become a nation that is dependent on highly industrialized agricultural food production systems, drawing on exogenous, global, food resources that are shown to be scalable. This has become the normal way to produce sufficient food for the world's population and to achieve what is understood to be a national definition of food security. Highly reliant on agriculture, easily available sources of water, factories, shops, and well-maintained transportation and infrastructure, this is the legacy of settlement.

The next chapter turns to examination of traces of the French legacy about food on their explorations, a legacy that has contributed in the modern era to a global interest in Australian 'native' foods.

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Chapter 7
French Explorations and Le Gastronomie

Abstract This Chapter, the third chapter of part two 'Food across the Colonial Frontier' suggests that the French had a distinct approach to their exploration of Australia and food is an important aspect of their encounters with Indigenous people. Drawing on available materials, this chapter tells a story that reaches into contemporary debates about food and food sustainability in global cuisine. The French were intrigued by local flora, fauna, and the food knowledge of 'les naturels' whom they encountered. Ostensibly on a scientific expedition rather than attempting to colonize Australia, their journals recorded their views of endogenous foods, and their own experimentations with what might be edible to their palates, portraying lively interest in what they considered exotic, 'native' foods. Amongst the explorers, the French provide an interesting counterpoint to the British in their exploration of coastal Australia. As discussed in Chap. 4, the French arrived in Sydney only days after the British. Auspiced primarily as scientific expeditions, and tasked with recording and locating specimens of flora and fauna in order to compete with Britain for exploitable resources and for advancing scientific knowledge across the globe, they also left detailed print and visual records of their explorations. Early French attitudes to foods of 'les autochtones' preceded their late eighteenth and early nineteenth century explorations. While French attitudes to inhabitants they met was as similarly disparaging to those of the British, their approach to endogenous food distinguished them. Accounts by French explorers such as Péron were mostly both curious and excited by the range of new possible endogenous sources of edible flora and fauna stand in contrast to the British record about endogenous foods eaten by inhabitants that bordered on repulsion. For the British, such foods were often eaten of necessity rather than for curiosity or pleasure. This repulsion points to a legacy in Australia shaped by the British palate being pushed beyond its frontier of taste. In distinction, food became an important aspect of French encounters with Indigenous people globally. Records demonstrated that they were interested in endogenous foods and the cultural habits of 'les naturels' they met.

Keywords French explorers · Australia · Edible food · Expedition food · Local food · French colonial food practices

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The French were intrigued by local flora, fauna, and the food knowledge of 'les naturels' whom they encountered. Ostensibly on a scientific expedition rather than attempting to colonize Australia, their journals recorded their views of endogenous foods, and their own experimentations with what might be edible to their palates, portraying lively interest in what they considered exotic, 'native' foods. Amongst the explorers, the French provide an interesting counterpoint to the British in their exploration of coastal Australia. As discussed in Chap. 4, the French arrived in Sydney only days after the British. Auspiced primarily as scientific expeditions, and tasked with recording and locating specimens of flora and fauna in order to compete with Britain for exploitable resources and for advancing scientific knowledge across the globe, they also left detailed print and visual records of their explorations.[1]

Early French attitudes to foods of 'les autochtones' preceded their late eighteenth and early nineteenth century explorations. For example, as late as 1756, French historians such as De Brosse invoked fantastical tales related by Greek scholars about 'les autochtones', citing those such as Ptolémée, in order to make sense of the lifeways of Indigenous Australians that he encountered.[2] For example, De Brosse opined that[3]:

> *Le pays dans le voiſinage de la mer eſt tout-à-fait ſtérile et nud; comme le ſeroit un nouveau fol que l'océan auroit abandonné depuis peu, ſans que l'action du ſoleil et des pluyes, et l'amas ſucceſſif du débris des menus végétaux eut encore eu le tems d'y former un terroir aſſez fourni pour donner aux plantes et aux arbres l'accroiſſement que la nature a coutume de leur donner…Les habitons ſont tout-à-fait brutaux, ſtupides, incapables de travail, indefenſibles aux avantage du commerce…*
> *[Trans: The land around the coastline is completely sterile and empty, as would land having just recently emerged off retreating sea, before sun, rains and the accumulation of vegetation had time to allow the development of a soil able to support plants and trees growth as nature intended… The inhabitants appear to be brutal, stupid, unable to work or to understand the benefits of trade…]*

While French attitudes to inhabitants they met was as similarly disparaging to those of the British, their approach to endogenous food distinguished them. Péron, for example, suggested of the kangaroo of Isle Bernier that[4]:

> *The flesh of this animal much resembles that of a wild rabbit, as Dampier remarked before us, but more aromatic, which is probably occasioned by the peculiar property of the plants it feeds on, and which are almost all odiferous. It certainly was by much the finest flavoured flesh of the kangaroo that we ever tasted, and this species would therefore be a valuable acquisition to European countries.*

Such accounts stand in contrast to the British record about endogenous foods eaten by inhabitants that bordered on repulsion, with such foods commonly being eaten of necessity rather than from curiosity or pleasure. This repulsion points to a

[1]Rosenman (1990).
[2]De Brosses (1756, Liv. V, 378).
[3]De Brosses (1756, 371).
[4]Péron (1809, 93–94).

legacy in Australia shaped by the British palate being pushed beyond its frontier of taste. In distinction, food became an important aspect of French encounters with Indigenous people globally. Records demonstrated that they were interested in endogenous foods and the cultural habits of 'les naturels' they met. Recent scholarship by Dyer provides a detailed account of ten French expeditions and discusses some of the knowledge gathered by them about the food of the inhabitants they met.[5] Examination of French explorer journals for specific examples where food is involved extends this work. Baudin, for example, gave positive insight into his gastronomic preference á la Brillat-Savarin[6] rather than leaving an impression that he is eating local foods under duress of hunger. He observed that[7]:

> *14 July 1801: During our stay ashore, we lived constantly on crabs, oysters, 'nérites de Burgos',[8] spiny lobsters, fish, and kangaroo. The dog-fish when young and small seemed very good to me and I preferred it to the kangaroo, which was everyone else's delicacy.*

Famous for their approach to 'le gastronomie', French explorer attempts to understand the food eaten by 'les naturels' became part of the narrative reported back to France. They were also well positioned to provide witness to the impact of British settlements on locally available foods, record their efforts to plant seeds, to release animals, and leave examples of a French food garden. These activities, considered together, could be dismissed as pragmatic to possible future colonial interests still harbored by the French. Even so, the curiosity evidenced in some of their records, their food practices, and their garden being remembered as a gift from the French people to Lyluequonny amongst others, speaks to an enduring interest that the French hold in endogenous forms of flora and fauna for the purposes of 'le gastronomie'.

British expedition parties struggled to find anyone with expertise in gardening, farming, or more general food production and processing knowledge. In stark contrast, French expeditions were accompanied by chefs, gardeners, and natural history artists, as well as scientists from a range of disciplines. Riedlé, the gardener on the Baudin expedition, recorded the French practice of sharing French cultivars and taking specimens of local flora and fauna wherever they were. For example, on their journey to Australia, he recorded that[9]:

> *Je ne puis assez me louer de toutes les honnêtetés que j'ai reçues des habitants de cette ile; j'ai visité leurs jardins et j'ai laissé partout des graines de légumes et de fleurs de l'Europe. Pendant notre traversée, j'avoirs planté des noix et élevé une multitude de jeunes noyers… [Trans: I cannot praise enough the kindness the inhabitants of this island showed me. I visited their gardens and everywhere I was able to plant seeds of flowers and vegetables*

[5]Dyer (2007, 1–22; 64–71).

[6]Brillat-Savarin (1825/2007).

[7]Baudin (1974b, 220).

[8]Possibly a Spanish mollusc of the Arionidae family called Burgos Mollusca that looks like a black slug.

[9]Riedlé (1801, 549).

from Europe. During our travels, I planted walnuts and saw numerous walnut trees starting to grow…]

Analysis of such evidence begins to tell a story that reaches into contemporary debates about food, food security, and food sustainability on a global scale. At this time, at the beginning of the nineteenth century, the global world of edible food was still forming in the minds of the sea and land explorers of the colonizing nations of Britain and Europe. The French continued to explore the coasts of la Nouvelle-Hollande while, as will be examined in the next chapter, the British were pushing inland and establishing colonies, settlements, and outposts to circumvent the French claiming any parts of Terra Australis. French sea exploration circumnavigated the landmass on numerous expeditions. This chapter will focus on the explorations they undertook along the western and southern coastlines including sojourns on various parts of Noongar estates, on Wardandi country around Géographe Bay, on Malgana and Nhanda country around Shark Bay and on Minang country at King George Sound[10] in Western Australia, on Kangaroo Island in South Australia (uninhabited at the time of their explorations), and around Van Dieman's Land on the estates of Palawa. It will specifically examine French records about food: what foods they brought with them on their sea explorations; what they themselves tried of the local flora and fauna, their practice of leaving future navigators edible, local, and recognizable foods, and their gift of a garden from the French people to Lyluequonny.

French Expedition Food

Prior to the French Revolution, Macdonald has argued that there was very little difference between the various European navies in terms of the provisions of food they carried with them.[11] Seafaring expeditions were variously provisioned depending on the auspicing body and the length of time at sea but there was knowledge of what successful explorations needed to feed the officers, crew, and other members. There were numerous tales of mutiny because of bad food and rampant scurvy, so provisioning bodies were keen in most cases to provision their expeditions well to keep their people happy. Food shortages bedeviled the French Navy following the Revolution.[12] Macdonald provides comparison of what navies ate, saying of the French that[13]:

[10]Originally named King George the Third's Sound, it was referred to as King George's Sound from 1826. By 1934, the habit had become to use King George Sound, the version that will be adopted in this book [see, for example, Editorial (2011, 15)].

[11]Macdonald (2004), Editorial (2011).

[12]Macdonald (2004, 147).

[13]Macdonald (2004, 145–148).

The daily ration was laid down as one and half pounds of biscuit, a midday dinner of bacon, salt beef, fish, or cheese, and a supper of dried pease or beans cooked and dressed with oil and vinegar.

She cites Bourdriot, who provided list of the foods carried by officers, making the following summary[14]:

In addition to the usual hams, tongues and pickles, this list includes beef, duck and goose 'confit', four types of cheese including Roquefort, dried mushrooms and truffles, five types of prunes and plums, fruit preserved in brandy, and vintage wines.

As argued above, Macdonald also suggests a certain attitude held by the French about food remarking that 'to those who know the French attitude to food, this is not surprising'.[15] Echoing the general approach taken by the French to provisioning of sea voyages, Baudin's journal left excellent records about the provisions he carried. He was provisioned for eight months for 120 men. He was sent with 28,800 rations, including 66 barrels of flour for bread-making, 360 biscuits, 156 days of bacon, 12 days of beef, 14 days of cod, 36 days of cheese, 22 days of vegetables and 240 days of vegetables and rice for supper.[16] Baudin's journal told of the need for him to be the arbiter of ship provisions of food and gave insight into some of the politics involved in such matters.[17] Unlike the British for whom food, its type, quantity, and quality marked social class and location,[18] the French had a more egalitarian view, reinforced more so by the revolution that had convulsed that country only a few years earlier. By the end of 1801, Baudin's expedition was experiencing shortages of food, both fresh meat and ship's provisions. He recorded a long note about his negotiation with staff-mess sergeant, Mr. Freycinet, who reported that the officers had eaten in ten days what had been allocated for a month.[19]

Eating Locally

The French sea explorers like their British counterparts, left records of the people they met as they explored the coasts of 'la Nouvelle-Hollande' and Van Dieman's Land. Some of these records gave insight into what the French understood to be the foodways of inhabitants they met. Baudin summarized his sojourn on Wardandi country around Géographe Bay thus[20]:

19 June 1801: ...we found few resources there. Fish are very rare, but whales on the other hand are very common. Likewise, we saw no more than one or two turtles. The land does

[14]Macdonald (2004, 146).
[15]Macdonald (2004, 146).
[16]Baudin (1974b, 571).
[17]Baudin (1974b, 292).
[18]Clements (1986, Chapter 2).
[19]Baudin (1974b, 292).
[20]Baudin (1974b, 197).

not appear to furnish much for the native's food. They seem to draw it mostly from the sea. Nowhere that we visited did we find a single tree bearing edible fruit or a single vegetable plant. The only food we found was some wild celery and a type of purslane, but the latter was not so good as the former. Shellfish especially of the scallop variety are not uncommon.

French expeditions to the great southern land commenced in the late eighteenth century. Dufresne[21] is credited with being the first French explorer to meet inhabitants in what is now known as Tasmania. His journals are now lost but there is a report by Crozet[22] that gives some information. These explorers were looking for food and fresh water and were clearly not welcomed by Paredareme living on the eastern coast of the island. Crozet[23] recorded their first encounter, French use of food as a trading opportunity, and the refusal of the inhabitants:

We endeavoured to gain their good will by means of presents, but they rejected with disdain all that we offered, even iron, looking-glasses, handkerchiefs, and pieces of cloth. They were shown fowls and ducks, brought from the vessel, in order to make them understand that we wished to buy the like from them. They took these animals, which by their action they showed to be unknown to them, and threw them angrily away.

Tragically, the French killed one of the inhabitants thereby causing escalated hostilities.[24] The French were forced to continue their search for fresh water and food without help, relying on catching fish and gathering seafood.[25] Similar to analysis offered in earlier chapters, examination of the French sea exploration records emphasizes the importance of foods of the sea to inhabitants as they moved around their estates. The historical records suggest that, at that time, the inhabitants of the eastern and southeastern parts of Van Dieman's Land did not like to eat fish. There has been considerable speculation as to why this might have been so.

For example, in 1792, Huon de Kermadec recorded finding plentiful fish in the D'Entrecasteaux Channel but he also noted that Nuenonne did not eat the fish offered to them by his people. In 1793, Labillardière, Raoul, La Motte du Portail, and Ventenat observed inhabitants eating seafood (lobster, mussels, pinnas, scallops, cockles, crayfish, and abalone).[26] Raoul noted inhabitants eating kangaroo. There are records that 'les naturels' refused vertebrate fish again in 1802 with the Baudin expedition.[27] For example, French efforts to share fish that they had caught were rejected by Paredareme and Nuenonne of the eastern coasts.

There were no bounds to the delight of the children and even the grown men when they saw the fish caught in the net.…We offered to share our catch with them, but they would accept nothing, making signs that they did not eat fish, but only shell-fish and crustaceans.

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[21]Duyker (1992).

[22]Crozet et al. (1783), Duyker (1992).

[23]Crozet et al. (1783, 18).

[24]Plomley (1990, 28).

[25]Crozet et al. (1783, 18).

[26]Grant (1990).

[27]Baudin (1974a, 323).

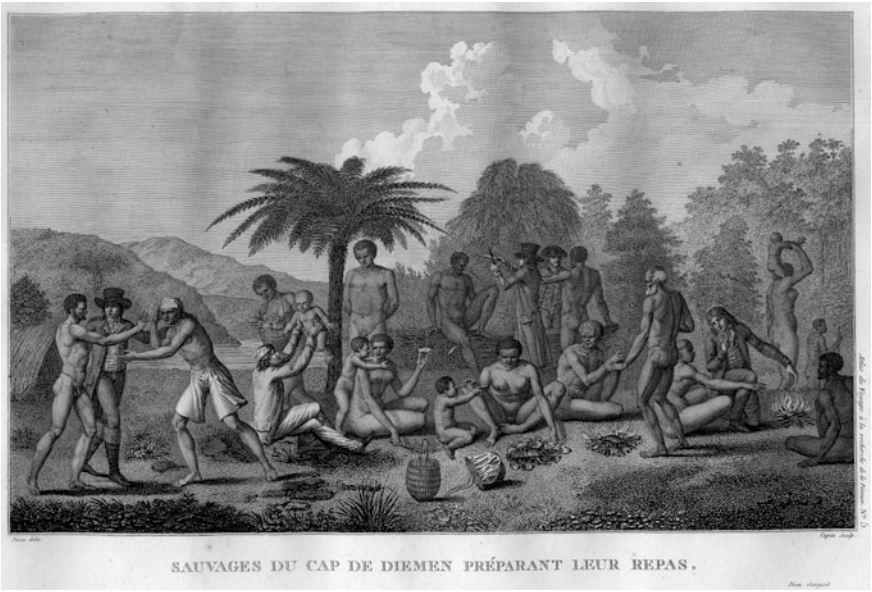

Fig. 7.1 *Sauvages du Cap de Diemen préparant leur repas (Savages of the Cape of Van Diemen preparing their meals)* (Copia 1817, 5). Image courtesy of Monash Rare Books Collection, Monash University Library

Hamelin (commander of Le Naturaliste with Baudin) saw people eating birds, broiled seaweed and ferns, and kangaroo meat. The debate about whether Tasmanian inhabitants ate fish or not has received considerable attention because, as Taylor notes, some historical evidence and stories shared by the descendants of these inhabitants suggests that fish was eaten (Fig. 7.1).[28]

French records regarding the exploration of the Western Australian coast shared similarities with what they observed and experienced around Tasmania. In both 1801, Baudin,[29] and 1803, Péron[30] on Noongar country at King George Sound noted the construction of stone dams across the river as a method of catching fish; in 1826, D'Urville's people noted the same method; the general tone of French records about what inhabitants ate was one of sympathy. Arago, for example, lamented that: 'These poor people live wholly on fish, shell fish, and a kind of pulse resembling our French beans'.[31]

Nicolas Baudin[32] and notable members of his expedition party left records of what the French sea explorers ate on their journey, both what they carried with them

[28]Taylor (2007, 2014).

[29]Baudin (1974b).

[30]Péron (1809).

[31]Arago (1820/2013, 179), Dyer (2007, 64–71).

[32]Baudin (1974b), Baudin et al. (1802/2001), Riedlé (1801), Ransonnet and Bevan (1803).

