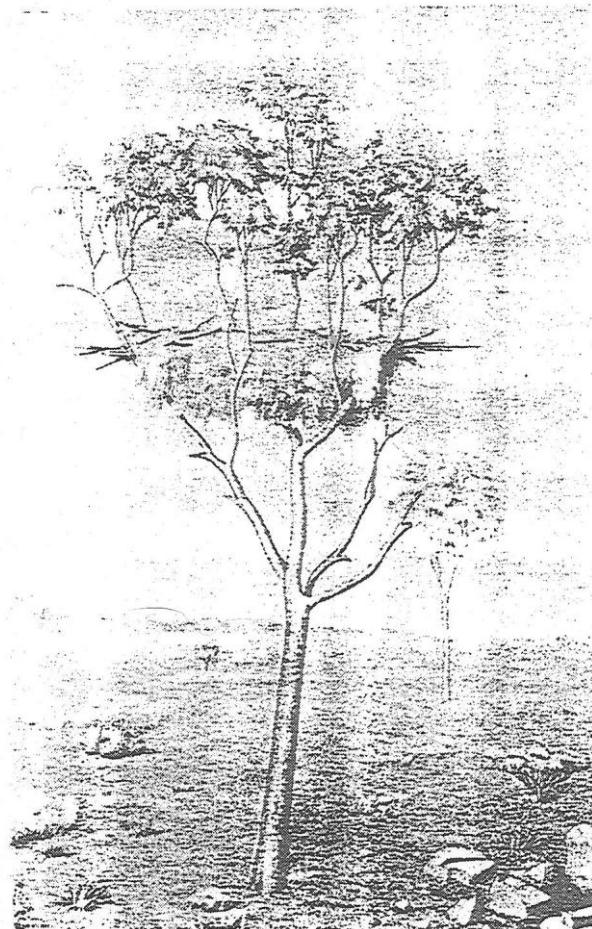


A FURTHER TRANSLATION OF SELECTED  
CHAPTERS OF Dr ERHARD EYLMANN'S

***Die Eingeborenen der Kolonie Sudaustralien***

("The Aborigines of the Colony of South Australia")



Transcribed and Translated by:

Willem Christiaan (Bill) Gerritsen

and

Rupert Gerritsen

**In Memory**  
**Of**  
**WILLEM CHRISTIAAN (BILL) GERRITSEN**  
**1920 - 2001**

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Intellectual Property Publications  
PO Box A145  
Australian National University  
Canberra ACT 2601

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National Library of Australia  
Cataloguing-in-Publication Entry

Eylmann, Erhard  
A further translation of selected chapters of Dr Erhard  
Eylmann's *Die Eingeborenen der Kolonie Sudaustralie*  
(The Aborigines of South Australia).

ISBN 0 9581045 1 4.

1. Aborigines, Australian – South Australia – Social life  
and customs. 2. Aborigines, Australian – Northern  
Territory – Social life and customs. I. Gerritsen, Rupert,  
1953-. II. Gerritsen, Willem Christiaan, 1920-2001. III.  
Title.

305.89915

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## FOREWORD

Erhard Eylmann's *Die Eingeborenen der Kolonie Sudaustralien* was first published in 1908. There has always been interest in the publication because of the detailed observations made by Eylmann. The depth of information in many instances is superior to that found in some of the better known Australian ethnographic works of the same period. Unfortunately, the fact that the book is written in German, and has never been fully translated in to English, has made it relatively inaccessible. Because of this it has, by and large, only been used as a source by specialist researchers. A number of chapters have, however, been translated by a variety of interested parties in addition to the chapters that follow. These have included :

- Anonymous 1966? **Weapons**, Australia?: s.n.  
Chapter 18: Weapons
- Anonymous 1966? **Relations Between the Aborigines and the Europeans and Asiatics**, Australia?: s.n  
Chapter 25: Relations Between the Aborigines, Europeans and Asiatics
- Sherlock, K. 1972 **Adhesives and Cements**, *Journal of the Anthropological Society of South Australia* 10(7):4-12  
Chapter 16: Adhesives and Cements
- Hubel, R. 1994 **Selected Chapters of Erhard Eylmann's Die Eingeborenen der Kolonie Sudaustralien** Darwin: Robin Hodgson  
Chapter 14: The Drugs  
Chapter 19: Tools and Utensils  
Chapter 20: Spinning, Weaving and Platting

Consequently, if the translation that follows is taken into account, nine chapters, 10,12-14,16,18-20 and 25, will now have been translated. This represents approximately 24% of the whole work. Hopefully others will take up the task of translating other chapters so that eventually the whole book, in one form or another, will be accessible to English-speaking researchers.