(as discussed above) and what they found locally, and some of their food procurement practices. Baudin's first record of seeking food was on 4 June 1801 off the coast of Bunbury, Western Australia on Wardandi country around what is now known as Géographe Bay. Baudin's people tried to catch some quail but 'were not clever enough to kill a single one'.[33] They were open to trying local sources of vegetables and fruit, given the small quantity of these foods they carried on-board.[34] Like the inhabitants, French sea explorers relied on food they could catch both at sea and on the coasts, even though each group employed different methods to do so.[35] They recorded success in fishing and gathering shellfish during their sojourn on D'Entrecasteaux (Bruny) Island in 1802.[36] They were also eating stingrays.[37] Arriving in Shark Bay on Malgana country,[38] Baudin's people assumed the reliability of their method of catching fish by using a net; this method of procurement sometimes left them under-provisioned, relying on their sea biscuits.[39] Others had more success using fishing lines and Baudin's record gave insight into how they were making sense of the local foods they found[40]:

> *28 June 1801: Upon returning to the beach, we saw with pleasure that the boatman had caught roughly a hundred fish…very like sardines. We even called them that. The largest closely resembled the European whiting in shape and flavour…as there were not many fish, I contented myself with oysters and crabs, of which there was a plentiful supply.*
> *When I arrived back on board, I was informed that during the day more than six hundred pound of good fish had been caught on the line, without counting two or three dog-fish which everyone found very good to eat.*

Even so, it is also evident that the use of draw-nets and fishing lines, rather than spears, was enabling the French to take large numbers of fish out of the local fish stock. There are no records from inhabitants of their reaction to such quantities of fish and shellfish being taken and neither to the numbers of kangaroo being killed by the French. What is known is that the French took what they could at every available opportunity, as these examples attest over a two-day period[41]:

> *6 July 1801: The pleasure seekers set off kangaroo hunting and killed about twenty…we put a drag new out several times in the afternoon but with no luck…we collected plenty of fairly delectable crabs, de Burgos' of various kinds…7 July 1801: During the day, our huntsmen waged a deadly war on the kangaroos and killed nearly thirty of them.*

[33]Baudin (1974b, 174).
[34]Baudin (1974b, 175).
[35]Baudin (1974b, 323).
[36]Baudin (1974b, 303).
[37]Baudin (1974b, 311).
[38]See also: http://sharkbay.org/default.aspx?WebPageID=141.
[39]Baudin (1974b, 207).
[40]Baudin (1974b, 208).
[41]Baudin (1974b, 214–215).

In 1803, on Kangaroo Island, over a similarly short period of time, they also procured large quantities of food[42]:

> *10 January 1803: In the course of the day we caught a fairly large amount of medium sized mackerel. The little dinghy, which had been sent to fish off a point to the East of our anchorage, was not so lucky as we were. It only bought back about fifty fish, all of the same species and known as parrot-fish. The kangaroo hunters did not fare badly and returned with five of the large variety, the total weight of which was possibly between 250 and 300 lb.13 January 1803: The petty-officer's boat returned laden with oysters, which were distributed among the whole crew. It likewise brought back a fairly large number of pelican's eggs and thirty or so of the birds themselves, taken from their nests.*

Depletion of food stocks was not so much of an issue here because Kangaroo Island was, at this time, inhabited only by European sealers and Tasmanian Indigenous Australian women.[43, 44] Of hunting kangaroo, Péron noted the difficulty at first of catching them, but eventually they develop a method[45]:

> *...our sportsmen collected themselves together, and while some beat the bush with long sticks, others were on the watch at the entrance of each little path, and the animals (kangaroo) flying through the usual places of retreat, thus became victims of the enemies inevitable.*

Like the British, they had learnt also to hunt for kangaroo with dogs[46]:

> *January 1803: ...the Only Luck We Had Was One Live Kangaroo that Our Dog Caught...*

In the most unlikely of environments passing a part of the coast that many sea navigators had described as barren and dry, the Great Australian Bight, they managed to find a fruiting tree[47]:

> *10 February 1803: A branch of some shrub was brought back, the fruit of which had an agreeable flavour. The boat's crew had regaled themselves upon it....some fish of the horse-mackerel variety were caught there and the sailors feasted off them.*

From analysis of such examples found in French expedition records, it can be argued that the French came well prepared to supplement their provisions with edible, endogenous flora and fauna. They were confident in their methods of procuring fish and other foods of the sea. The overall tone of the records suggests that they did not find local edible foods to be shocking or detestable. There is some evidence to suggest that kangaroo was considered a delicacy by French explorers and in France, with one source noting the pressures on kangaroo stocks because of their popularity as a source of meat[48]:

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[42]Baudin (1974b, 466–467).
[43]Russell (2012).
[44]Péron (1809, 194–195).
[45]Péron (1809, 92–93).
[46]Baudin (1974b, 463–469).
[47]Baudin (1974b, 478).
[48]Vavasseur (1861, 42).

> *Il résulte naturellement des avantages qu'on retire de ces animaux qu'on leur fait une chasse tellement acharnée que leur nombre est aujourd'hui considérablement diminué sur le littoral et partout où les établissements européens se sont étendus; le kangurou à moustaches est maintenant rare sur la côte de la Nouvelle-Galles du Sud; celui de Bennett est plus abondant dans la Tasmanie; mais le nombre en décroît journellement.*
> *[Trans: Naturally, as harvesting these animals is so profitable, they are mercilessly hunted and their numbers have declined tremendously everywhere the Europeans have settled. The Eastern Grey Kangaroo is becoming rare along the New South-Wales coast and the numbers of Bennett's Wallabies continue to decrease day after day in Tasmania.]*

Over the course of their seafaring the coasts of this great southern land, they learnt to use their dogs to hunt for kangaroo. Like the British, they took what they could each time they made land and found edible food. Their minimalist on board provisions, and the uncertainty of local, edible food caused this logic of taking whatever was edible to store for future lean times. Similar to early British explorers who used descriptors of their food procurement activities as 'sport' for 'game, the French expanded the activities of their 'sportsmen' to descriptions in terms of 'hunting' and 'war', alluding to a slightly different understanding of procuring larger food resources that were considered to be 'wild'.

Both Smith[49] and Clarke[50] note the important perspective brought by a French worldview that while still judgmental of inhabitants, differentiated levels of civilization according to the approach to food taken by them. Péron opined that it was less the racial characteristics of the Aborigines that was determining their level of 'civilization' but rather their lack of food, its poor quality, and the excessive labor they used to source it.[51] As discussed in Chap. 5, this was, in 1802, in sharp contrast to the hardening negative racial attitudes of the British colonial administrators and convicts in the Sydney area and new settlements. The next section discusses French food related practices that are echoed in contemporary Australian debates about endogenous food and food sustainability practices.

Some French Food Practices Examined

There is little evidence that the French sea explorers gave thought to the fact that the kangaroos, eggs, or foods from the sea they were taking in large numbers were food stocks also being managed and eaten by the inhabitants. Considering the cultural and management practices about edible foods of Wardandi[52] (Géographe Bay), Malgana[53] (Shark Bay), and Nuenonne, Mellukerdee, and Lyluequonny[54]

[49]Smith (1990, 47–59).
[50]Clark (1978, 168–169).
[51]Péron (1807).
[52]See also, http://swccnrm.org.au/work/community-engagement/cultural-mapping/.
[53]See also, http://www.sharkbay.org/default.aspx?WebPageID=141#contact.
[54]Mulvaney (2007).

(southeastern Van Dieman's Land), inhabitants would have been wary and disturbed by the volumes of food being taken.

Baudin provided a glimpse of his attempt to acknowledge in some way that they were involved in some sort of exchange with inhabitants. As well as records of leaving trinkets, beads, cloth, bottles, and buttons, food was also recognized as an exchange item. Baudin made explicit his recommendation to his officers[55]:

> *15 January 1802: I even recommended each of these officers to give the natives a little of our catch if it were a good one.*

The French tried to engage with inhabitants as discussed above but people were reluctant to eat food offered by them. On meeting a group of Nuenonne[56] while anchored in D'Entrecasteaux Channel, Baudin recorded that[57]:

> *14 January 1802: Some of our number were eating biscuit and gave them all a piece, but they did not take much interest in it, nor in bread either.*
> *15 January 1802: It was noticed for the second time that the natives would neither eat nor drink anything that our men took ashore with them.*

Evidence suggests that the French strove, where possible, to share what they had with inhabitants they met but it seems that this food was rejected. An earlier French expedition led by D'Entrecasteaux had also attempted to leave a gift of a food garden for Lyluequonny. While the English planted with a view to meeting the food needs of penal colonies and their explorers, evidence suggests that the French had an expanded and slightly different raison d'être. There are traces of record on all French expeditions of planting European cultivars and, in one case, a now famous garden on the lands of Lyluequonny. In May 1792, while the D'Entrecasteaux expedition was anchored in the area of Recherché Bay on another part of Lyluequonny estates, Labillardière recorded an attempt by the French to establish a garden plot[58]:

> *We had a great variety of different kinds of European grain on board, which might be advantageously propagated at this extremity of New Holland…our gardener was directed to prepare a spot of ground so as to render it fit for receiving this deposit. He dug a small garden for this purpose on the east coast of the harbour, E.N.E. of our place of anchorage.*

Before departure, Labillardière visited the plot with the expedition gardener Félix Delahaye,[59] observing that the attempt was probably doomed to failure, noting that 'It was a plot of ground twenty-seven feet by twenty-one, divided into four beds. The soil was rather too full of clay to ensure the success of the feed'.[60]

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[55]Baudin (1974b, 304).

[56]Possibly Nuenonne for what is now called Bruny Island. Baudin identifies the island as D'Entrecasteaux Island after his compatriot who had explored and named these places earlier.

[57]Baudin (1974b, 302–305).

[58]De Labillardière (1800, 112).

[59]Félix's surname is variously spelt in the records as de Lahaie, Delahaie, de Lahaye, de La Haye, and Lahaie.

[60]De Labillardière (1800, 118).

We are indebted to Lyluequonny and contemporary events that that this garden is still known to exist. Attempts to undertake extensive logging in the area of Recherché Bay were stopped because people remembered stories of a 'French Garden'. The stories of Lyluequonny, the work of historians Edward and Maryse Duyker,[61] John Mulvaney,[62] of politician Bob Brown, and journalists such as Paul Healy have enabled this story to stay alive well beyond the stone boundaries and plants that were left.[63] D'Entrecasteaux wanted the garden to be accepted by Lyluequonny as a gift from the French people.[64] He hoped that it would provide an example for 'les naturels', to demonstrate to them the usefulness of European plants and perhaps foster in them a motivation to sustain the plots. Delahaye's journal reported that he planted celery, chervil, chicory, cabbages, grey romaine lettuce, different kinds of turnip, white onion, radishes, sorrel, peas, black salsify and potatoes; he also had large quantities sewn in the woods, thrown at random where they might grow.[65] The journals of Delahaye and Labillardière also recorded that they returned on 21 January 1793 but that the garden had not been productive, the seed having been planted in dry and sandy soil.[66] This time Delahaye tried explaining to Lyluequonny that the tubers, when cooked in fire embers, made fine eating. Calling in on the Adventure Bay side of Bruny Island, Delahaye also examined and tended the two pomegranate, one quince, and three fig trees planted by Bligh's expedition in 1792.

When conducting the research for this book, I was able to speak with descendants of Lyluequonny and they tell a more complicated story that involved exchanges of food knowledge, something not noted in the flurry to rediscover the 'French Garden'. The descendants spoke about how their ancestors had shown the newcomers how to source edible greens and other flora and fauna to help them not to be sick and that one group had built a number of gardens surrounded by rocks but that everything had died. D'Entrecasteaux noted that inhabitants were aware of and interested in the French plants and this was verified in conversations with people. Most upsetting to these descendants of Lyluequonny who met the French explorers, great effort had gone into successfully preserving the famed 'French Garden' garden from the loggers but the claims of Lyluequonny to their traditional estates have never been recognized or compensated even though it had been the permission

[61]de Bruni D'Entrecasteaux (2006), Duyker (2003, 2004, 2005).

[62]Mulvaney (2007), Mulvaney and Tyndale-Biscoe (2007).

[63]Cited in *The Sunday Tasmanian*, March 2nd 2003, p. 24; See http://www.justpacific.com/tasmania/huon/gardens.html.

[64]Duyker (2004, 8).

[65]Duyker (2004, 9) Mulvaney acknowledges the work of Maryse Duyker for this recent translation of what Mulvaney describes as: "…Delahaye's difficult manuscript in archaic regional dialect and almost indecipherable writing. It adds considerably to our knowledge of the number and variety of species of seeds planted and to other plantings".

[66]Mulvaney (2007, Chapter 4).

of their descendants that had allowed the French to plant their garden in the first place.[67]

Baudin also provided examples of the common French practice to plant seeds and release pairs of animals in destinations they visited to provide sustenance for other sea expedition parties. His records suggested that, like the above examples, he is concerned also to bring European cultivars to 'la Nouvelle-Hollande' to improve edible food choices for inhabitants.[68] While sojourning on Kangaroo Island and on Minang country at King George Sound, he left animals and plants seeds.[69, 70] On that same day, he recorded that he caught a number of live kangaroos to take back with him to France. A few weeks later, as the Baudin expedition headed west past Wirangu country, near current day Ceduna, South Australia, along the Great Australian Bight, he mentioned that[71]:

> *9 February 1803: During the morning, I sent the little boat ashore to obtain grass for our kangaroos, which are all in very good condition, with a healthy appetite; but what was bought back did not suit them at all and none of them would touch it. As they are beginning to get used to maize, I am hoping that I shall soon be able to feed them entirely on that.*

It was not only live kangaroos that were captured to take to France. As a scientific expedition, Baudin and Péron were under instruction to bring back specimens of unfamiliar flora and fauna. Péron's journals are replete with scientific information and details about specimen he collected and catalogued. Baudin also made notes of such scientific activities. For example, both at Shark Bay and on D'Entrecasteaux Island, the gardener Félix Delahaye collected some unfamiliar plants.[72, 73] Accompanying Baudin and Péron, artist Lesueur's beautiful drawings showed an idyllic paradise, such as the one below that presents the best-known flora and fauna of la Nouvelle-Hollande in France (Fig. 7.2).

Following his return to France in 1800, Delahaye was appointed Head Gardener for Empress Josephine Bonaparte's palace estate of Malmaison, just outside Paris. There he planted a Tasmanian garden for the Empress. The kangaroos also arrived back in Paris. Vavasseur's *Guide* records that[74]:

> *La chair du kangurou est excellente et prisée à l'égal de celle des meilleurs gibiers. Sa peau fournit une fourrure très-recherchée en Australie et dont on exporte des quantités assez considérables en Angleterre; celle du kangurou laineux est la plus estimée.*

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[67]Now held permanently by the Tasmanian Land Conservancy; see http://www.tasland.org.au/permanent/recherchebay.

[68]Baudin (1974b, 175).

[69]Baudin (1974b, 468).

[70]Baudin (1974b, 487).

[71]Baudin (1974b, 477).

[72]Baudin (1974b, 207).

[73]Baudin (1974b, 320).

[74]Vavasseur (1861, 42).

Fig. 7.2 *La Nouvelle-Hollande mieux connue, vegetaux utiles naturalises en France* (Lambert et al., 1824). Image courtesy of the Bibliothèque Nationale de France and National Library of Australia

[Trans: Kangaroo meat is excellent and is on par with the best games. Its skin provides a fur valued in Australia and which is exported to England in quiet large amounts. The fur of the Tasmanian Pademelon in particular is the most prized.]

Conclusion

The examination of food and its role in inhabitants' relations with newcomers has shown that there were differences in approach taken by the French to their British counterparts. Indigenous Australian people quip to this day that if the French had

colonized Australia, at least the food would have been better. This speaks to the memories handed down by descendants of ancestors through generations about French interest in endogenous food and their willingness to eat it. These stories are told in contradistinction to the stories about the British who were mostly repulsed by endogenous food except when starving. Neither British or French explorers seemed interested or able to learn food procurement methods from local people, preferring rather to develop their own methods for catching and preparing their food. The French records show that they were willing to share both their own provisions and their catches of local produce, most of which inhabitants refused to eat.

The French records about the foods they ate demonstrate the general inability of the explorers and colonizers to understand that they were procuring edible endogenous flora and fauna that were mostly the food resources that had been managed and cultivated by inhabitants. Like their British counterparts, French explorer parties took what they could whenever they could, using methods of procurement that ensured they carried sufficient food for their seafaring. Harvesting the managed food resources of inhabitants, using draw nets, dogs, and guns, the newcomers could report that they had eaten well. Stories told to me by Lyluequonny still refer to the amounts of food taken, particularly edible greens, and animals for their meat, and how this seriously depleted stocks of food that would have otherwise been available for their ancestors to eat.

Even so, the French explorers attempted to share their food knowledge with inhabitants, left an example of a French potager garden, planted seeds of exogenous cultivars, released couples of birds and animals, and took back to France live examples of the flora and fauna of 'La Nouvelle-Hollande' and 'Le Terre de Van Diemen'. We know from historical records that there was interest in the edibility of these flora and fauna, especially 'Le Kangurou', and interest that has remained into the contemporary era and one that will be taken up in the final chapter. The next chapter turns to an examination of the overland explorations that the British were undertaking, radiating out from the early penal colonies and settlements towards the heart of the country, the food knowledge they recorded of inhabitants they met and their approaches to food as they faced new challenges away from the relative comforts of foods from the sea.

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Chapter 8
Explorers and Food Beyond Settlements

Abstract Chapter Eight, the final chapter of section two 'Food across the Colonial Frontier', traces the development of the food provisioning practices of overland explorers as they moved inland. This chapter includes localized studies of the experiences of people trying to establish food and household security as explorers and early settlers traversed their estates bringing livestock and new ideas. As the frontier expanded, so too did the frontiers of taste for inhabitants and newcomers alike. The French continued their sea explorations but the British were pushing inland from their settlements dotted along coastal areas. French and British exploration parties crossed paths many times in the later eighteenth and early nineteenth centuries. Both the quality of food and quantity of food provisions that could be carried on explorations became a formative aspect of the success or failure of an expedition. Whether a party made it to a prearranged destination, whether there was sufficient food to enable the expedition to return safely to a settlement, or even the simple fact of the daily health and optimism of the members of a party was significantly shaped by food. This chapter examines the records about what explorers were eating as they moved out from settlements overland and along parts of the coast that were unfamiliar to them, thinking about what they carried, and what they were able to learn of edible endogenous foods. Of note across the historical record gathered for this chapter, there was very little information recorded by these expeditions about inhabitants or what they were eating, suggesting that by now, inhabitants and newcomers were moving around one another in separate and sometimes intersecting lives. It is also becoming less common for an exploration party to include 'native guides' to help source food. Many journal records indicate that, by now, explorers were becoming aware that inhabitants from one place were not knowledgeable about food and water resources, or the terrain, once they left their own estates. Some, such as Eyre, still included inhabitants in his explorer party but this became less common towards the latter part of the 1800s. It is also of note that by the mid to late 1800s, expedition parties of newcomers carried what they could and ate what endogenous foods had been found to be acceptable during the early explorer and settlement days. There was little evidence of experimentation or curiosity during this period. It is also important to consider that inhabitants were moving across their estates according to the seasonal availability of different food resources and, given the vast distances involved, it is possible that only a few clan or family groups happened to be in

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the same vicinity as the explorers as they passed across country. Certainly, by the time small settlements began to be built, and lands began to be cleared for agriculture and grazing, there was greater likelihood that the food and water resources of inhabitants would become depleted or destroyed. In the case of explorers, they were so few in number, generally disliked endogenous food except for particular items, and passed across country with much of their food carried with them that their impact on available food resources could be considered to be minimal.

Keywords Frontier expansion · Van Dieman's land · Terra Australia · Overland explorers · Overland telegraph

The French continued their sea explorations but the British were pushing inland from their settlements dotted along coastal areas. French and British exploration parties crossed paths many times in the later eighteenth and early nineteenth centuries. For example, Giles and Bosanquet retold a story about Eyre's travels between Adelaide and King George's Sound, as he travelled along Wudjari coastal estates (near current day Esperance, Western Australia):[1]

> *Eyre and this boy (Wylie) now pushed on in a starving condition, living upon dead fish or anything they could find for several weeks, and never could have reached the Sound had they not, by almost a miracle, fallen in with a French whaling schooner when nearly 300 miles had yet to be traversed. The captain, who was an Englishman named Rossiter, treated them most handsomely; he took them on board for a month while their horses recruited on shore—for this was a watering place of Flinders—he then completely refitted them with every necessary before he would allow them to depart.*

Both the quality of food and quantity of food provisions that could be carried on explorations became a formative aspect of the success or failure of an expedition. Whether a party made it to a prearranged destination, whether there was sufficient food to enable the expedition to return safely to a settlement, or even the simple fact of the daily health and optimism of the members of a party was significantly shaped by food. This chapter examines the records about what explorers were eating as they moved out from settlements overland and along parts of the coast that were unfamiliar to them, thinking about what they carried, and what they were able to learn of edible endogenous foods. Of note across the historical record gathered for this chapter, there was very little information recorded by these expeditions about inhabitants or what they were eating, suggesting that by now, inhabitants and newcomers were moving around one another in separate and sometimes intersecting lives. It is also becoming less common for an exploration party to include 'native guides' to help source food. Many journal records indicate that, by now, explorers were becoming aware that inhabitants from one place were not knowledgeable about food and water resources, or the terrain, once they left their own

[1]Giles and Bosanquet (1986, Introduction).

estates. Some, such as Eyre, still included inhabitants in his explorer party but this became less common towards the latter part of the 1800s.

It is also of note that by the mid to late 1800s, expedition parties of newcomers carried what they could and ate what endogenous foods had been found to be acceptable during the early explorer and settlement days. There was little evidence of experimentation or curiosity during this period. It is also important to consider that inhabitants were moving across their estates according to the seasonal availability of different food resources and, given the vast distances involved, it is possible that only a few clan or family groups happened to be in the same vicinity as the explorers as they passed across country. Certainly, by the time small settlements began to be built, and lands began to be cleared for agriculture and grazing, there was greater likelihood that the food and water resources of inhabitants would become depleted or destroyed. In the case of explorers, they were so few in number, generally disliked endogenous food except for particular items, and passed across country with much of their food carried with them that their impact on available food resources could be considered to be minimal (Fig. 8.1).

Overland in van Dieman's Land

Walker's collection of papers provided record of the establishment of food resources in the early Risdon settlement in 1803 on the estates of Moomairremener.[2] Bowen was directed to 'begin immediately to clear ground and sow wheat and other crops… and he was given six months provisions'.[3] The animal stocks were recorded as:[4]

> *...the Government owned 9 cattle and 25 sheep while the officers and Birt and Clarke, the free settlers, were possessors of 7 sheep, 8 goats, and 38 swine.*

The early attempt to settle was precarious and the settlement was moved under new command of Collins. One of his first acts was to announce the weekly rations for each person as being '…7 lbs beef or 4 lbs pork, 7 lbs flour, and 6ozs sugar'.[5] Like both the Sydney and Norfolk Island penal colonies, this colony struggled at first to feed itself. The provisions were of poor standard and the corn seed sent from England failed to vegetate.[6] The intervening 30 years witnessed the settlement expand to Mouheneenner country, the present day site of Hobart, managing to establish itself with fairly reliable food resources. Clements suggests, for example,

[2]For more detailed information on the languages spoken by inhabitants of Tasmania, see http://en.wikipedia.org/wiki/Aboriginal_Tasmanians; see also Walker (1989).

[3]Walker (1989, 23–24).

[4]Walker (1989, 41).

[5]Walker (1989, 64–65).

[6]Walker (1989, 68).

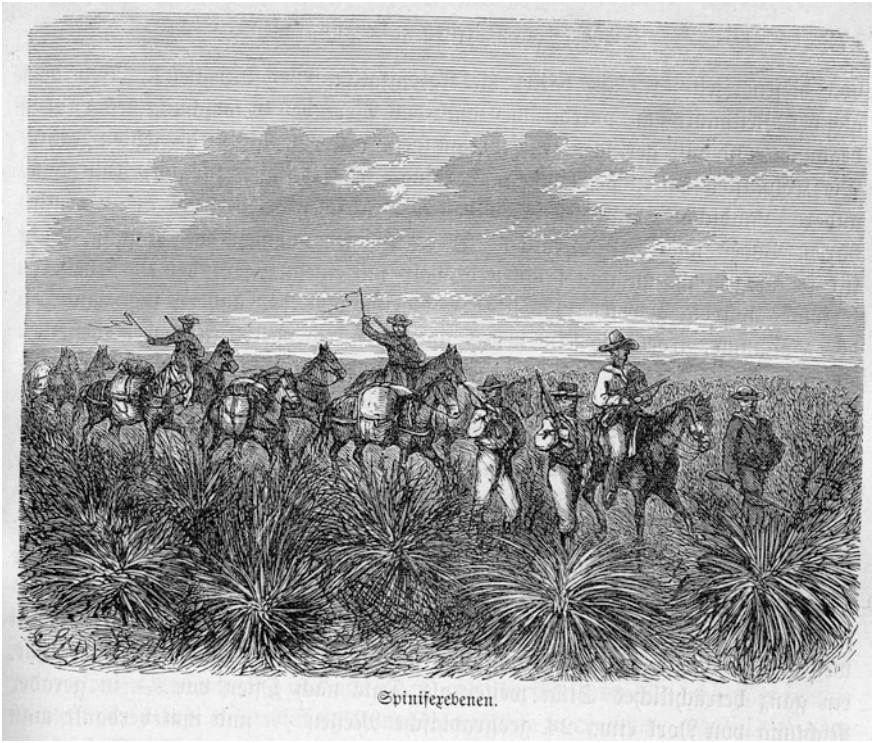

Fig. 8.1 *Spinifexebenen (Surrounded by spinifex)* (Christmann and Oberländer 1880, 171). Image courtesy of Monash Rare Books Collection, Monash University Library

that, '… by 1813, there were five hundred farmers in Tasmania, cultivating about eight hundred hectares, producing a wide variety of crops'.[7] He cites Bridges who remarked that:

> *...with adequate supply of mutton, wheat, potatoes, and a full range of fruits and vegetables, and milk, butter and cheese from their own farms, and with tea and sugar from the stores in Hobart, farmers enjoyed an adequate diet from 1813 onwards.*[8]

With stability of the settlement secured for the newcomers, pressure mounted on the resources of the small settlement and John Darke was one of a number of explorers whose records enable insight into the provisioning of such expeditions.[9] In 1833, he undertook his first surveying expedition to Wylde's Craig (also known as the Peak of Teneriffe) for two weeks from 23 March–8 April 1833. Even for such a short time, his journals recorded the difficulty these early parties had in sourcing

[7]Clements (1986, 33).

[8]Clements (1986, 33).

[9]Darke (1833/1985).

and then carrying their food and how they had learnt quickly to rely on guns and dogs to help them to catch edible endogenous foods, using different methods of food procurement to those employed by Mouheneenner and their neighbors.[10] On his first exploration, Darke recorded that:[11]

> *Saturday 23 March 1833: We were enabled to set off with about 50 lbs of bread and flour, ten pounds of sugar and I½ lbs of tea; 30 cakes of chocolate and a number of boiled fowl for present use. I had bought an excellent dog for £2 and had brought another with me.*

In the early days of his expedition, he used guns to procure both kangaroos and ducks.[12] The party became caught in bad weather and were not able to catch any fresh meat, so they lived off eating small kangaroo rats.[13] Severely short of food. Darke recorded that they were eventually reduced to eating spoonfuls of flour made into a paste with water.[14] Having exhausted their provisions, they managed to kill a small kangaroo and Darke recorded that they were so hungry that, 'We ate the forequarters directly and passed on a little refreshed'.[15] Still hungry, they even took some provisions that had been stored for 'His Excellency' in a hut on their way back to Township.[16]

Darke made more careful preparations for provisioning his second, two-week expedition undertaken from 19 May–2 June 1833 carrying:[17]

> *Sunday 19 May 1833: ...sixty ponds of bread, a ham of 3 lbs, 20 lbs oatmeal, 20 lbs sugar, 3 lbs tea, four bottles of rum, with pepper, salt, onion,* etc.

Even so, he was always searching for edible endogenous sources of fresh food.[18] His careful management of both carried and fresh provisions meant that he was able to travel further than had been done by other newcomers and bring his expedition party home safely. Such experiences taught subsequent explorers about what they would need as they pushed further into territory that was unknown to them. George Frankland also left records of his overland expedition in Tasmania from 7 February–21 March 1835.[19] His method of establishing base camps and provisioning small parties to carry lighter food provisions enabled him to push further into the high mountainous country of Larmairremener, the region around Lake St.

[10]Gowlland (1976, 14).
[11]Gowlland (1976, 16).
[12]Gowlland (1976, 17).
[13]Gowlland (1976, 25).
[14]Gowlland (1976, 25).
[15]Gowlland (1976, 27).
[16]Gowlland (1976, 27–28).
[17]Gowlland (1976, 29).
[18]Darke (1833/1985).
[19]Frankland (1835/1983).

Clair at the head of the Derwent River.[20,21] As his party set out, his plan was clear. He recorded that:[22]

> *28 February 1835: …each man being laden to the greatest extent he is capable of bearing – in order that our long journey through the unknown tracts of the Huon we might not be baffled by the failure of our supplies – and the knapsacks averaging Eighty pounds in weight – we started for the mountain…*

Interestingly, as he crossed Leenowwenne, Pangerninghe, Braylwunyer, Larmairremener, and Luggermairrernerpairrer country (now known as the clans of the Big River[23] nation), he came across wild cattle that had escaped from settlements. He recommended that these stock should be brought under management by the colony.[24] Frankland's letter to RW Hay, Colonial Office in London demonstrated that there was an emerging narrative of these early explorers that revealed something of the way that they were making sense of local edible foods, even as they expressed its comparison with English foods. He wrote that:[25]

> *It was laborious work struggling through such woods with a heavy knapsack on one's back! But it served to make one relish the grilled 'Wombat' and 'damper' which in other circumstances would not have been so palatable!*

From Sea and Overland in the Southeast of Terra Australis

On the southeastern part of mainland, to the north of Tasmania, the expansion of the frontier inland from Sydney (Chap. 6) was supported by information supplied by earlier sea explorers (Chap. 4). As was the practice in other areas, explorers tried to establish fresh sources of edible foods for future explorers or settlers to use. Sea exploration of the southern coast by the British, particularly their charting of Port Philip Bay and Western Port, included such activities. As discussed previously, in 1801, Lieutenant Grant cleared an area on Phillip Island (Western Port) on Bunerong country and planted wheat, Indian corn, peas, rice, coffee, and potatoes.[26] In 1803, the first British settlement in Victoria was established in Sorrento, again on Bunerong country. It was abandoned four months later and the Bunerong may have hoped that these unwelcome strangers were finally leaving their estates. The British government was keen to consolidate its colonies around Sydney, and in Tasmania and Norfolk Island. Expansion onto the southern coast was discouraged. The

[20]Frankland (1835/1983, 29).
[21]Frankland (1835/1983, 30).
[22]Frankland (1835/1983, 32).
[23]See, for example, http://en.wikipedia.org/wiki/Aboriginal_Tasmanians.
[24]Frankland (1835/1983, 44).
[25]Frankland (1830/1997, 29).
[26]Gippsland Times (1941, 4).

colonial expansion from Sydney eventually found its way overland with Hume and Hovell in 1824 when they arrived on the Wathaurung coast. Sturt (1828–1831) extended knowledge of the interior between the Sydney colony and the southern coast, travelling predominantly along rivers. His journals are replete with information about Indigenous Australian families and larger clan groups, their skills in accessing food and their knowledge of the country. Some people were friendly and some hostile as he passed through their estates. It is likely that inhabitants along Sturt's journey had heard from Sydney, from the southern coast, and beyond, of these strangers and the contests over food and water that had occurred. Figure 8.2 Captures a moment of exchange between people and the newcomers in an expedition undertaken in Victoria, similar to that which was experienced by people on their estates as expeditions criss-crossed their lands.

Sturt was followed by Mitchell along the river systems of southeastern Australia. In the early years of the colonization process, analysis suggests that the emerging colonial administration focused on overcoming the food security crises that dogged the penal colonies and settlements, building infrastructure to enable food to be transported more easily back to the main towns that were beginning to establish themselves. Exploration parties advanced the frontier to the limit that these parties were able to feed and provision themselves. The early sea explorations along the southeastern coasts of Australia were met by overland explorers who were also opening up stock and transportation routes between previously isolated colonial settlements.

Discovering Felix Australis

The expeditions of Sturt and Mitchell opened the interior of Victoria to rapid settlement, heralding an era that established household and community food security for settlers and caused an ongoing wave of emergency food security crises for inhabitants across lands and waterways that had sustained them for millennia. 'Australia Felix' was the term penned by Major Thomas Mitchell after his third expedition to describe the lush pastureland of the lands of Wiradjuri, Yorta Yorta, Gunditjmara, and others as his expeditions opened up the new frontier for agricultural development.[27] Through the explorer diaries of Mitchell and other contemporaries, issues about food and food security are apparent in the analysis of available sociohistorical data for this area. The overland explorations of Hume and Hovell, Sturt, and the government surveyor, Mitchell, proved there were sufficient inland river systems to support agricultural and grazing industries and news was sent back to England of the potential of 'Australia Felix', viable agricultural land, the long awaited spoils after the near starvation and hardship of establishing this new colony.

[27]Mitchell (1839b, 333).

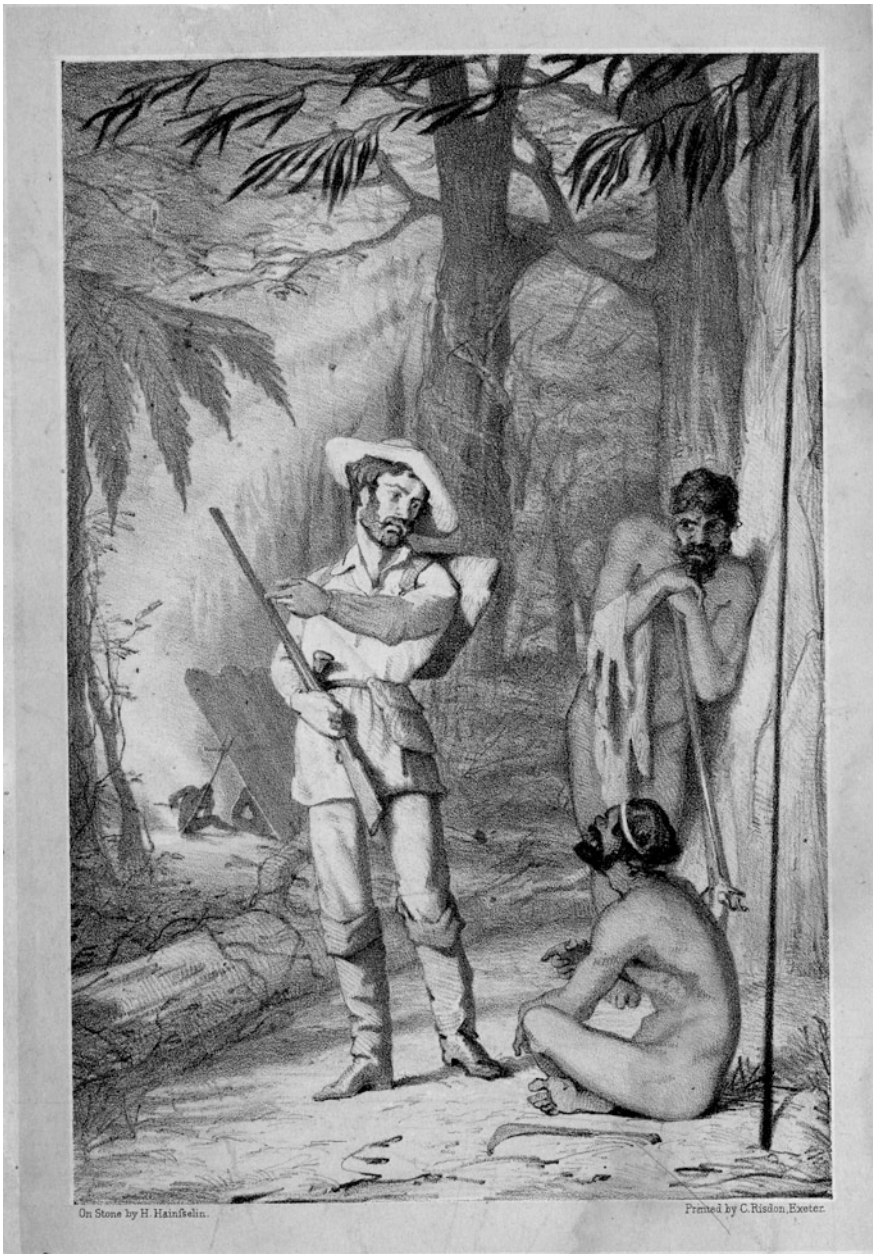

Fig. 8.2 *Frontispiece* (Haydon 1846). Image courtesy of Monash Rare Books Collection, Monash University Library