Only three specific conventions were adopted in the following translation. Firstly, any English expressions and speech which appears in English in the text have had quotation marks placed around them. Where German words appear in the text in quotation marks those quotation marks are bolded. Finally any name of any Aboriginal tribe or group and any Aboriginal words or expressions specific to this region are put in italics, though the form of spelling used by Eylmann has been retained.

It should be noted that some terms that might be considered highly offensive to Aboriginal people have been modified in accordance with modern usage. In all other cases the original meaning of words, even where they may reflect Eylmann's prejudices, have been retained.

Rupert Gerritsen  
June 2002

## CHAPTER 10

### Infanticide, Cannibalism and Human Sacrifice

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However much the Aborigines' notions of good and bad differ from ours it is quite clear they do not consider infanticide, cannibalism or human sacrifice to be a crime. In all tribes the killing of newborn children who have not received the mother's breast is not a rare occurrence. As a rule it only occurs when the parents have to struggle hard for survival, or when the mother has another child to suckle. Regarding the first case, we should not forget that an increase in the family can easily have fatal consequences for the mother as the Aborigines have to struggle harder for their existence than the poorest of the poor. With hindsight I have noticed in the second case that the children are only weaned in their third or fourth year, as the woman is usually poorly fed and thus seldom has enough milk for two children. This fact is also the reason why in the case of twins only one child is kept. The reason weaning takes place so late is based on the lack of easily digested vegetables. Besides, it is abundantly clear that an Aboriginal woman on walkabout cannot carry two progeny at the same time. Normally they stab the condemned child to death instead of putting sand in its mouth. A woman from Sterling Station told me with a smile on her face that she had killed three of her children (one from a white person, two from an Aborigine) by pouring boiling water into their mouths.

Cannibalism occurs also among the tribes. Oddly enough the people of the expansive interior limit themselves to the enjoyment of eating the flesh of children. This is more noticeable than otherwise because cannibalistic people usually eat the flesh of slain enemies. Understandably they eat the flesh of new-born children who have lost their lives for the aforementioned reasons. Besides, they don't reject the bodies of children that have died of natural causes, as long as they are in an edible state. When there is a shortage of food,

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as occurs now and then, an infant is consequently killed because the tribespeople long for a good roast.

Cannibalism is more in vogue with the tribes of the north than in other parts of southern Australia. In many places not only is the meat of children considered a delicacy but adults as well. Some tribes are reputed to eat all their dead but for others it is sufficient to partake of some of the fat or flesh of the adults, as long as they have not had a long, debilitating illness and have not lost too much weight. The reader will understand that these cannibalistic reports are, as a rule, not without shameful actions. For example a young man from the Daly River Mission told me that his mother, after her death from natural causes, was partially eaten by the tribesmen and that the elders had thrown her breasts into the water.

According to Taplin there is a tribe on the south coast called the "*Merkani*" who are particularly hated by the *Narryngeli* because they steal people's fat to eat. Cannibalism was also common in all the tribes that have died out. Two elderly Aborigines from the west coast of Lake Alexandrina told me that they often heard in their younger days that all along the south coast of the colony people were eaten.

Gason noted that the *Diari* ate fat from the dead during the funeral. The Aborigines from the Kilalpanina Mission refused to give me information about this. I attempted to obtain the correct information on cannibalism by the *Diari* and their neighbours from those with a good knowledge, but because these cannibals were aware of the depth of the Europeans' detestation of it they constantly gave evasive answers. A *Ngaminni* who I met at Koppermana told me, however, that the older people from his country, after having enjoyed in some parts of the corpse, painted a circle round their mouths with red paint.

One has the feeling that revenge, superstition, hunger, or the desire for delicacies, are the reasons for anthropophagy.

The Aborigines never torment their enemies, who have fallen into their hands, to death as do the North American Indians and other people; it is doubtful that untrammelled revenge has turned them into cannibals.

Many seek to lay the blame for the cannibalistic habits of the Australians on the fact that they expect, by eating people, to obtain their cleverness and strength. I have, despite great effort, not been able to determine if the South Australians have that idea while eating human flesh. If it is the case, that this superstition of our Australians is the motive for cannibalism, then we can rightly ask: Why do the inhabitants of the interior only select children to eat and not men in the bloom of their years?