After Mitchell, settlement was rapid and every effort was made to clear land, plant crops, and raise sheep and cattle to ensure that the new settlements would survive across lands stretching from Sydney in the east, following the inland river systems to the southern coasts around the settlement at Port Philip and along the southern coastal area. The journals of Mitchell provided a window into the food he and his explorer party traveled with, his observations of the food practices of early settlers, and the fresh endogenous foods they procured during their explorations. He travelled well-prepared and had learnt to manage his carried food provisions carefully. On his first expedition, his preparations already indicated that this new breed of explorers were learning the limitations of their food needs. He provided the following by way of explanation of his thinking. Mitchell left records that demonstrated that he was experimenting with the food provisioning of his expedition to optimize adaptability to the terrain, refining his methods between 1831 and 1835.[28,29] He also noted potential settlement locations on his journeys back and forth, offering important information to the colonial administrators who were responsible for expanding colonies saying, for example, that the lands of Gundungurra:[30]

> *[Goulburn Plains] consist of open downs affording excellent pasturage for sheep and extending twenty miles southward from the township, their breadth being about ten.*

Over the course of his three expeditions, he surmised of 'Australia Felix', the sweep of Gunditjmara, Djadjawurung, Taungurung, and Yorta Yorta estates across western and northern Victoria, that:[31]

> *An industrious and increasing people may always secure an abundant supply by adopting artificial means to preserve it and, in acting thus, they would only extend the natural plan according to their wants. The fine climate is worthy of a little extra toil, especially in those parts at a distance from the surplus waters of the large rivers, and in places considered favourable in other respects either for the rearing of cattle or for cultivation … Towards the south coast on the south and adjacent to the open downs between the Grampians and Port Phillip, there is a low tract consisting of very rich black soil, apparently the best imaginable for the cultivation of grain in such a climate.*

While in the Goulburn area on Gundungurra country, he noticed the improvements in household food security among the early setters, recording that:[32]

> *I reached at twilight the house of a worthy friend, Captain Rossi, who received me with great kindness and hospitality. The substantial improvements which he had effected on his farm since my last visit to that part of the colony evinced his skill and industry as a colonist; while an extensive garden and many tasteful arrangements for domestic comfort marked the residence of a gentleman.*

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[28]Mitchell (1839a, 18).

[29]Mitchell (1839b, 4).

[30]Mitchell (1839b, 318).

[31]Mitchell (1839b, 331–332).

[32]Mitchell (1839b, 318).

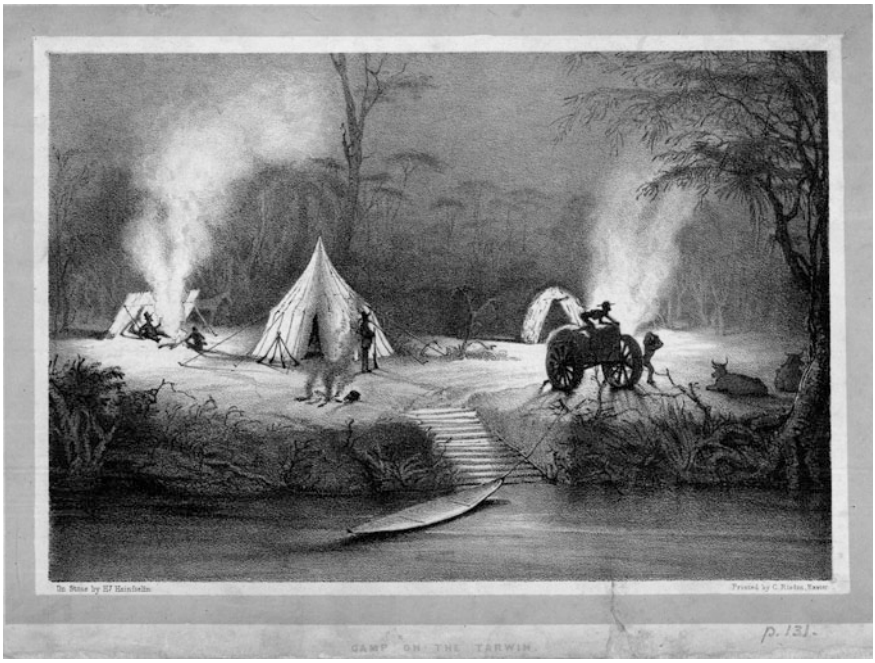

Fig. 8.3 *Camping on the Tarwin* (Haydon 1846, 152). Image courtesy of Monash Rare Books Collection, Monash University Library

His journals also recorded insight into the unsustainability of early animal grazing practices. For example, around the Wollondilly River on the country of Dharug and Gundungurra, he noted that already, '…the scantiness of grass, also observable, might be attributed to the great number of sheep and cattle fed there.'[33]

Mitchell was comfortable with supplementing his carried food provisions with fresh, endogenous foods but like others, he chose to develop methods of meat procurement that relied on guns and dogs, and sometimes with cooperation of inhabitants. As Fig. 8.3 shows, the explorer parties (such as this one on Gurnai/Kaurni country) set up their camps and fires as would have been done in England and employed similar methods of shelter and transportation. These people literally transformed the country as they travelled, building roads, using dogs and guns to bring down prey, and eating food that they had been able to manufacture in the newly established settlements appearing along their exploration routes.

[33]Mitchell (1839b, 240).

Explorations of the Western Parts of the Continent

Contemporaneously, exploration was also fanning out from the coastal settlements on the southwestern and western coasts of Australia. The settlement of the western parts of the landmass of Australia occurred more slowly, despite there having been many seafaring expeditions (as discussed in Chaps. 4 and 7) that explored the western coastline. In the early 1800 s, the British became concerned about the possibility of a French colony being established on the western side of Australia, given their use of King George's Sound as a reliable port on their scientific expeditions. In 1826, the British established a small penal settlement on Minang estates at King George's Sound. In 1829, the Swan River colony was established on Wajuk country. From 1829 to 1832, several expeditions were sent from NSW by ship to land at various places on the southwestern and western coasts and undertake overland explorations. Of similar optimism to that expressed by Mitchell, Bannister gave glowing recommendations about Wajuk estates along the Swan River for agriculture, encouraging newcomers from England to take up large land grants.[34] The words of an early poem also reflect the optimism of the time:[35]

By care and attention I'm sure 'twill he found,

Two crops in the year we may get off the ground;

Good wood and good water, good flesh and good fish,

Good soil and good clime, and what more could you wish.

Let every one earnestly strive, Sir,

Do his best, be alert and alive, Sir,

We'll soon see our Colony thrive, Sir,

So Western Australia for me.

A key factor of exploration, as noted in both Tasmania and across southeastern Australia, most of the early attempts to undertake explorations of the inland from western coastal settlements took what they anticipated would be sufficient supplies of food for their journeys. The navies stationed in these early settlements relied heavily on the provisions they carried with them on their vessels. Johnston writes that, 'out of three years and ten months the Sulphur was employed upon the Swan River service, her crew were only 256 days upon fresh diet'.[36] An unnamed author, known only by the initials T.W.H., gave an idea of the estimates that were used to

[34]Bannister (1833/2013), Chapter XIII.

[35]Anon (1833/2013, Appendix No. 8).

[36]Johnston (1833/2013, Appendix No. 4).

manage the types of food that would be needed for these journeys, recording that, '…from ten to fourteen days' provisions were deemed necessary for the expedition, which consisted of flour, biscuit, pork, rice, sugar, tea, spirits, &c. &c.'[37]

It is remarkable how little attention was paid to the nutritional range of food sent on these explorations, an extremely limited collection of colonial provisions that replicated that of the earliest days. From the records left, it is apparent that most of these explorers lacked the skill, the need, the interest, or some combination of these in supplementing their provisions with fresh endogenous foods except in extreme circumstances. Apparently, the enjoyment of food or its freshness was not a high priority for most. For example, in March 1830, the Lieutenant-Governor undertook an exploration around Port Leschenault, along the Collie River and its surrounds, on Kaniyang and Wardandi country but recorded that the mussels they found were rejected by his party because they did not taste good and they still carried a better alternative in their provisions.[38] These overland explorer parties were also unable to catch kangaroos, even with their guns and dogs when the terrain did not suit such procurement methods. In 1829, Wilson, for example, undertook an exploration of Minang country, inland from King George's Sound.[39] He travelled with Mokare, a person from the King George's Sound area, and recorded that it was Mokare who had the skill to shoot, 'a kangaroo of a large size, all the party were in high glee preparing the feast'. Dale also made a number of overland excursions inland from King George's Sound across Minang country and his party had the skills to catch kangaroo, fish, and duck to supplement what they carried.[40]

Bannister and a number of others left Freemantle, on the western coast on Wajuk estates crossing Pinjarup, Wiilman, Kaniyang, and Minang estates with provision to take the team all the way south to Minang country at King George's Sound. Bannister's report indicated their reliance on carried food, when he reflected that, having come down to the coast to the west of King George's Sound that he had exhausted all food supplies, relying on fishing, and experiencing difficulties with catching and gathering endogenous food.[41] Dewar and Smith undertook a journey of some 200 miles overland from Augusta on the estates of Bibbulman and Wardandi, crossing Kaniyang and Pinjarup country on the way north to the Swan River on Wajuk country. They left the following record of what they carried:[42]

> *Our provisions were, for the whole party, 10 lbs. of bread, 4 lbs. of beef, one canteen of water (half a gallon), 4 lbs. of sugar, and ½ lb. of tea. We had guns and ammunition by us.*

Like Bannister's group, Dewar and Smith ran out of provisions quite some way from their destination and were forced to rely solely on what edible, endogenous

[37]T.W.H. (1833/2013, Appendix No. 1).
[38]Cross (1833, Chapter 10).
[39]Wilson (1833/2013, Chapter III).
[40]Dale (1832, Chapter VIII).
[41]Bannister (1833/2013, Chapter XIII).
[42]Dewar and Smith (1833/2013, Chapter XIV).

foods they could find, including Hottentot figs and a sturgeon. Collie reported from his month-long journeys around Minang country north from King George's Sound that edible, endogenous foods such as kangaroos, emus, ducks, cockatoos, and pigeons were abundantly available in late April.[43]

Exploration parties were also pushing inland from various coastal points both north and south of Swan River colony. Bussell explored inland from present day Busselton on the estates of Wardandi, along the River Vasse and noted his lack of success in catching game.[44] Unlike others, he recorded sourcing out fruits and greens, especially rock spinach.[45]On another journey, he found figs.[46] He also made notes of other potentially edible vegetables, indicating that he was given information by inhabitants about the edibility of flora and some of the dangers of eating particular sorts, such as a wild celery that would induce vomiting.[47] Interestingly, Dale was sent out from King George's Sound in 1832 in search of types of grain, Kuik and Quannet, which were thought to be eaten by Minang. He left a note that gives rare glimpse into how the newcomers found out about edible, endogenous foodstuffs. In this example, the inhabitants he asked did not themselves hold the information but told of the White Cockatoo tribe who held such knowledge:[48]

> *Several of the natives of King George's Sound tribe describe these grains ... The Kuik they say resembles our rice, and the Quannet grain is compared to a large pea for size. Their account is that the White Cockatoo Tribe, who inhabit the district, eat the Kuik raw, but beat the Quannet tied up in their skins, bake it, and cook it in the ashes, like a damper.*

While some were exploring the southwestern corner of the continent, others were retracing earlier sea explorations along the northwestern and northern coastlines and inland as provisions would allow. Grey became an unwilling overland explorer when he found his expedition party facing a walk from the northern coast of Western Australia back to Perth after losing his boats. They suffered severe privations.[49] His team fared no better after their provisions had run out. One of his seaman, Woods, reported that[50]:

> *They had succeeded, he said, in procuring upon the whole about a dozen birds, a crab, and eighteen fish… he thought he could have walked to it [to Perth] had he not been discovered, although he had nothing to eat but a few native figs; and that he thought the whole of the party were getting more accustomed to native food and were latterly better than they had been at first; he said he felt so himself.*

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[43]Collie (1833/2013).
[44]Bussell (1833/2013, Chapter XXI).
[45]Bussell (1833/2013, Chapter XXI).
[46]Bussell (1833/2013).
[47]Bussell (1833/2013).
[48]Dale (1832, Chapter XVIII).
[49]Grey (1841/1983, Vol. 2, 40).
[50]Grey (1841/1983, Vol. 2, 70).

Others were trying to find a way from the southwestern coastal settlements of Albany and Swan River east towards the middle of the continent. John Eyre[51] recorded the successful expedition he made with his friend, Wylie,[52] a man described as being from the King George's Sound tribe (possibly Minang) to cross from Adelaide to Albany. Like many other overland explorers, Eyre's biggest challenge was to find sufficient water and food to supplement his carried provisions. Wirangu showed Eyre and Wylie about a method of collecting fresh water at the base of sand dunes. Eyre recorded that:

> *11 November 1840: The water to which the native took us was procured by digging about four feet deep, in a swamp behind the coast hummocks, which were here high and bare, and composed of white sand. The water was abundant and good, and the grass tolerable, so that I determined to remain a day to rest and recruit the horses; it was so rarely that we had the opportunity of procuring both grass and water. The dogs killed a kangaroo, which enabled us to give our guide an abundant feast of food, to which he had been accustomed…*

This system of finding water enabled Eyre and Wylie to travel across an otherwise arid and demanding landscape. Eyre also developed an elaborate system for burying water in casks to ensure they would have enough. Wylie was frequently successful at using the gun to hunt for kangaroo and many other sorts of food and they used a spear and fishing hooks to source coastal foods. Eyre reflected that his way of regarding the landscape was different to the way that inhabitants regarded their estates:[53]

> *In other cases, the very regions, which, in the eyes of the European, are most barren and worthless, are to the native the most valuable and productive. Such are dense brushes, or sandy tracts of country, covered with shrubs, for here the wallabie, the opossum, the kangaroo rat, the bandicoot, the leipoa, snakes, lizards, iguanas, and many other animals, reptiles, birds,* etc., *abound; whilst the kangaroo, the emu, and the native dog, are found upon their borders, or in the vicinity of those small, grassy plains, which are occasionally met with amidst the closest brushes.*

Eyre was one of the explorers who was somewhat comfortable sourcing fresh, endogenous foods.[54] Even with careful planning and willingness to eat endogenous edible food, Eyre and Wylie and their exploration party ran out of provisions and were unable to source enough fresh food for the group. Being without meat, they survive by eating a flour and water paste.[55]

In 1848, Augustus Charles Gregory led a settler expedition across Yinggarda country along the Gascoyne River to seek out pastoral land and, again, in the 1850s was sent to explore the northern coast and open up that region as well.[56] The exploration party comprised a skilled group and the food was sufficient for a trip of

[51] Eyre (1845/2009, Chapter XIII onwards).
[52] Birman (1967).
[53] Eyre (1845/2009, 340–341).
[54] Eyre (1845/2009).
[55] Eyre (1845/2009).
[56] Gregory and Gregory (1884/2002).

eighteen months. They also travelled with 50 horses and 200 sheep.[57] Again, in 1858, Gregory was asked to lead a party to find out information about the lost expedition of Dr. Leichardt. On that journey, they took:[58]

> *1400 lb Flour, 500 lb Bacon; 400 lb Sugar; 70 lb Tea; 750 lb Meat Biscuit; 20 lb Sago; 6 lb Pepper; 50 lb Salt; 150 lb Dried Beef; 800 lb fresh meat; and another 1000 lb Fresh Meat.*

Departing in late March 1858, by June they were beginning to run out of carried provisions.[59] Like Eyre's journeys, the availability of, or lack of, water also continued to have significant influence on the capacity of these expeditions that travelled far from newcomer settlements into the drier parts of the continent. Even into the 1870s, the Forrests relied on following Wudjari to water sources, being unable to find water themselves.[60,61]

Journeys to the Centre

As expeditions began to be able to rely on small settlements to stage their journeys and replenish their carried food provisions, as well as having more reliable information about edible fresh flora and fauna, drinkable water sources, and better knowledge of the terrain, they finally came to the center of the continent, repeating a now familiar experience. By 1836, the settlement of South Australia had attracted pastoralists who were keen to establish sheep and cattle farms. John Eyre brought 1000 sheep and 600 cattle overland from New South Wales to Adelaide and he, like others, was keen to explore the country to the north towards the center of the continent. His journals of his first exploration from Adelaide towards the center in 1839 provided notes with similar observations to those made by explorers who spread west from the eastern coast or east from the southwestern coast. One defining feature of the journey towards the center encountered by all explorer parties was that water became a precious resource. Eyre noted the importance of pools of water early in his journal, observing that while crossing Banggarla country that both inhabitants and animals relied on such pools and that explorers would, by necessity, need to pay attention to where such pools were, given their rarity.[62] As was considered above, the explorers and inhabitants were accessing the same resources, their journeys intersecting at food and water sources, and then parting again towards their next destinations (Fig. 8.4).

[57]Gregory and Gregory (1884/2002).
[58]Gregory and Gregory (1884/2002).
[59]Gregory and Gregory (1884/2002, 69).
[60]Forrest (1875, 45).
[61]Forrest (1875, 83–84).
[62]Eyre (1845/2009, 82).

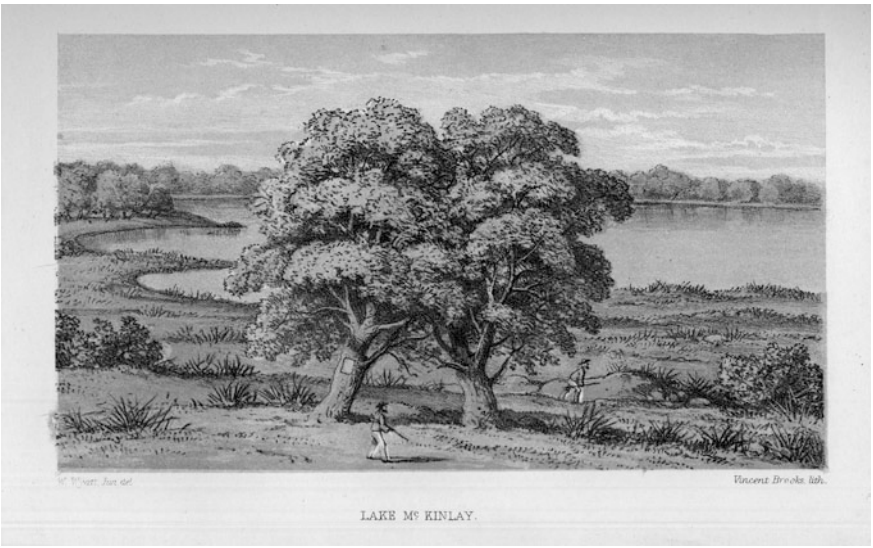

Fig. 8.4 *Lake McKinlay* (Davis and Westgarth 1863, 178). Image courtesy of Monash Rare Books Collection, Monash University Library

Like other explorers, Eyre relied heavily on carried food supplies, using guns and dogs to hunt for meat to supplement minimalist provisions. Crossing Narangga country, he recorded that they had not succeeded in catching kangaroos even using their guns and dogs.[63] As Eyre's party crossed Kokatha country, he managed to shoot a kangaroo, injuring himself in the chase, but noting the pleasure they had in eating kangaroo meat after so long on limited rations of food:[64]

> *20 July 1840: Before sunset, I got a shot at a kangaroo with my rifle, which, though severely wounded, gave me a long chase before I could capture it; this furnished us with a welcome and luxurious repast. We had been so long living upon nothing but the bush baked bread, called damper (so named, I imagine, from its heavy, sodden character), with the exception of the one or two occasions upon which the native boy had added an opossum to our fare, that we were delighted to obtain a supply of animal food for a change…*

These explorers were also learning to prepare for worsening conditions, by establishing rudimentary food supply depots along the way.[65] Of particular note, on this journey there was no mention of fish being eaten. This source of food, previously so reliable and recognizable a source of endogenous food along the coasts and river systems, began to be difficult to find. As these exploration parties pushed further inland, in addition to the paucity of fresh drinking water, the loss of fish as a

[63]Eyre (1845/2009, various).

[64]Eyre (1845/2009).

[65]Eyre (1845/2009, 105).

part of the supplemental diet caused restrictions of the range available of fresh foods they considered to be edible.

In 1844, Sturt undertook an inland exploration, relying on colonial food supplies and the supply depots that were becoming more established as the colonial frontier expanded.[66] On Kokatha estates, they came across waterways that had some fish even though they were not considered to be as good to eat as fish they had caught in the bigger rivers.[67] Sturt was forced to pay careful attention to the management of supplies as their time away from food depots increased.[68] By late 1850s, the overland explorers had learnt how to manage their carried supplies, overland routes had become better established, and new settlements and securely built supply depots made exploration across the driest parts of the continent possible. John McDouall Stuart was based in Adelaide, from where he embarked on his explorations of the most arid regions of the continent. Similar to previous explorers, and in what became a familiar pattern, Stuart relied on his carried food supplies and sometimes supplemented them with endogenous foods.[69] Unlike others, he did not seem to take dogs with him for hunting and did not seem to use guns for that purpose very much either. By late July, they were out of provisions, noting that '*Forster bakes the last of our flour this afternoon—the last of our provisions*'. They had little luck in catching anything to eat and by mid-August, Stuart noted that '*I must now shape my course for Streaky Bay to get something to eat*'. Desperately hungry, he recorded that they ate greens and shellfish, something he had not previously done:

> *17 August 1858: We have been forced to boil the tops of the pigface, to satisfy the wants of nature. Being short of water, we boiled them in their own juice. To a hungry man they were very palatable, and, had they been boiled in fresh water, would have made a good vegetable. Yesterday we obtained a few sow-thistles, which we boiled, and found to be very good.*
>
> *Wednesday, 18th August, Bectimah Gaip. Rested the horses and obtained a few shell-fish from the beach: there are very few, which was a disappointment to us.*

He reflected that[70]:

> *For upwards of a month we have been existing upon two pounds and a half of flour cake daily, without animal food. Since we commenced the journey, all the animal food we have been able to obtain has been four wallabies, one opossum, one small duck, one pigeon, and latterly a few kangaroo mice, which were very welcome; we were anxious to find more, but we soon got out of their country.*

Interestingly, he made note of the presence of fish, but made no record of eating them, seemingly using their presence rather to indicate a permanent water source. In

[66]Sturt (1965a).

[67]Sturt (1965a).

[68]Sturt (1965b, 231).

[69]Stuart and Hardman (1864).

[70]Stuart and Hardman (1864, 37).

Fig. 8.5 *Dussindung der Leiche eines im Busche verirrten Reisenden* (Finding the corpse of a lost traveller in the bush) (Christmann and Oberländer 1880, 75). Image courtesy of Monash Rare Books Collection, Monash University Library

1859, he undertook a second journey carrying three months' provisions and then returned to his established supply depot at Chamber's Creek to restock. In 1860–61, he was very well provisioned by the government for thirty weeks, with the goal of making the crossing overland to the northern coast.[71] On this journey, there was mention of eating some fish. His journal recorded that:

> *21 January 1861: Exploring parties were despatched up and down the creek, and returned, reporting abundance of water eight miles above and five miles below where they were. They also brought back with them some fish, resembling the bream, which were very palatable when cooked.24 May 1861: Woodforde succeeded in catching four fish about ten inches long, something resembling the whiting. I had one cooked for tea; the skin was as tough as a piece of leather, but the inside was really good, as fine a fish as I have ever eaten.*

By mid-1861, he was again running short of provisions and by July, he had to turn back without making it to the northern coast. In 1861–1862, he finally made a successful journey all the while experiencing shortages of food and water. Here again there was mention of fish but of little else that was endogenous; he appeared to rely almost totally on flour as his staple together with a dwindling supply of other carried provisions on this last journey. Stuart's journey mapped out the route that

[71]Stuart and Hardman (1864, 7).

was later followed by the Overland Telegraph and opened up the possibility of communications and transportation routes across the landmass. Lack of water and provisions proved to be a constant challenge for all such journeys as newcomers sought to cross the continent from south to north. Clune, in his retelling of the history of the development of the Overland Telegraph Line, noted that:[72]

> *Stuart and Foster slogged their way through the dismal scrub and sandhills. The rations were almost exhausted. They were reduced to one meal per day and a very small one, but eked out the menu with kangaroo-mice, tops of pig face (weed) and sow thistle.*

These stories of severe hardship, death, and hunger were to be repeated many times as the explorers opened up the center of Australia (Fig. 8.5).

Ten years later, between 1872 and 1876, Ernst Giles led five expeditions into Australia's western interior, the last journey using camels. He crossed the continent from east to west and later went back again by a different route. Like Stuart, his journeys mixed carried provisions with fresh caught food. He did not seem to travel with dogs for hunting like some others but where possible did catch fish.[73] Giles was not able to secure fresh game by hunting. Although he noted seeing kangaroos and other animals, he did not succeed in shooting them. There was record of using guns to shoot small birds to make soup but he noted his lack of skill compared to inhabitants in catching other game. Like Stuart, Giles also had to rely on using his horses both as pack animals and for food.[74] Like Hume and Hovell, Giles wrote about planting seeds for the return trip and how only the maize survived.[75]

The Australian Central Desert region covers a considerable expanse extending across borders of the states of Western and South Australia and the Northern Territory. Analysis of these explorers' records provides insight into a different kind of frontier engagement as the explorers came and went, followed by people who began to establish farms and towns. An early settler in central Australia, the notebook left by Carl Strehlow provides a fascinating insight into a man 'making sense of country' between 1910 and 1919.[76] A notebook that he kept in his back pocket as he rode around the Central Desert region near his homestead charts the ways in which he began to understand the language of inhabitants, descriptions of birds, animals, trees, places, and foods. Alongside his growing knowledge base of endogenous flora and fauna appear shopping lists of groceries to be collected on his trips into the nearest township. The one for his 1912 trip to Horseshoe Bend, for example, reminds him to pick up 1 bottle of Tomato Sauce, 1 bottle of Pickles, 1 Billican, 3 tins of Jam, 6 tins of Sardines and a bottle of brandy.[77] The 1917 trip to

[72]Clune (1955).

[73]Giles (1889/2000, 55).

[74]Giles and Bosanquet (1986, Chapter 2.8).

[75]Giles and Bosanquet (1986, Chapter 2.11).

[76]Strehlow (1910–1919, courtesy of Strehlow Research Centre, Alice Springs).

[77]Strehlow (1910–1919, 50).

Alice Springs reminds him to get 10 lbs of sugar, 2 lb of Tea, 2 tins of flour, and 2 lbs of caramel lollies with a question mark about potatoes.[78]

Thirty years later, a timespan similar to the period between first settlement in Sydney and that colony achieving reasonable food security, it is evident that the household and community food security situation for settlers in the Central Desert region was also beginning to be achieved with reliable stocks of foodstuffs available and supply lines now secured for stocks to be ordered. For example, in 1942, Hamilton, a constable in the police did a stocktake of foodstuffs available in Alice Springs in four locations: Glass & Kenna, Wallis Fogarty Ltd., Akbar Khan, and the Hermansburg Church Alice Springs.[79] He reports about stocks of flour, tea, sugar, rice, peas, beans, potatoes, onions, and cereals in hand, of quantities expended monthly, and quantities ordered. There were, for example, just over 30 tons of flour, 10 cwt of rice, and 760 lbs. of tea available. These staples of settler life formed the basis for ongoing household, community, and regional food security for the newcomers who had become settlers, rationing out their foodstuffs to the original inhabitants in return for information, objects, and performances of traditional ceremonies. These patterns continue to this day.

Reaching the Limits of the Frontiers of Taste

The journals of the explorers record the urgency for newcomers to find adequate arable land to support the expansion of each of the penal colonies and their surrounding settlements and an aspiration to a better life than would have been possible in Britain. It is clear that these explorers were generally reluctant to rely on fresh endogenous food resources, preferring to develop provisioning methods based on rations and allocations, a practice that had been laid down from the first attempts at establishing the penal colonies. Food in the early colony was a carefully managed process and this continued for these nineteenth century explorers. Many times near starvation, they preferred to eat a paste of flour and water rather than eat fresh foods that were all around them, once their food provisions were depleted. They had neither the energy nor the skills to expend on hunting and gathering by the time they desperately needed them, even as they could observe people around them bringing home edible food (Fig. 8.6).

The other matter of significance is that these overland explorations were followed rapidly by settlers. Similar to what was shown in previous chapters, the settlers who followed the explorers and road builders at last managed to secure sources of familiar food. From this time, little is known of how original inhabitants gained access to their traditional sources of food and water. While beyond the purview of this book, the development of settlements created a new period in the

[78]Strehlow (1910–1919, 18).

[79]Hamilton (1942).

Fig. 8.6 *A successful day's hunting* (Albrecht 1943). Image courtesy of Monash Rare Books Collection, Monash University Library

development of food security in Australia from the local to the regional and national levels. By the turn of the twentieth century, explorers gave way to settlements across the country and the record falls silent on what Indigenous Australians did to survive the loss of access to the food and water resources on their traditional estates. There is some record of measures that were introduced to address the impact of colonization on Indigenous Australians, some of which involved rations being apportioned and church-based missions being established to offset the suffering that was evident amongst Indigenous people. Rowse, for example, observes that commentators of the 1894 Horn Expedition in Central Australia 'register an inescapable sense of their implication in a colonial process'.[80] Brock argues that:[81]

> *Government officials and missionaries who provided food, tobacco and clothing to Indigenous Australian people under stringent regulations were in an ideological bind wanting to encourage assimilation, while preventing dependency and parasitism (to use their terminology). This ambivalence on the part of the suppliers of rations forced*

[80]Rowse (1996, 105).

[81]Brock (2008, 19–20).

> *recipients to juggle incompatible sources of food: hunting and gathering which required mobility, with rations distributed from fixed locations. The ration regime assumed supplementation of rations with other foods, but this assumption was built on unrealistic expectations with dire consequences for Arrernte and Pitjantjatjara Yangunytjatjara people.*

It is clear in the contemporary era that the colonization of inhabitants' estates has left ongoing negative impact that influences debates about food security and health within the Indigenous communities of Australia. As was discussed in Chap. 5, the pattern of settlement followed the expanding frontier. As newcomers cleared significant tracts of land around settlements for agriculture and grazing, fenced off land, and substantially changed food procurement and production practices around new homesteads and settlements, their household and community food security increased just as losing access to traditional estates meant that inhabitants remained in a state of emergency food security crisis. Eyre is one of the few explorers who recorded the impact of settlements on inhabitants. For example, he left records about inhabitants risking hostility from newcomers to access traditional foods on their estates:[82]

> *Compelled at last, it may be by enemies without, by the want of water in the remoter districts, by the desire to procure certain kinds of food, which are peculiar to certain localities, and at particular seasons of the year, or perhaps by a wish to revisit their country and their homes, they return once more, cautiously and fearfully approaching what is their own…*

Mitchell left an equally dismal picture of the negative impact of these newcomers that brought with them new sources of food and a careless attitude to endogenous fauna:[83]

> *The kangaroo disappears from cattle runs, and is also killed by stockmen merely for the sake of the skin; but no mercy is shown to the natives who may help themselves to a bullock or a sheep.*

Mitchell was not only concerned for the depletion of kangaroo stocks but, as has been argued previously, he was aware that inhabitants would turn to cattle for food, thus attempting to balance the forced exchange to the best capacity as was possible. Some of these explorers were aware of their part in taking from inhabitants without giving back. The final section now turns to discussion of food sovereignty, sustainability, and the making of modern Australian cuisine. Moving from the analysis of the evidence provided in the previous chapters, the concluding chapter theorizes the legacy of sociohistorical encounters about food into contemporary, postcolonial Australia.

[82]Eyre (1845/2009, 187).

[83]Mitchell (1839b, 262).

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Part III
Food and the Making of Modern Australian Cuisine

The final section, 'Food and the Making of Modern Australian Cuisine' brings the monograph into the contemporary era, offering concluding analysis of the development of a modern Australian cuisine. Addressing the question of what constitutes an Australian national cuisine in the postcolonial era, the chapter raises questions about Australia's dependence on highly industrialized, exogenously derived, food like products. Drawing on arguments put forward in this book, it examines the potential of endogenous flora and fauna to enter into the food economy examining the viability of current approaches to artisanal 'wild', 'native', 'Bush Tukka' and Indigenous-controlled food businesses, offering innovative thinking about Indigenous food sovereignty, sustainability, scalability, and edibility for the future food security context.

Chapter 9
Australian National Cuisine: Beyond the Frontiers of Taste

Abstract Chapter Nine, the final chapter of the book, brings the focus into the contemporary era, offering concluding analysis of the potential for the development of a sustainable, nutritious, tasty, Australian cuisine that moves beyond the tropes and stereotypical narratives embedded into colonial Indigenous-settler relations about food, its procurement, production, nutritional benefit, sustainability, and enjoyment. In a pluricultural, postcolonial democracy such as Australia with its history of colonization, it is necessary for the nation to acknowledge Indigenous Australians' loss of food sovereignty that was caused by the British taking over the lands and waterways of inhabitants. As analysis of anecdotal evidence, oral histories, and the historical records demonstrates, there needs to be recognition that Australia's edible, endogenous, flora and fauna is embedded within a political ecology of cultural practices and individual preferences that span the Indigenous and non-indigenous populations of Australia. For all Australians to take such a perspective would create capacity within the debate about the emergence of a uniquely Australian cuisine to be able to mobilize opportunity for Indigenous Australians to develop food products into the market that are sustainable, economically viable, and developed in ways that are culturally appropriate. Organizations such as *Indigenous Businesses Australia* at the national level, those such as *Ninti One* that has a regional focus, and those such as the Victorian *Koorie Business Network*, have potential to work with Indigenous families and communities to develop endogenous food resources that are developed in culturally appropriate ways and are viable within a capitalist economy. Unfortunately, one of the legacies of the colonial past is that there is significant confusion in the market and amongst Indigenous and non-indigenous Australians about what an Australian cuisine might be and how much or little it would need to incorporate endogenous foods, or Indigenous knowledge about such foods. Is it, as Craw argues, necessary to recognize Indigenous cultural practices around endogenous flora and fauna in their contemporary procurement and production? Or, as was shown in examination of newcomer records, can non-Indigenous people consume endogenous flora and fauna without any interest or knowledge in Indigenous cultural practices about such foods? Part of the emergent debate about the specifics of what an Australian cuisine might be continues to revolve around the answer to these questions.