Everywhere, and in all instances, people are driven to cannibalism by hunger. Without doubt the need arises during bad years, in the hardest times for the original Australians, when even whole tribes have to eat human meat if they don't want to perish. Now and then cannibalism also arises amongst the Aborigines who are only able satisfy their hunger by eating foul tasting and indigestible vegetables, causing a strong and unhealthy desire for meat or fat.

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The main reason for cannibalism in Australia is, however, the desire for delicacies. It is certain human meat is sought out because of its wholesome taste. Everywhere it is claimed that it tastes like pork and those who have tasted it once consider it a superior food. The original Australians seem to be of the same view. When I asked a *Larakia* who had taken part in many cannibal feasts how human meat tasted, he gave me the answer, "My word, good fellow tucker! All the same as pig." The taste, however, does not appear to be exactly the same to everybody in regard to human flesh, as an Aborigine I know maintains that meat from animals is much tastier than from people. Generally the roasted flesh of a child is preferred to that of an adult. However, I have also met people who maintained that meat from a child was not very good. A *Plinara*, for instance, told me that his friends did not like to eat "piccaninnies" [children] much because they had "too much milk inside" them. I have noticed that human fat is highly prized by them and, as a *Malack-Malack* told me, this was the only part of many of the corpses that was eaten.

The preparation of the corpses involves the removal of the intestines. It is a matter of some concern to the adults how the corpse is handled. In some cases an allocation of parts takes place.

The preparation of the corpse is done in the same way as with kangaroos and wallabies.

To my knowledge human sacrifice only occurs amongst the tribes in the north. What this is based on I cannot say because they would not give me any further information owing to the fear of angry spirits and the "old men".

In the neighbourhood of the Jesuit Mission at Daly River it was claimed that during a months long corroboree a man named *Tjaboi* was offered. One of the missionaries told me the following about this event: One day a young man, who stood out from his fellow tribesmen in having a strong well-built body, came and requested immediate baptism. When the missionaries told him that he must first spend time receiving instruction in the faith he became very depressed and left. Some days later he was strangled. His head, heart and other parts of his body were then eaten by other participants in the corroboree. They satisfied their appetite with his meat and the rest was burned. They then threw the bones in a small pit that was encircled by a wall with an entrance and some of the men sprinkled this with blood taken, by bloodletting, from the corpse. Afterwards the pit was covered and some women gathered inside the encircling wall and all the men engaged in intercourse with them over the bones of the dead man.

## CHAPTER 12

### Hunting and Fishing

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As a hunter the Australians are a people without peer. It is not surprising that people without the ability to hunt wild animals suffer much during prolonged droughts.

The main reason for their admirable success is their unsurpassed faculty of observation, their great stamina and their capacity in tracking and outwitting wild animals. Their success in hunting is not only due not to the sharpness of their senses, which are basically the same as Europeans, so that men whose eyesight has been previously affected by conjunctivitis are seldom good hunters. Their effectiveness as a hunter is due in greater part to their knowledge of the behaviour of wild animals, gained by constant schooling and observation and their recognition of the imprints left by animals on the surface of the ground.

One of their main hunting methods relies on the ability to creep up on game, such as any animal of prey, and bring it down from close range with a thrown weapon. They particularly rely upon their knowledge of the tracks animals leave behind on the ground. Already as a child they try, under instruction from their mother, to catch lizards and "rats" by following their tracks. Later they will progress, through continuous practise, to the point where they can even recognise the footprints of all the members of the tribe. Even the age of the track can be established with great certainty by a good "tracker".

During my journey south west of Central Mt. Stuart a *Katitje* was my constant companion for a week. One day, as we were passing the boundary of his home territory, he suddenly stopped with a shout of astonishment and attentively examined the imprint of a human foot in the sand; he had found the track of a woman in the sand, who, two years previously had been taken from his tribe by a strange tribe, and was fleeing back to her relatives. We followed her track, which according to him were no more than three hours old and found the woman at sundown at a waterhole fifteen kilometres away. I especially noted that the tracks

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did not have any eye-catching characteristics that would have made it possible, in my view, to differentiate them from those of other women.

The Aborigine also has a very retentive memory. He is capable memorising details with surprising facility as the following illustrates.