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I quote a passage from *The Emigrant's Friend* that speaks to how potential new emigrants were introduced to the country:

> *…its natural productions, particularly those of an animal or vegetable kind…its birds, its insects, are all new, and what is very remarkable, none of them of great utility. Its trees produce no excellent fruits…The native shrubs are generally harsh, ugly, and dark coloured – the flowers are many of them very pretty…The Colonist however need not complain of this barren list, for although the native productions are so useless, yet he will find at Sydney all the fruits and vegetables of his own country, and…all these things are already cultivated at Adelaide and other parts in abundance…*[1]

The assurance that there was plenty of familiar European food to eat was reinforced by those such as Henry Lawson who, in 1896, famously wrote:[2]

> *It is a broiling hot day in summer, and the dinner consists of hot roast meat, hot baked potatoes, hot cabbage, hot pumpkin, hot peas, and burning-hot plum-pudding. The family drinks on an average four cups of tea each per meal…*

Despite this enticing picture of normality, even abundance, there was evidence from the outset of colonizers trying to establish European agricultural methods that some soils were not able to sustain agriculture. This fact almost brought the penal colony of Sydney to the point of starvation, as noted in earlier chapters. Bampton also notes this, arguing that by 1870 the settled landscape was already showing signs of exhaustion in both soil fertility and by the increasing prevalence of wheat diseases.[3] Bringing this book into the contemporary era, the final chapter offers concluding analysis of the potential for the development of a sustainable, nutritious, tasty, Australian cuisine that moves beyond the tropes and stereotypical narratives embedded into colonial Indigenous-settler relations about food, its procurement, production, nutritional benefit, sustainability, and enjoyment. In a pluricultural, postcolonial democracy such as Australia with its history of colonization, it is necessary for the nation to acknowledge Indigenous Australians' loss of food sovereignty that was caused by the British taking over the lands and waterways of inhabitants. As analysis of anecdotal evidence, oral histories, and the historical records demonstrates, there needs to be recognition that Australia's edible, endogenous, flora and fauna is embedded within a political ecology of cultural practices and individual preferences that span the Indigenous and non-indigenous populations of Australia. For all Australians to take such a perspective would create capacity within the debate about the emergence of a uniquely Australian cuisine to

[1]Unknown (1848/1974, 7).

[2]Lawson (1896/2014, 62–63).

[3]Bampton (1996, 20).

be able to mobilize opportunity for Indigenous Australians to develop food products into the market that are sustainable, economically viable, and developed in ways that are culturally appropriate. Organizations such as *Indigenous Businesses Australia* at the national level, those such as *Ninti One* that has a regional focus, and those such as the Victorian *Koorie Business Network*, have potential to work with Indigenous families and communities to develop endogenous food resources that are developed in culturally appropriate ways and are viable within a capitalist economy. Craw argues that eating endogenous food does not, in itself, overcome the colonial inheritance that has ignored Indigenous right to food sovereignty. As Craw identifies:[4]

> *My argument here is not intended to dissuade settler Australians from consuming native foods. Rather, it is to encourage such consumption—and the stories that are told about it—to take place in ways that support full recognition of Indigenous Australian ecological and culinary knowledge.*

Such critical voices, heard in Australia since the mid-1960s, have argued for the Indigenous claim and have worked in partnership with Indigenous Australian and Torres Strait Islander people to preserve and maintain their knowledge for the present and future generations. In Victoria, for example, Hercus,[5] Massola,[6] Gott,[7] Critchett,[8] and Broome[9] have all argued for Koorie people to be included in decisions that affect their future and they have provided thorough documentary evidence of the profound ecological knowledge held by Indigenous Australian Victorians; knowledge, passed down from ancestors to descendants, of food, climate, water, and rivers, of enculturated philosophies and food practices. Unfortunately, one of the legacies of the colonial past is that there is significant confusion in the market and amongst Indigenous and non-indigenous Australians about what an Australian cuisine might be and how much or little it would need to incorporate endogenous foods, or Indigenous knowledge about such foods. Is it, as Craw argues, necessary to recognize Indigenous cultural practices around endogenous flora and fauna in their contemporary procurement and production? Or, as was shown in examination of newcomer records, can non-Indigenous people consume endogenous flora and fauna without any interest or knowledge in Indigenous cultural practices about such foods? Part of the emergent debate about the specifics of what an Australian cuisine might be continues to revolve around the answer to these questions.

Roberts notes that the descriptor 'Modern Australian Cuisine' was first used in 1996, but it was not specific to the inclusion of endogenous foods, or Indigenous

[4]Craw (2012, 21).
[5]Hercus (1966, 1970).
[6]Massola (1969, 1970, 1971).
[7]Zola and Gott (1992), Gott (1999, 2008).
[8]Critchett (1990, 1998).
[9]Broome (2005).

knowledge about such foods.[10] Rather it was a mélange of cookery from around the world with an 'Australian' tag. What specifically made it Australian depended on the context. Arguably, it was a symbolic move to identify Australian cuisine as something more modern, interesting, and palatable than Australia's British roots might otherwise suggest. It spoke to a vibrant postcolonial democracy that accepted and celebrated all that was multicultural in Australia, a potential consumer market that was becoming especially excited about all the foodstuffs that were now available from globalizing food markets.

Of importance to this book, there is still a distinct lack of interest in edible, endogenous flora and fauna, except for fish and seafood, food types that the newcomers had always understood and absorbed into their meals from the earliest times. There was a quiet emergence of descriptors such as 'wild food', 'bush tucker', 'bush food', Australian 'native' food, and seminal texts by Cribb and Cribb's about 'wild' foods in Australia,[11] and by Jennifer Isaacs and Peter Latz about Indigenous Australian food.[12,13] The earliest endogenous food, beyond fish and seafood, to gain acceptance as a marketable product was kangaroo. South Australia legalized the sale of kangaroo meat in 1980 and some small restaurants and artisanal businesses promoted an interest in 'native' or 'bush' cuisine, as noted by Roberts:[14]

> *It is against this backdrop of defining Australia's culinary identity that interest in native Australian cuisine began to grow throughout the 1980's and 1990's, and it is continuing to gather pace today. Native produce started to be developed by pioneering restaurateurs and chefs such as Jean-Paul Bruneteau, Vic Cherikoff, Andrew Fielke, Craig Squire, Benjamin Christie and Jennice and Raymond Kersh. These ingredients were uniquely Australian and they could be incorporated into the fusions within 'Modern Australian Cuisine' to create flavours that set Australian cuisine apart from the rest of the world.*

Both Vic Cherikoff[15] and Jean-Paul Bruneteau[16] led a movement that tested the consumer interest in eating endogenous foods at restaurants and began experimenting with the marketability of endogenous foodstuffs, writing books that also supported their attempts.[17] Unsurprisingly, foods that found the easiest acceptance were those that had been the survival foods of the explorers and early settlers—animal and bird meats, fish and seafood, and a very small range of vegetables and fruits. The frontier of taste for contemporary Australians has not moved very far beyond that of their ancestors.

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[10]Roberts (2007) also provides a very helpful timeline about the development of the industry.
[11]Cribb and Cribb (1974).
[12]Isaacs (1987).
[13]Latz (1995).
[14]Roberts (2007).
[15]Cherikoff (1992).
[16]Bruneteau (1996).
[17]Saunders et al. (1999, 14-15).

The methods of procurement and production of this new 'native' cuisine were and are still undertaken within the capitalist market structure and the emerging endogenous foods industry faced significant issues on a number of fronts. First, non-indigenous Australia has always been over-reliant on industrialized, processed food that could be manufactured at a sufficient scale, a matter of importance to those responsible for ensuring food security at the national level. The food security needs and opportunities for Australia's Indigenous population have not yet been addressed, except as they could be caught in the national food safety net. The right of Indigenous peoples to be able to access their traditional estates, in order to procure, manage, eat, and enjoy their ancestral foodstuffs remains as puzzling to newcomers as it was in the early years of colonization. Indigenous food sovereignty is still widely regarded as incommensurable with the modern nation-building project.

Second, agricultural methods that have been developed by settlers for livestock and grain production are, for the most part, unsuited to the Australian ecology and are unsustainable but there are powerful lobbies that protect the interests of these sectors of the food industry. Only 6 % of Australia has arable land of use to these types of industry but together they hold a larger proportion of land than that, even though they cannot optimize its use. Ongoing use of chemicals and fertilizers is diminishing the viability of previously arable soils, ensuring that foods that are produced may look like wheat or beef but their nutritional value is significantly diminished.

The third aspect confronting a viable food industry in Australia follows from the second. Food procurement and production methods have become large scale in Australia and it has been a challenge for the more artisanal food producers, including those using seasonal endogenous flora or fauna, in being able to appropriately scale the production of endogenous food stuffs to meet the regular demands of a hungry food industry. These foods may be more nutritionally of higher quality but they are unable to compete with the industrialized food production and distribution companies and the supermarkets that support them.

Lastly, and possibly the most difficult to change, the majority of Australians do not yet have a palate for endogenous foods. The early explorer records of revulsion of most endogenous foods have left a strong after-taste in current attempts to entice the immigrant palate. As Fig. 9.1 shows, some fusion occurs in rural areas where endogenous sources of food are as easy to hunt and forage as exogenous varieties but in metropolitan cities, people are reliant on their local supermarket or butcher and endogenous foods are only slowly finding their way to these places (Fig. 9.1).

The next sections, Food Sovereignty and Food Security, Sustainability, Scalability, *and* Edibility and Taste examine these issues in detail.

Food Sovereignty and Food Security

The first matter of vital importance to this discussion is with regard to food sovereignty. An aspect that is rarely discussed but of necessity for the nation of Australia to address is that Australian Indigenous people enjoyed food sovereignty

Fig. 9.1 *Fresh fish, rabbit and kangaroo steaks*, Author image taken on the road between Robe and Mt. Gambier

before colonization by the British. As was noted in the explorers' journals, people did not have food security in the sense that global policy now mobilizes such a concept.[18] Food was seasonal, specific to places, and only made available through careful food resource management on the part of inhabitants. Procuring food was a continuous activity undertaken within the context of life. The arrival of explorers and settlers threatened and nearly caused the disappearance of food knowledge, customs, and practices of inhabitants. Competition over endogenous food resources between inhabitants and newcomers caused significant disruption to people's assumptions about the availability of particular foods at particular times on their estates and beyond, causing sometimes fatal conflicts to occur. As has been demonstrated in previous chapters, for the newcomers, the demands of subsistence living in such an unfamiliar environment were often fatal. Hunger and starvation had become rife in new settlements as stores of familiar foods ran out, attempts at farming failed, transport routes were impassable at certain times of year, and supply ships were delayed or food arrived completely spoiled and inedible. A basic element of exploration was commonly asserted—the ability to live from the country—but as has been shown, most preferred to carry what provisions they could of

[18]Goodall (2008).

familiar, if limited, food and most acknowledged that they had little skill in endogenous food procurement or preparation when compared with the expertise of inhabitants. Neither were inhabitants interested in sharing their knowledge of food and clean water sources. They were more often cautious, sensing the manipulation behind the gifts proffered, and there is scant record in the early encounter period of people showing any interest in the foods of newcomers. Competition was keen over fish and shellfish, a common story around the coast, where inhabitants and newcomers shared a common knowledge of how to catch fish, if not an equal knowledge of the type of fish being caught or the best places to catch them seasonally. For inhabitants, the exponential rise in the strength of the newcomers, who became settlers, to secure food could only occur at the expense of food availability for themselves.

As settlers began to establish both household and community food security, inhabitants were forced off their land, away from their traditional subsistence lifeways, and denied access to their known and familiar sources of food and water. The original inhabitants lost food sovereignty and an emergency food security crisis emerged whereby their traditional foods became scarce and they did not have access to colonial and settler food supplies, except as begging mendicants. Many families continued in a state of emergency food security for generations as they struggled to preserve and maintain their rights to land and recognition. Some were able to enter the new cash economy through laboring work or tenuously at the edges of wealthy settler cities and towns, forming a new, dispossessed poor whose access to any food was precarious. Contemporary evidence demonstrates that while Indigenous Australian and Torres Strait Islander Australians may have access to supermarkets and have money to purchase food, therefore counting them as 'food secure', the loss of food sovereignty has never been addressed.

Examining the food security history of Australia since the first explorers entered the traditional estates of original inhabitants, it is apparent from the records and ongoing discussions with Indigenous Australian people that right to, access to, and use of, the resources of the land and waterways has always been contested. In the case of Victoria, I have argued previously that there was ample record of a period of contestation about food between people and newcomers for about 15 years after the beginning of the establishment of each colonial foothold, first in coastal encounters and later through inland exploration and settlement.[19] Written evidence of newcomer interest in endogenous edible flora and fauna diminishes as the explorers and entrepreneurial colonists made way for settlers and familiar sources of domesticated foods become more established and reliable. Between 1840s and 1960s, foods that were more familiarly British become reliably available to the settlers and inhabitants were absorbed into the emerging cash-based economy, losing access to their traditional estates and their subsistence way of life, and learning to eat settler foods.

Over the last 50 years, described here as the period of re-emergence, the Indigenous claim to rights in the future food security of Australia has become

[19]Ma Rhea (2014).

pressing because of a number of converging factors. The 1967 Referendum and the Mabo and Wik agreements changed the relationship between the state and Indigenous peoples of Australia with the recognition being given to pre-existing, and unextinguished, 'native title' rights of original inhabitants.[20] This has enabled some traditional owners to reclaim their estates, and thereby, some families to re-establish their traditional food cultivation methods and food resource management practices. For some, these foodways are a lost art. In 1975, Brokensha researched the food eaten by Pitjantjatjara living in a very remote area, still on their traditional estates.[21] He noted the unreliability of food obtained from both hunting and gathering and of purchased foods, observing that, 'Both the range and the quantity were variable'.[22] The foods eaten practically all the time were white flour, tea, sugar, and rabbits, all originally exogenous foods. The first three were the most common fare of the explorers and early settlers and also became the most common sources of food available to traditional owners.

There has been some work done to support traditional owners to produce food into the capitalist market, given the business opportunities available because of the growing demand for 'Bush Tucker'. There have also been attempts by Indigenous entrepreneurs such as Mark Olive to popularize endogenous edible flora and fauna in a manner that is palatable to both Indigenous and non-indigenous people, helping to overcome seemingly incommensurable cultural practices embedded in these foods.[23] Mark Olive chose the historically famous site, Géographe Bay, to create a hybrid gourmet food experience using endogenous products, cooked on a barbeque (an iconic Australian cooking method).[24] Arguably, it is the fact that he is Indigenous that allows him to bring together such otherwise sharply contrasting approaches to food on the Australian continent. What is less obvious is the extent to which his ancestral ways of producing food are being brought into this hybridization, how much this will inspire Indigenous families to explore new ways of creating food security for themselves and their communities, and how much non-indigenous Australians can stomach of such hybridity. Another visionary collaboration between Lois Peeler and Beth Gott at Worawa Indigenous Australian College has created a 'Bush Tucker Garden' bringing Worawa's Dreaming Trail together with Gott's ethnobotanical knowledge.[25] The garden exhibits endogenous flora, promoting their value as a source of food and nutrition, as well as their

[20]Ma Rhea (2013).

[21]Brokensha (1975).

[22]Brokensha (1975, 25).

[23]Mark Olive of *Black Olive Catering*, has become a global television chef. For more information see: http://www.blackolive.net.au/mark-olive-bio/.

[24]See, for example, http://www.geographebay.com/whatson/event/1155-kambarang–a-south-west-aboriginal-gourmet-experience.

[25]Lois Peeler OAM, Executive Director, Worawa Aboriginal College (http://worawa.vic.edu.au/our-school/principals-welcome/) and Beth Gott, Ethnobotanist, Monash University (http://fsd.monash.edu.au/environmental-sustainability/newsletter/monash-aboriginal-gardens); see also: Zola and Gott (1992).

medicinal qualities. To have such an important exemplar in a school allows visitors and students to begin the journey to an appreciation of endogenous edible foods, and Indigenous cultural knowledge about such flora and fauna.

As discussed above, most Australians do not yet have a taste for endogenous foods even though consumers are becoming aware of the importance of quality and nutritional value of the food they eat. They are still seeking out familiar British and European foodstuffs that are 'clean and green', bypassing what is all around them. One can only imagine a day when Australian food security means addressing insistent environmental concerns about the sustainability of European farming practices and large scale, industrialized, food production methods on the Australian continent, thereby causing a renewed interest in artisanal cultivation and production methods for endogenous, edible flora and fauna, and of traditional Australian Indigenous philosophies and food management practices.

Research shows that food insecurity is still an issue for Indigenous Australian people and the food choices available to them are not necessarily nutritionally good food choices. Nor are they the preferred foods for many Indigenous Australian people, who still speak of bush tucker as their preference.[26] While there is an argument made by governments that Australian food security is improving, they are making such an argument based on a narrow fact that there is improved access to industrialized, domesticated food resources. The fact that Indigenous Australian people have been forced into the cash economy and away from their traditional estates means that the rights of Indigenous Australian people to household food security recognized in the Rome Declaration, and signed by the Australian government, are still not fully being recognised. Arguably, this narrow approach to food security is also questionable in general for all Australians when what is on offer is lacking in nourishment, is full of chemicals and pesticides, and is ultimately unsustainable in any meaningful ecological sense.

Ecological and Cultural Sustainability

The second aspect of importance in contemporary discussions about Australia's food security is the matter of the ecological and cultural sustainability of endogenous and exogenous food resources. The food security crisis caused by the arrival of the explorers and then settlers to Australia was, for many years, pushed to the background because the majority of settlers and their descendants managed to develop household and community food security after about 30–35 years of settlement. The food security needs of Indigenous people were ignored by the government as being relatively insignificant, especially in the early days, and the feeding of displaced inhabitants mostly was left to missionaries or others of philanthropic groups that sought to ameliorate the poverty and starvation of 'their'

[26]Thorpe and Adams (2011).

Aborigines. Ration depots were established for Indigenous Australian families in some cases but many analysts have regarded these depots as performing more of a surveillance function than a strictly benevolent one. It has not been until recently that attention has been paid to the national food security situation and, in doing so, the warnings of scientists about impending ecological disaster in Australia have created doubt in peoples' minds about the sustainability of European, industrial food production methods, to be examined more closely in the following section. Here the focus is on the ecological and cultural sustainability of food procurement and production, matters that directly influence the incorporation of endogenous foods into the Australian diet, while recognizing Indigenous *sui generis* rights to their traditional food knowledge and cultivation practices. Pascoe posits that:[27]

> *The knowledge to be gained by a more enthusiastic examination of Australia's past is not just an acknowledgement of Indigenous Australian prior ownership but a search crucial to Australia's agricultural survival.*

Consideration of food sustainability immediately raises questions that were first raised in Chap. 1, such as: What is 'wild'? What is 'native'? and, What foods should be considered 'game'? The answers to the above questions have, up until the present, depended on whether one is Indigenous or non-indigenous. For Australian Indigenous people, the matter of sustainability is relatively simple: 'Never take more than you give back to the land and she will always support you'.[28] Of equal importance, and as explorer journals noted, inhabitants from one area would hold intimate knowledge of reliable sources of food and drinking water but were lost when they moved away from their traditional estates, demonstrating that food knowledge is highly localized and that sustainable management of food resources was, and continues to be, a matter for the traditional owners of each estate, not necessarily known by outsiders, inhabitants or newcomers. Little is known, in the contemporary era, about these knowledges. As traditional owners return to their estates and begin the process of repossessing their food resources, Altman, Roach and Bek have argued, 'There is an urgent need for research on levels of subsistence resources and their utilization as sustainability is currently impossible to assess'.[29]

The evidence presented in previous chapters showed that the explorers and early settlers did not hold such localized knowledge and nor were they privy to the cultural practices that surrounded the management of food resources in a particular area. For the newcomers, with respect to sources of meat, endogenous fauna were considered to be 'wild' game, food that was just there, not cultivated, or managed in the same ways as British meats were produced. The descriptor 'game' is commonly used in explorer and settler narratives as a marker for 'wild' fauna. In his examination of the food habits of colonists in America, Hume notes that early colonists sourced wild foods such as white-tailed deer (venison), beaver, otter, and squirrel,

[27]Pascoe (2014, 162).

[28]Personal communication, Joy Murphy-Wandin. See also her traditional *Wominjeka, Welcome to Country*: Murphy-Wandin (2010).

[29]Altman et al. (1995, 17).

'all of which afforded a cheap source of fresh meat for those willing to go in search of it'.[30] In the Australian context, as the settlements grew there is no record of consideration being given to the need to manage such 'wild' food resources sustainably. More commonly noted was that endogenous sources of fresh meat were hard to catch, were in any case unfamiliar, and in the minds of many were regarded as inferior to meat from cattle, sheep, and pigs. As settlements progressed, settlers shunned endogenous food sources, preferring instead to establish household, community, and regional food security through farmed, grazed, and manufactured foods. Analysis of the records suggests that it was only ever necessity that turned newcomers to consider endogenous foods and they took little time to establish cultural practices that would embed endogenous flora and fauna into the emerging settler consciousness. Instead, as Lawson's writings attest, even in the most unsuitable of climates, stronger British cultural food habits shaped what foods were enculturated into the settler landscape. Many authors, such as Hume, distinguish between domestic and wild varieties of various foods with the inference being that any food resource that was occurring 'naturally' at the time of colonization remains 'wild' in the contemporary non-indigenous imagination while any food resource that is produced using European agricultural methods is understood as being a 'domesticated' food resource.[31] Arguably, highlighting traditional practices of managing and procuring food resources, referred to in the literature as subsistence practices, the idea of 'wild' continues to exist only within the minds of non-indigenous and highly urbanized people as a perception of that particular environment, as was noted above.[32] For the original inhabitants and their ancestors, food resources are managed, cultivated, procured, prepared, and enjoyed. In what sense could these foods be described as 'wild'? In each world, the same endogenous food resources exist.

From the outset, there has been profound difference between inhabitants and newcomers in their understanding of what constitutes food and how one might procure and prepare it for eating. Inhabitants have lived, and in some parts of Australia continue to live, in an enculturated world where one's labor was used directly to hunt and gather items for food, shelter, medicines, and clothing (or one had kinship rights that gave rights and responsibilities in relation to these things). Before coming to Australia, officers, soldiers, and convicts alike would predominantly have lived within the cash economy where they earned money to purchase food produced by others. There were few farmers, gardeners, or bakers that came as the early explorers, convicts, and administrators. There was little knowledge of a subsistence approach to food procurement and the newcomers did not have the knowledge, the weapons, or the skills required. Ironically, a high proportion of the convicts were in Australia because they had been convicted of stealing food, arguably a form of subsistence foraging behavior and something that was often

[30]Hume (1978, 21).

[31]Hume (1978, 24).

[32]Ingold (2000, Chapter 3).

continued in the new settlements, in the absence of either paid employment or opportunity to produce their own food. Ingold suggests that our knowledge of the world can be described as a process of enskillment in the context of our practical engagement with the environment.[33] Humans, in this view, are embedded in nature and engaged in situated, practical acts. Long before European explorers approached the shores of the 'great south land', people lived and thrived in diverse ecosystems throughout the country. Typically, it is estimated that 140 edible species were consumed in the South East[34] and about 60–100 in the central desert region.[35] The land was able to support family and clan groups on a rich and varied diet. Kiple and Ornelas say that bio-anthropological investigation has shown that:[36]

> *...the sum of the findings to date seems to suggest that at least in the matter of diet and nutrition our Paleolithic ancestors did quite well for themselves and considerably better than the sedentary folk who followed.*

This was not the realm of the 'wild' as it has been promoted in contemporary marketing of endogenous foods, particularly 'game'.

Following the question of what makes food wild or domesticated, there is additional confusion about what nomenclature should be used to describe distinctly Australian cuisine. Many contemporary foods are labeled 'Native' or 'Bush' foods. The descriptor 'Native' evokes confusion about whether the food under discussion is simply endogenous to this ecological context or whether it is food that has been produced through Indigenous cultural practices, in addition to being an endogenous foodstuff.[37] It opens up the need for discussion about what the market could call endogenous food that is procured and produced without Indigenous input. It would be a mistake to ignore the knowledge held by Indigenous people about the edible foods on their estates, especially where that knowledge continues from pre-contact times. In a recent example, researchers were tasked with identifying 'bush foods' in northern Australia that would be suitable, 'As an adjunct to army ration packs for medium-to-long term feeding in the field… and… useful in short term survival situations'.[38] They found that, 'an adequately varied diet may be obtained in much of northern Australia provided that the survivor can distinguish between edible and toxic species'.[39] There are two important aspects to note about this research. Few people hold such precise knowledge and there has been insufficient research and development focus on working with such Indigenous knowledge holders to bring this knowledge into the public domain, where appropriate. It also serves an important reminder to those who would commercialize endogenous flora and fauna

[33]Ingold (1996) See also Ingold (2000, Chapter 2).
[34]Flood (1980).
[35]Hetzel and Frith (1978).
[36]Kiple and Ornelas (2000, 2).
[37]Roberts (2007).
[38]James et al. (1988, 269).
[39]James et al. (1988, 273).

that many of these plants have been cultivated by people for millennium and, as such, traditional owners may hold intellectual property rights that are now protected under international law. Altman, Roach, and Liddle noted this as an emerging matter in the consideration of the commercialization of endogenous flora and fauna.[40]

Equally, there is confusion over the term 'bush'. A descriptor adopted by explorers and early settlers to describe the non-urban Australian landscape, it came to be used also to describe the foods found 'out there in the bush', 'bush food', or by the iconic moniker, 'Bush Tukka'. For inhabitants, this is a nonsensical descriptor. All lands were the estates and waterways of someone. Everything was enculturated with boundary observances and obligations. The modern concept of empty 'bush' makes no sense. Similarly, the descriptors 'bush tucker' and 'native food' simply denote food that was eaten by inhabitants.

It is therefore argued here that such concepts as 'wild', 'bush', and 'native' foods are a fictional construct of the non-indigenous imagination and, as such, fail to disrupt the enduring colonial narrative about endogenous edible flora and fauna. It is simply not possible to move towards a postcolonial view of ecological and cultural sustainability if one holds to these fictions. Many people have argued that Australians need to have a deeper ecological understanding of the lands and waterways that surround them. Flannery observed that, despite the estrangement:[41]

> *Australia – the land, its climate and creatures and plants – is the only thing that we all, uniquely, share in common. It is at once our inheritance, our sustenance, and the only force ubiquitous and powerful enough to craft a truly Australian people.*

As can be seen from the previous chapters, this general estrangement extended to fresh, local sources of food, commonly but not always bypassed by newcomers. With respect to endogenous, edible flora and fauna, Bampton,[42] Craw,[43] and Santich[44] are contemporary researchers who have challenged the view that there was no interest shown by the colonizers in endogenous foods, arguing instead that there have always been attempts by the colonizers to adapt to endogenous foods. Bampton cites the willingness of early settlers to eat wild game birds, emu, parrot and cockatoo, and the flesh of the kangaroo. Craw points to examples in early cookbooks, settler journals, and more recent amateur histories. While there is evidence, discussed in previous chapters, in the journals and records of the explorers and those in the first penal colonies of such interest, it has been argued here that the majority view was to eat endogenous food from necessity but to establish familiar exogenously-derived foods as soon as was possible. The

[40]Altman et al. (1997, 10–11).

[41]Tim Flannery's 2002 Australia Day Speech available at: http://www.onlineopinion.com.au/view.asp?article=1199.

[42]Bampton (1996, 19).

[43]Craw (2012).

[44]Santich (2011).

arguments made by both Craw and Bampton speak to the matter of scalability that will be discussed more fully in the following section.

Santich's research addresses the important matter of nutrition, something not centrally examined in this book. She and others such as Cherikoff and Bruneteau ask important questions of the nutritional value of exogenously derived, domesticated foods, arguing for the benefits of the endogenous flora and fauna that are better adapted ecologically to the places where they occur than cultivars and livestock brought from other places. This proposition has not yet been fully explored in the Australian context. Kiple and Ornelas observe that, 'with agriculture and sedentism came diets too closely centered on a single crop, such as wheat in the Old World and maize in the New, and although sedentism has encouraged population growth… [it had]…diminished nutritional status'.[45] Certainly, as will be discussed in the next section, the matter is complicated by the industrialized production methods of the newcomers.

Scalability

The third aspect confronting a viable, endogenously derived, food industry in Australia follows from the second. Food procurement and production methods have become large scale in Australia and it has been a challenge for the more artisanal food producers, including those using seasonal, endogenous, flora or fauna, in being able to appropriately scale the production of endogenous food stuffs to meet the regular demands of a hungry food industry. These foods may be nutritionally of higher quality when managed in situ by knowledgeable, traditional owners on their estates, as some such as Gammage and Pascoe have argued.[46] Even so, the minority argument for Indigenous control of culturally embedded, ecological sustainable management of food procurement, and in food processing, is unable to compete with the majority who prefer highly industrialized production of domesticated, exogenously-derived foods, and the distribution companies and the supermarkets that support them. Scalability is a significant issue because if industrial forms of food procurement and processing were applied, for example, to kangaroos or Warragul greens, it is probable that the nutritional value and life force vitality of these things would fare no better than exogenously-derived foodstuffs. Downes, for example, observes that:[47]

> *Despite the pioneering work of Cherikoff and others, the use of indigenous ingredients in Australian cooking remains minimal… In short, adopting Australian foodstuffs in bulk in Australia is simply too hard for all concerned…Australian cooking does not need to contain indigenous ingredients. It is a way of doing things…*

[45]Kiple and Ornelas (2000, 5).

[46]Gammage (2011, Pascoe (2014).

[47]Downes (2002, 272–273).

By comparison, Mark Olive maintains optimism about the future potential scalability of endogenous foodstuffs. He has developed a Native Herb Index of what he considers to be a sustainable range of endogenous foodstuffs.[48] He also runs a very successful business demonstrating to Australian consumers, both Indigenous and non-indigenous, that it is easy to use endogenous foods and that most of the issue facing the consumer is the reliability of access to commercialized, domesticated products.

Cherikoff and Brand noted that after 1830 most immigrants who moved to Australia were British and, 'many learnt to force European cops and livestock to grow in the harsh Australian outback'.[49] Certainly, the development of Australian agriculture suggests that Australians, like people the world over, have been taught to be what Pollan terms, 'industrial food eaters' where synthetic foods created by humans are considered better than those created by nature.[50] As I have argued throughout this book, this is not a new matter. As soon as was practical and technically possible, explorers and early settlers demonstrated a greater preference for manufactured foods over that for which they could gather and hunt. This has commonly been attributed by critical scholars to a form of racially motivated belief on the part of the colonizers that their foods were superior to that of the savages they met, in reality to cover up the fact that they had no skills or knowledge of endogenous edible foods. While there is evidence of this view in some explorer and settler journals, I would suggest that the majority of people prefer manufactured food for a range of more complex reasons, personally as well as culturally shaped preferences crossing physiological, psychological, and sociological aspects of the formation of taste.

Pollan argues that some of this preference for manufactured foods derives from the unique combination of fat and sugar that industrialized food producers have discovered, a combination that gives great pleasure and satisfaction to the consumer of such products. Food manufacturing and livestock management procedures are also able to add nutritional supplements that give greater certainty around nutritional value than can be determined in fresh produce and livestock that are so much more dependent on the quality of the soil and of their environment than are the controlled environments of industrial processes. Pollan observes that, '… in nature – in whole foods- we seldom encounter these nutrients in the concentrations we now find them in in processed foods'.[51] He argues that such issues are pushing our evolutionary buttons and fooling our inherited food selection systems. Mead argues that, 'we began manufacturing on a terrifying scale, foods, and beverages that were guaranteed not to nourish'.[52]

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[48]Native Herb Index at: http://www.blackolive.net.au/native-herb-index/.

[49]Cherikoff and Brand (1988, 179).

[50]Pollan (2006, 97).

[51]Pollan (2006, 106–107).

[52]Mead (1997, 15)

The issue of the popularity, globally, of these sorts of foods places the examination of scalability of endogenous foods in complex relief. In a global society, where large scale industrialization is the method by which nation states are managing their respective food security needs, supporting one of the big engines of capitalism, while producing tasty food that people want to purchase and consume, what seems to be emerging is something I would prefer to call a 'food-like product'.[53] Within this context, the idea of a uniquely Australian gastronomy needs to address the issue of industrialized, domesticated food and its large-scale production methods. Mitchell argues that the marginalization of endogenous foods and the reliance on a small number of exogenous, introduced species is not a situation unique to Australia. He notes that:[54]

> *The proportion of plants used in cultivation is a tiny proportion of the world's edible plant species. There are about 250,000 species of higher plants in the world. Given this biodiversity, it is perhaps surprising that with 10,000 years of settled agriculture only about 100 species have been developed as commercially significant food plants, and only about 20 of these constitute the staple foods of the developed and developing world. It would have taken a huge investment in time and money to create commercially viable native crops and there was simply no immediate need.*

A brief recounting of the history of the development of cultivation of crops and livestock across Australia highlights the matter of scalability in the current discussion. From the outset, as has previously been examined, land under cultivation grew steadily around penal colonies and settlements displacing its traditional owners. In the years from 1860 to 1907, this increased rapidly from 1,188,282 acres to 9,545,856 acres under cultivation.[55] The crops under cultivation were wheat, oats, barley, maize, beans and peas, rye, potatoes, onions, and produce from orchards and market gardens. The livestock also increased considerably.[56] These trends have continued and the contemporary methods of food production in Australia are predominantly in the hands of large agribusinesses that operate on a global scale. Importantly, even the raising chickens, turkeys, and pigs that traditionally used small-scale production methods are sectors of the food industry that have incorporated large-scale, industrialized processes more recently.

Commercialization of a Concept

In this environment of large-scale production methods, how can the concept of an Australian cuisine that uses endogenous foodstuffs emerge? Pollan provides a useful approach by making distinction between the industrialized, the artisanal, and

[53]See for example: Department of Environment Food and Rural Affairs (2006).

[54]Mitchell (1999, 24).

[55]Australian Bureau of Statistics (2001).

[56]Australian Bureau of Statistics (2001)

the 'wild'. He theorizes that global production methods that lead to the industrialization of foods that use fat and sugar, together with petroleum by-products, fertilizers, and chemical additives enable such food-like products 'to appear as pure products of culture rather than nature….'[57] Currently, the industrial food procurement, production, and marketing processes in Australia are culturally inclined towards a European palate. The commercialization of endogenous foods is, as Cherikoff and Brand note perceptively, marking, 'the current trend towards Indigenous foods disguised in conventional European ways'.[58] This commercialization is relying on placing endogenous foodstuffs into industrialized food production processes. There have been a number of studies and research programs that have tried to assess the commercialization potential of endogenous, edible flora and fauna. For example, Hele reports on research about the 'Native Foods Industry', a report that struggles to settle on a language that might be used to describe these foods.[59] This report examines a number of edible flora but surmises that there is little knowledge or interest in the research community because, for example, there is belief that there would be inadequate returns on research and development investment within a reasonable timeframe.[60]

Kangaroo has had more success in gaining acceptance as a source of food for newcomers. Reflecting on global interest in 'le kangurou', Vavasseur noted, for example, that:[61]

> *… tous les voyageurs qui ont visité la Nouvelle-Hollande, Cook, Dampier, Perron, Quoy et Gaymard, en ont parlé avec plus ou moins de détails. Les ménageries européennes en ont même possédé quelques individus vivants, mais seulement comme objets de curiosité. Daubenton place cet animal dans la liste de ceux qu'il serait à désirer d'introduire dans notre pays; mais ce n'est que plus tard qu'il commença à fixer l'attention. Il y a une quarantaine d'années qu'un certain nombre de ces animaux furent introduits vivants en Europe, où il parait qu'ils vécurent fort bien et se reproduisirent.[Trans: …all the travellers that came to New Holland, Cook, Dampier, Perron, Quoy and Gaymard, have described them [kangaroos] in various degree of details. Some European zoos even have managed to keep some specimens alive as part of their collection, but only as an object of curiosity. Daubenton considers that the animal should be part of the list of species that should be introduced in our country, but it's only more recently that he started to be listened to. Forty years ago, some were released alive in Europe and they did survive and started to reproduce.]*

Descendants of newcomers also developed a palate for kangaroo meat. In 1862, Andrews gave an account of kangaroo eating that showed it being enjoyed by European settlers as steak and soup and by inhabitants using open stone fires.[62] In the contemporary era, leading supermarket chains and local butchers alike in

[57]Pollan (2006, 115).
[58]Cherikoff and Brand (1988, 181).
[59]Hele (2003).
[60]Hele (2003, v).
[61]Vavasseur (1861, 42).
[62]Andrews (1862, 544).