When I arrived at Stuart-Town [Alice Springs] I instructed an *Arunta* to return both my horses on the morning of the third day to my camp. Because they had already wandered out of sight I showed him their tracks. At exactly the appointed time he arrived with them. He had found them without difficulty sixteen kilometres from the camp. All around the settlement the ground was covered with the tracks of camels, horses, cattle and goats that had been driven into the yards each evening, with the result that the ground had become like a sandy desert. Because of this he did not simply follow the tracks from their starting point but singled them out a short distance away from the camp, where he was sure they had not been obscured by other animals.

Among the settlers the general opinion is that with continued practice a white man can become nearly as proficient as an Aborigine. I must inform you there are cases of adults who claim to be the equal of the Aborigines in detecting and recognising tracks, though I know that capable Aboriginal trackers can ascertain the age, sex and the strengths of many wild species from the condition of the track. If a white person in this regard received the same schooling from childhood as an Aborigine I would be in no doubt that he would also achieve the same level of proficiency in recognising in most cases the significant details in which they differ from one another.

The tribes of the north cannot be compared with those inland in their knowledge of tracking. This is readily apparent and based on the differing climatic conditions of both areas. In the north, as a consequence of heavy summer rains the ground is normally covered with tall, dense grass, so that the knowledge of the tracker is naturally not as important as it is between 15 and 30 deg. latitude, where it is exceptional for a thick covering of grass to form, and the imprints of feet stay for a long time as the weather is seldom stormy and rainy. The best "trackers", by the way, live on the Finke River according to settlers.

Naturally I cannot elaborate much further in regard to the characteristics of tracks in the Australian wild. But may I add a few words about the "features" that enable the Australian to differentiate the tracks of people from each other. In a case where a person has a long scar on the sole his foot or one of his toes is crippled the owner of the track can be determined without difficulty. In cases where the feet are completely normal then we are unable to differentiate them from the prints of most other people, even when we can measure the width of the steps and their general likeness, exactly as our hunters sometimes do when they have to "declare", according to the condition of the track, the species, sex, age and strength.

In any case, two different characteristics are relevant for the Aborigines when it concerns two different feet. As we know, no two people

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have identical body shape. We can thus also correctly assume that that the track of each bare foot shows deviations that are caused by the build of the man. Most times, however, there are so few visibly distinctive characteristics that even the shape escapes the sure eyesight of the best equipped "tracker". Many clear differences can, however, be attributed to the gait. These differences are produced not only by the placement of the feet or the length of the stride but are betrayed by the soles of used footwear. "Features" of this knowledge that can easily be detected by everybody include the following: a short, flat furrow that runs from the front to the back and a special deep imprint of the heel of the big toe. How these distinguishing marks come about I won't explain. I have to stress, however, that the degree of variation in the feet of adult Aborigines is by no means less than one would expect. The toes often show changes in their shape or placement acquired through injury or from marching on stony ground. Naturally these changes are normally not as evident in people who wear heavy or narrow footwear.

What are the signs that help the Aborigine ascertain the age of the track? In my travels in the colony I was, as previously mentioned, forced to look for my horses each morning, as they had often strayed up to 10-12 km from my camp. When I was unable to hear the sound of their bells then I would follow their tracks, which, at the commencement of my journeys, in the neighbourhood of stations and near much frequented watering points created considerable difficulties, with the ground around these places always showing fresh and old hoof-prints. In the end I was capable of not only distinguishing the hoof prints of my horses from those of others but could also determine if the tracks were one or two days old. Foremost I would consider the condition of the ground. By making marks with my fingers I was able to establish the colour of the soil which had been disturbed by the horses. Specifically, the surface of the ground is always lighter than underneath. I won't go into the reason why here. When the dark soil beneath the surface is exposed to the sunlight for one to two days the colour difference is markedly different from that of the surface. Sometimes I was able to tell with some certainty where the horse stayed the first or last half of the night. When there are quite a few stalks and leaves or other hoof-prints over the tracks or small animal have crossed them, then the prints are several hours old. With these types of prints even the Aborigines are unable to draw a conclusion as to their age.

With "prints" the Aborigine, as a matter of fact, solves the problem by paying noting trodden on or broken grass stalks, in a word, to all the signs with which he is presented. Because the grass in the interior is green for only a few weeks, damage to leaves and stems is consequently useless in most cases in trying to establish the age of a print.

I have often noted that when hunting the Aborigines creep up on the animals like beasts of prey. In most cases this normally applies to mammals and birds. Smaller animals that conceal themselves underground he forces to the surface with grass fires and then finishes them off with a boomerang or club, or he digs them up with a digging stick.

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He uses fire to force larger animals to move to a place where it is easier to stalk them or kill them with spears. The frequency with which fire is used in hunting in the inland is apparent at certain times of the year when, day in and day out, somewhere on the horizon one can see clouds of smoke rising. When they set fire to soft grasses of the sticky Triodia [*Triodia pungens* - spinifex] they do not take any measure to ensure the safety of themselves or others because bushfires in South Australia are not considered to be dangerous to people. Also, by setting up ambushes at drinking places he is able to kill much game in the morning as well as in the evening twilight. (Only a few tribes make use of poisons. Pits to catch wildlife are used now and then in the interior.<sup>1</sup>); though I have had no experience of traps for other sorts of game.

In case the wind direction is unfavourable when hunting the inhabitants of the north daub themselves with mud so that they won't be smelled by the wild animals. Furthermore, they keep a large branch in front of them when there is nowhere to hide. Aquatic birds are often caught in this way by hand, by covering their heads with reeds and moving slowly, step by step, up to their neck in the water, until they can get near.

Also, in other parts of the colony, the Aborigines occasionally use a peculiar method to outwit their prey. Mr Cowle, a trooper in the inland, told me that he once witnessed a *Lurritji* boy catching "rock pigeons" (*Lophophaps leucogaster*) with his hands. The young hunter hid in a small depression he had dug next to a small waterhole with a narrow entrance concealed by porcupine grass. When a pigeon came to within reach of the entrance it was seized with lightning speed. Another unusual method utilised by the *Narryngjeri* to catch plumed birds was described by Taplin in the following words: "Wild fowl are caught by means of a long wand with a noose at the end. An Aborigine lurks silently amongst the reeds with this in his hand. It looks like a reed. It is slipped over the head of the first unsuspecting duck or other water fowl which come near enough and it is dragged to its captor."<sup>2</sup>

Hunting for sport is naturally unknown to the Australian; because of the abundance of wildlife he does not engage in scavenging either.

Many animals, such as the kangaroo and wary birds, show considerable shyness toward the Aborigines. This is not surprising as they consider the Aborigines their greatest threat and they for their part give them no rest or peace. When, towards the end of 1897, I stayed for several months at Knuckey's Lagoon I noticed that each time

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<sup>1</sup> I thank an apparently reliable settler who has extensive knowledge of the manners and practices of many tribes for the following information: The Aborigines in inland South Australia not only kill emus with a boomerang but also catch them in traps. These are dug near waterholes and in some areas consist of a five foot deep pit that has a spear placed upright in the middle of it in such a way that the point is approximately fifteen centimetres below the surface. The opening is covered with half-broken sticks that are then covered with grass and the whole then covered with soil. Two small fences made of plaited twigs are placed in such a way to force the bird to cross over the trap when it goes for water. To prevent the possibility that the emu will smell the trap, or its surrounds, porcupine grass is burnt. I don't doubt that Aboriginal Australians catch emus this way, but I think it is possible that my informant made his observations somewhere else in another colony and not in South Australia.

<sup>2</sup> G. Taplin, "The Narrinyeri", page 42.

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hundreds of water- and swamp-fowl that inhabit the water basins are frightened off and fly away when an Aborigine comes in sight; while I without difficulty could come close enough to be within shooting range. I noticed this particularly as there were more Europeans and Chinese than Aborigines who hunted, and they as a rule were only equipped with noiseless deadly spears.

I will now delve more deeply into the means by which the Aborigine hunts the wild animals that comprise a major part of their food supply.