Australia now sell fresh kangaroo meat. Competing with the cattle, sheep, and pig industries, it took some time for the kangaroo industry to find a footing in Australia as a commercially viable enterprise. Long the source of meat for inhabitants, its general acceptance in Australia is recent. It is important to note that echoes of negative, 'first contact' attitudes of explorers and settlers to kangaroo meat continue today. As nutrition and ecological sustainability come to the forefront of debates in Australia, influential people are considering the benefits of kangaroo meat in the Australian diet while the beef, lamb, and pork producers fight to protect their turf, reminiscent of the earlier settler times.[63] Some political ecologists argue that, in a country such as Australia, kangaroo meat should be the staple fare because kangaroos do far less damage to the environment than cloven-hoofed European livestock. This view is ridiculed by many as Pascoe notes:[64]

> *When Ross Garnaut championed kangaroo farming as a way of conserving land and cutting greenhouse gases, because cattle are greater polluters than motor cars, the press could hardly contain their contempt.*

At the same time that the kangaroo industry is trying to establish its market presence, it is struggling to meet demand because of the methods of procurement that are employed. From the early days, expeditions and settlers relied on people with skills in the hunting of kangaroos, and in the absence of willing inhabitants, they used guns and dogs. Kangaroo hunting also developed into a sport for settlers out for a day's hunting for game. Various sporting journals provide evidence that kangaroo was considered a good hunting animal due to the skill required to catch one. As one unnamed source in South Australia in the 1840s records:[65]

> *All work ceased however when it was time for the settlers favourite pastime -kangaroo hunting. With all the abandon of an English hunt, they used packs of greyhounds to run their quarry to earth. Good dogs usually brought down the bounding kangaroo after a dash of two miles or so, but cornered bucks frequently killed their snarling attackers with a viscous blow from their paws or hind legs. Infuriated kangaroos trapped by a water hole sometimes even seized dogs with their forepaws and held them under the water till they drowned.*

Reminiscent of early methods that explorers developed, kangaroos are still taken from the 'wild' and the 'bush' by 'kangaroo hunters' using guns and dogs. This attracts significant criticism from some conservationists and vegans alike. Peace argues that there is also a certain amount of repugnance about this industry because cute and cuddly kangaroos first entered the imagination of many young Australians through a television series called 'Skippy the Bush Kangaroo', an Australian version of Lassie.[66] From a different aspect of this debate, the idea of farming

[63]Garnaut (2008).

[64]Pascoe (2014, 43).

[65]Cited by Anderson (2014).

[66]Peace (2011).

kangaroos, of fencing them into paddocks like other livestock, of domesticating them, and developing an approach to kangaroo breeding that is as lucrative as that of cattle breeding seems a long way off and is possibly considered as being culturally inappropriate by some Australian Indigenous people. There is something about this meat being in a 'wild', relatively 'unspoiled', and 'natural' state that gives kangaroo meat a marketing edge in an otherwise highly industrialized, domesticated meat market.

A third aspect of this debate stems from the enculturation argument suggested in Pollan's thesis. The breeding and management of kangaroo stocks was undertaken by traditional owners on their estates. As noted in previous chapters, explorers noted tracts of grassland that attracted large numbers of grazing kangaroos. As discussed previously, and as noted more recently by scholars such as Gammage,[67] explorers did not recognize that these 'natural grasslands' were actually areas of estate that had been cleared by inhabitants and cultivated to ensure that they attracted kangaroos to the area.

As a staple food of many people, it has been successfully brought into the present to be consumed by Indigenous and non-indigenous people alike. At this historical juncture, there is little public discussion about Indigenous intellectual property rights regarding the kangaroo or the breeding and management methods for this important food. It is as though it has simply appeared as a food source into the industrialized markets of the world as a meat from the 'wild'. As Barthes observes that, 'To eat is a behavior that develops beyond its own ends, replacing, summing up, and signalizing other behaviors, and it is precisely for these reasons that it is a sign'.[68] Eating kangaroo is one such activity that now becomes a sign, a symbolic marker, of postcoloniality in its recursive looping through the ever present now (Fig. 9.2).

In terms of Indigenous food sovereignty, it is vital that Indigenous knowledge and skills about kangaroo breeding, procurement, and preparation can be brought to the foreground to ensure that this source of lean red meat remains the nutritious food that it is. Of equal importance, the kangaroo industry needs to be encouraged to enable the scalability of kangaroo meat as a commercialized, hybrid, cultural food product for a postcolonial society that recognizes the rights of Indigenous people to control the development of their traditional foods rather than kangaroo becoming a stripped bare, industrialized product filled with all the chemicals and additives that are becoming so common in exogenously-derived meats. This seems to be an emerging view of food studies scholars such as Pascoe in his summation of his argument that Australian farms of the future need to focus on the artisanal, something that echoes the words of Pollan.[69] Santich also supports this view arguing that there is a need for Australia to move away from industrialized mass production. She argues that:[70]

[67]Gammage (2011).
[68]Barthes (1997, 25).
[69]Pascoe (2014, 50–52).
[70]Santich (1988, 408).

Fig. 9.2 *Endogenous fusion with multicultural Aussie Menu*, Author image taken in Darwin

> *In Australia, there are specialist, small-scale producers of both raw ingredients – such as different varieties of salad greens – and manufactured products such as fresh pasta. It does not necessarily follow that such artisan-style foods are 'better' than the standardized factory product, but at least they provide a desirable diversity.*

Prophetically, in 1861 at the same time as Australia was rapidly expanding its commitment to beef and sheep, Vavasseur records the French understanding of the value of kangaroo as a source of meat, noting that:[71]

[71]Vavasseur (1861).

> *Le fait de l'acclimatation de ces intéressants animaux est donc aujourd'hui hors de toute contestation. Il ne reste plus qu'à travailler à sa propagation dans nos parcs et dans nos forêts, où il fournirait un gibier entièrement nouveau, dont la chasse ne pourrait manquer d'offrir un vif attrait aux amateurs. Plus généralement répandu et élevé en domesticité complète comme le lapin, cet animal viendra peut-être un jour augmenter et varier nos ressources alimentaires…[Trans: The possibility of acclimation of these interesting animals is beyond question. Now remains the work of releasing them into our parks and forests, where they could become an entirely new type of game and an attractive object of hunting. More widely spread and raised as we do with rabbits, this animal may be able to increase our source of food in both quantity and variety.]*

Bampton notes the recognition by French people of the value of Indigenous 'game'. He recounts Bourband's warning that exotic game should be processed for the European market, not as a cheap substitute for traditional European fare, but as an exotic delicacy.[72] As has been examined in earlier chapters, the French explorers certainly developed an appreciation for fresh endogenous foods, knowledge that they took back to France. Their interest has continued into the contemporary period of the re-emergence of interest in, and potential commercialization of Australian foods, through the work of Jean Paul Bruneteau.[73] His work elevated Australian-derived, endogenous, foods into the global, gourmet food market.

Olive and Cherikoff and Brand all argue that the future growth and development of a bush food market will depend on the supply of raw materials on a commercial scale.[74,75] Roberts discusses the challenge of commercialization for endogenous, edible flora and fauna directly, as someone who maintains a restaurant presence in Brisbane, Australia, explaining that:[76]

> *The vision behind Tukka Restaurant is to take the flavours of the bush to the tables of the world. This vision will not be achieved solely through one restaurant or even ten, but through the widespread adoption of native foods into the mainstream of Australian cooking. Tukka is designed as a showcase for the use of native foods in contemporary Australian cuisine. The online store, Gourmet Australia, was created by Tukka to supply ingredients and retail items to Tukka's customers all over the world. As more chefs adopt these incredible flavours and more Australians embrace these products in their own cooking, our vision will gradually be achieved. Your choices make a huge impact on the speed Australia develops this cuisine, so seek out dining opportunities, ask for the products, try these ingredients in your own cooking, and encourage others to discover Australia's unique cuisine. Advance Australian Fare!*

[72]Bampton (1996, 21).

[73]Bruneteau (1996).

[74]Mark Olive of*Black Olive Catering* has become a global television chef. For more information see: http://www.blackolive.net.au/mark-olive-bio/.

[75]Cherikoff and Brand (1988, 181).

[76]Roberts (2007).

Edibility and Taste

Lastly, and possibly the most difficult to change in terms of Australia embracing the endogenous edible flora and fauna around them, the majority of non-indigenous Australians do not yet have a palate for endogenous foods and many Indigenous people know little about such foods and no longer have access to their traditional food resources. Taste and enjoyment of food are an important consideration when trying to understand the relative absence of endogenous, edible foodstuffs in contemporary Australian cuisine. Murton surmises that the typical diet in 1788, in England for the middle class was three boiled chickens, a haunch of venison, ham, flour, suet pudding, gooseberries, and apricots. For the poor it was potatoes, bread, and tea, with once a week for milk and sugar and once a year, bacon.[77] The early colony records show that the penal colony of Sydney was on reduced rations for three years on what was known as the 'Ten, Ten, Two and a Quarter' for a week of rations comprising 10 lb Flour; 10 lb Meat; 2 lb Sugar; ¼ lb Tea; and salt. Brokensha's research in the central Australian context of a remote Pitjantjatjara community shows that this range of foodstuffs became the early Australian fare for Indigenous and non-indigenous people alike.[78] Considerations about rationing aside, the narrative created by early British explorer and settler records of dismissal and revulsion of most endogenous foods have left a strong after-taste in current attempts to entice the immigrant palate. Most newcomers did not develop pleasure in eating endogenous edible flora and fauna, and, as argued by French gastronomist Brillat-Savarin in his seminal text, pleasure of food is a major aspect of 'le gastronomie'.[79] As has been discussed in previous chapters, contemporary research has begun to examine Australian exploration and settlement history, specifically the food history of the early colonial years.[80] Walker and Roberts suggest that 'the meal patterns of the colonists followed the British models according to social class.'[81] By the end of the nineteenth century, Clements argues that the newcomers were eating possibly more meat than their compatriots, less vegetables, and more dairy.[82]

Contemporary discussions with traditional owners across Australia confirm the devastating impact that the loss of food resources had on their ancestors and on themselves as descendants who have inherited such profound losses. Forced into eating foods for which they had no ancestral memory, or knowledge of procurement and preparation methods, the poverty and poor health of Australian Indigenous people has to be attributable at least in part to this loss. Petersen's research showed that in central Australia traditional owners were increasingly forced into a hybrid amalgam of foods because of their forced sedentarisation and what rations were made

[77]Murton (2000, 1347).

[78]Brokensha (1975).

[79]Brillat-Savarin (1825/2007).

[80]Clements (1986), Davey et al. (1945), Walker and Roberts (1988).

[81]Walker and Roberts (1988, 54).

[82]Clements (1986, Chapter 3).

available to them, such as flour, sugar, tea, jam and meat all bought by monies given to them as 'social security'.[83] This range of foods in no way could be considered as nutritionally adequate but such foods staved off starvation for people used to being able to move around their estates to procure food in freedom and with sovereignty. There was an extraordinary range of foods available to inhabitants that were discussed in earlier chapters. These food stocks had been carefully managed and bred to taste, watched with great attention until the appropriate time, and hunted, fished, gathered, prepared, and consumed, sometimes with great relish. The losses of these foods continue to manifest in substantially diminished food and nutritional choices being available to Indigenous people, in particular, and to Australians as a whole.

Some early settlers were experimenting with endogenous edible flora and fauna and, as has been argued previously, even though they were using the same ingredients, their methods of procurement and processing were very different from inhabitants. Gollan provides a fascinating collection of information about the development of now iconic 'bush foods' such as damper and traces the development of the outdoor kitchen, and the concept of portable food,[84] echoing analysis offered by Symons about Australian cuisine being 'one continuous picnic'.[85] The evidence offered in this book certainly speaks to the preference that developed for foodstuffs to be portable. There was a keen focus on provisioning explorer parties with foods that would remain edible for the duration of the journey. Descriptions of how a small number of explorers learnt to preserve fresh, endogenous edible flora and fauna to carry with them also speak to this important aspect of Australian cuisine. What is absent from many of these records, except for those of the French, is any pleasure that newcomers took in these foods. While endogenous foods were procured and prepared to be stored and carried together with colonial rations and supplies, thus being incorporated into the explorer diet, there were few who reported enjoying such food. This evidence suggests that newcomers did not find endogenous food to be either edible or tasty when set alongside more familiar exogenous foods.

Mallos and Argyriou, in their examination of the history of Australian cooking provide a number of recipes they term 'Australian Adaptations'.[86] Their collection of recipes has none that includes endogenous ingredients. It is unclear what makes them Australian. Allen and McKenzie examine early Australian cooking and provide detailed information on the method developed by early settlers to cook kangaroo, called 'jugged kangaroo', that departed significantly from the method employed by the explorers, learnt from inhabitants as they travelled across their estates. The 'jugged' method was used to cook other meats and used an earthenware crock and a lid rather than an oven pit dug in the ground.[87] The recipe was cooked

[83]Petersen (1978, 30).

[84]Gollan (1978).

[85]Symons (1982/2007).

[86]Mallos and Argyriou (1988).

[87]Allen and McKenzie (1977, 8).

in the English manner of adding cloves and other herbs and spices, covering it with brown gravy, adding red wine and served with red currant jelly. Kangaroo and other 'game' were also popular in soup. Burt, for example, notes that, 'Soups made of game are generally very good sort of things. Kangaroo, hare, partridge, pheasant, and grouse soups are excellent…'[88] He offers a detailed collection of recipes and knowledge about the preparation and cooking methods for various 'game' such as kangaroo, emu, wombat, mutton birds, wild ducks and teal, black swans and wattle birds drawing on observation made of these foods in colonial records.[89] Daunton-Fear and Vigar also gather an interesting collection of colonial recipes that have endogenous flora and fauna as ingredients. In addition to fish recipes such as 'Broiled Murray Cod Steaks', they include 'Roast Wallaby' and 'Paraqueet Pie'.[90] Novelty recipes such as those for 'Parrot Pie', 'Braised Leg of Emu', 'Kangaroo Tail Stew', and 'Wild Duck' all find a place in a collection of historical homestead recipes in a collection titled, *Is Emu on the Menu?*[91]

As argued above, contemporary cuisine has not moved very far from its explorer past. 'Australia cuisine' is something of a hybrid, cross-cultural food fusion that emerges from the guts of Australian history where wheat-based flour products such as damper of the Aussie bushman and the kangaroo meat and Warragul greens of traditional owners fuse into iconic 'bush tucker' or the new concept of 'Australian Tukka' that Bruneteau and Roberts have popularized globally. Fahey defines 'bush tucker' as having come to mean 'game, fowl, native vegetables, or seafood gathered by someone who is living off the country'.[92] Clearly, this older definition belies a time when it was possible for people to live off the country. Australia has become highly urbanized and food ingredients are brought into cities drawn from a globalized, large-scale food production system. The new 'Australian Tukka' that uses endogenous ingredients has become commercially viable for specific foods such as kangaroo but little else. Fusions such as Pan Seared Kangaroo with Lillipilli in damper, served with Quandong compote provide inspiration for a nascent genre of delicious, edible, endogenous food.[93] Thomas' excellent books cover the range of endogenous food types available for the Australian cook.[94] Importantly, some Indigenous people are beginning to share their stories about foods from their estates that could become part of a tasty, new form of Australian cuisine, one that the Australian palate is glad to embrace and enjoy.

[88]Burt (1970).
[89]Burt (1970, 69–75).
[90]Daunton-Fear and Vigar (1977, 30, 34, & 37).
[91]Crooke (1966, 5–6).
[92]Fahey (2005, 105).
[93]Kangaroo Industry (2010).
[94]Thomas (1986, 1989).

Some Final Thoughts

Henry Atkinson (19 March 2011, pers. comm.) explains that where non-Indigenous people talk about water flows, Wolithiga understand cultural flows of their waterways and lands. He echoes the words of others when he says 'we know that we have to give back what we take out'. That simple, and powerful, ecological philosophy should positively inform every seminar, round table, meeting, and legislation about the future food security context of Australia as people work to find innovative solutions to current global threats to food security. Non-indigenous Australians fear this approach, a fear that finds its genesis in their arrival to this land, fear of the flora and fauna and fear of the inhabitants. A non-indigenous person, Flannery wrote that despite this fear, '…that this wide, brown land might claim us as its own, is I suspect, our best hope for a sustainable, long-term future'.[95]

The central argument in this book points to the potential for the development of a uniquely Australian cuisine that uses edible endogenous food, 'Australian Tukka'. Such attention has highlighted need for compensation from the nation state in recognition of loss of Indigenous food sovereignty, for the *sui generis* rights of Australia's Indigenous Australian and Torres Strait Islander peoples to be mobilized to address the loss of food sovereignty that has led to crippling poverty and food insecurity for many descendants of the original inhabitants of Australia. Thomas speaks of settling the outstanding balance across the postcolonial world, noting the importance of, 'histories that engender cultural and political transformation of nations and relations mediated through time'.[96] Les Hiddins is an iconic and influential figure in settler Australia known as the 'Bushtucker Man' who had a very popular and long running television show and has also written a 'Bush Tucker Field Guide'. In this book, widely available in mainstream bookshops, Hiddins highlights the importance of having a proper education in endogenous edible flora and fauna, undertaken by traditional owners who can speak for their country, and having this knowledge then taught by knowledgeable educators in mainstream education systems to the next generation of Australians. Hiddins offers a very important reflection, writing that:[97]

> *I reckon the real answer is to take the time to learn what your country is all about and what the different environments have to offer. That way you move out of the realm of guess-work and into the realm of education.Part of the learning process is a change in visual perspective. By that, I am referring to the way you look at the landscape – really you should be looking* into *the land, not* at *it. Literally 'reading' the landscape. That was one of the very first lessons I had to grasp once I started the learning process.*

It is my hope that this book contributes to such a transformation of the colonial perspective about endogenous food that has so profoundly influenced the

[95]Flannery (2007, 123).

[96]Thomas (1991, 9).

[97]Hiddins (2003, vi-vii).

contemporary national palate. To do so, the food sovereignty rights of Indigenous Australians must be addressed and non-indigenous Australians must move beyond the frontiers of taste, towards a celebration of Indigenous food knowledge; together developing appreciation and pleasure in endogenous, edible flora and fauna, and its potential to contribute to an ecologically sustainable, Indigenous rights-based, delicious, nutritious, postcolonial Australian gastronomy.

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