Marsupials are amongst the main animals that are hunted in South Australia. The largest of these in the red kangaroo (*Macropus rufus*), the grey kangaroo (*M. giganteus*) and the antelope kangaroo (*M. antilopinus*) are usually killed by spearing in an ambush. Apart from this they also chase them with a large pack of dogs. Of course these should not be in a bad condition if the hunt is to be successful. The euro (*M. robustus*), which frequently comes down from the hills, is often ambushed; also they like to hunt them using grass fires (*Triodia*) in the manner mentioned above. The rock wallaby (*Petrogale lateralis*) is preyed upon in many of the same areas as the above mentioned kangaroo species, because it gives away its hiding place easily owing to its habit of living on boulder-strew strewn rock-faces near waterholes. The Aborigine lies in wait at dusk when it wants to still its hunger and slake its thirst, or drives it out of its hiding place by smoking it out. The possum (*Trichosurus vulpecula*) can also be counted as important game for most of the tribes. It prefers to live in the hollows of the gum trees (*Eucalyptus rostrata*) that line the creeks and it comes out with the onset of darkness. Thus, if an Aborigine is able to determine, from the fresh scratch marks in the light coloured bark, that a tree accommodates an "Opossum" - as the settlers call it as previously mentioned - they then firstly try to find the hole in which it is located. To do this they poke a long slender stick deep into each branch hole until they meet resistance and they then rotate the stick. If some hairs adhere to the tip they then know that they are in luck. He then opens up the bottom of the hole with an axe at a point that has been measured with the stick and pulls the defenceless and extremely frightened animal out of its hiding place. To make a toehold for his big toes when climbing he cuts notches in the tree about one metre apart. Such marked trees can be seen throughout the inland. To obtain wattle grubs the Aborigine proceeds in a similar manner. At Pine Creek I observed an old woman from the *Wulwanga* tribe use a different method to catch "Opossums". To determine if a hollow contained an animal she didn't use a stick, but put her nose in the hole to smell for excrement. If the animal stayed calm, she would then address another hole, but if it became restless because it had smelled her then she would immediately open the hollow near the bottom. Another important animal for the South Australians is the bandicoot (*Perameles*). They force it from its underground nest with grass fires and kill it with a boomerang, a digging stick or a normal club. In certain situations dogs are a great help when hunting. Hunting for "rats", snakes and longer

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lizards are carried out in a similar manner. The Aborigines also dig small game such as this out with their digging stick, or try to surprise them when they are feeding. Their deep knowledge of tracking stands them in good stead as they can determine from footprints in the vicinity of their nests if it is occupied. Everywhere the emu is an important species of feathered game. Hunting it does not present any great difficulties for the inhabitants because, owing to its curiosity, it is quite easy to outwit. The inhabitants of the northern part of the colony ambush them and bring them down with their main weapon, the spear. The southern tribes mainly use a club for this purpose. I heard from a *Diari* that they, east of Lake Eyre, used to encircle them and, after driving them together, kill them with boomerangs. Around the MacDonnell Ranges, and perhaps elsewhere, the Aborigines prefer to use poison, *pitcheri* (*Duboisia hopwoodi*) so that they are semiconscious when pursued. They do this by digging a soak near a waterhole which many local animals drink at, and put large bunches of twigs in it. To ensure the bird does not quench its thirst at the larger water source but from the smaller soak, they cover the larger one with branches. There are many other

kinds of feathered game which are eagerly hunted, as we shall see from the chapter on provisions and cookery. When hunting this type of game they normally only arm themselves with a throwing club, a digging stick (north) or a simple club. Bustards and larger birds that are preferred dietary items, such as the many types of waterfowl, are sought by the Aborigines, especially on the coast, and killed with light spears. Ducks were easily caught in the south, according to the overseer of the Point Macleay Mission, because they were unable to escape the quick movement of the pilferers. According to Taplin<sup>1</sup> the *Narryngieri* use nets to catch them. They encircle them when they are hiding in the thickets with bullroarers and flush them out by slapping the water and with the noise created by the bullroarers.

It just remains for me to provide information about the South Australians hunting dogs. As is known, the Aborigines of the whole Australian continent catch young dingoes and use them to assist in hunting. Without doubt this gifted animal, with its sharp senses, is able to render excellent service by tracking and catching game, if treated well from a young age so that it reaches its full potential. In the colony the tame dingoes are poorly fed causing them to lag behind those that are free. When a dingo is caught at a very early age a woman will suckle it until it reaches an age where it can be weaned; later it receives totally inadequate food consisting of plants that are difficult to digest. The dingo is easily turned into a house pet. As Aborigines from various areas of the colony assured me it is not unusual for tame house dogs and wild dingoes to mate, without interference from anyone. I have often seen cross-breeds; all were, however, retarded in their development because of an insufficiency of food. The tame dingo is absolutely reliable and does not bite. They are not as faithful or attached as our dogs.

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When there is a lack of food at his master's, then the dog will often leave and enjoy a free life, or go to a tribe that wil look after him better. In the interior I have seen dingoes which show all the signs of having run away from the Aborigines. When I stayed at Frew River there was a large, good-looking specimen that joined me of his own free will, and was for weeks my constant companion. At night he slept on a corner of my blanket and during the day while I was travelling he was always near me. When I rode at a slow pace the dog would trot in front of my horse and, as it moved faster than me, it would regularly rest in the shade of a bush when the distance reached 1/4 kilometre, until I had caught up with him. One day it found a dead kangaroo and it stayed behind and I never saw it again.

Most of the Aborigines nowadays also have European dogs. At the camps of tribes who have been in contact with the whites one always finds a large number of half-starved dogs lead by a mangy cur that is usually a cross-breed of the larger greyhound, in Australia called the kangaroo dog and considered to be a distinctive breed. One day at my camp on Knuckey's Lagoon approximately twenty "Alligator River Blackfellows" passed by me; men, women, and children walking in a single file accompanied by seventeen miserable mangy curs. If there is no "bloodfresh" [injection of new bloodlines] taking place from the station owners' dogs then such dogs will become degenerate.

The Aborigine is very fond of his dogs (*Canis dingo* and *C. familiaris*); and they are often worth more to him than his close friends; he knows well that they surpass his best friends in sincerity and faithfulness. At one of the *Wulna* camps I met an old man who cried like a child for his dog which had broken its leg. It is the only time that I have seen an adult male Aborigine cry. I shall now discuss another example of the close relationship between man and dog in Australia. When I stayed at Rum Jungle in late summer 1898 it rained very hard and constantly, day and night for three days, and, along with the heavy rainfall of the past months, the surrounding area turned into a quagmire, so that the Aborigines were loath to leave the protection of their huts. Because of this they were greatly distressed when an old woman's dog starved to death. I only

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<sup>1</sup> Taplin, "The Narryngieri"

noticed the woman as she carried the dog with tottering steps and loudly lamenting, to bury it. I later heard that apparently she too starved to death. As far as I know the Aborigines do not kill their dogs. If they don't want to keep a litter then they will give the pups away or swap them, and when a dog is mortally ill then they will calmly let it die in a corner of their hut rather than speed up its death with a well placed blow with a club. If one shoots one of these thieving animals, then you attract the bitter enmity of the owner or the whole tribe, even the saddlery has to be placed in a safe place. The Aborigines always share their huts and their camps with their dogs but not, however, their food, their selfishness is too great. As a rule these poor animals must be satisfied with the leftovers. Because of this they are shielded from starvation, with the master and his family leaving behind the stomach

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and intestinal contents, hair, a relatively few feathers and the bones. What they catch in their patrols around the camp is not worth mentioning. The *Warramunga* place the corpses of their dogs in the branches of trees, just like they do with their youngsters, on a bed of sticks and branches that resembles the nest of a bird of prey. On a few occasions, however, I saw such dogs from these tribes that were just hung from branches and were not covered with bushes. A dog that dies a natural death isn't eaten, as I will explain in the chapter on food and cooking. As far as I know the dogs in many places, if not everywhere, are given a name. It also appears they have a calling name for them. I was, for instance, travelling one night in the company of several *Arunta* and *Kaititji* of both sexes toward the western end of the Reynolds Ranges when the women wanted to recall their dogs, which had left us to pursue a few kangaroos, by yelling out loudly to call them back. They lit the porcupine grass as well to make the dogs' return easier.

What use are these dogs to the Aborigines? This question is, as a whole, difficult to answer. According to me the South Australian's dogs are of no value in hunting because of their poor condition. But their usefulness is not to be underestimated. According to what the Aborigines say they are most help in catching snakes, lizards and "rats". That these dogs, as well as the tame dingo and the domestic European dogs, are generally not much use in hunting for larger game, or game that is fleet of foot, makes sense to anyone who has closely observed them. I quite often witnessed a pack of them, yapping and howling, put an emu to flight, but each time the hunt ended without any result and the curs returned to their masters completely exhausted. However I also saw many kind of game that appear to have been caught and killed by the Aborigines' dogs. During long, hot spells there are many dogs that injure their paws, or else they hurt them on the small branches that lay about. I have also heard that dogs have been killed or badly injured by the kick of a kangaroo or emu that they have cornered.

What is worth knowing about fishing is easily recounted.

As we shall see in the following chapter fish play an unimportant role inland as they usually only appear in the largest of the scattered waterholes and those that do appear in larger concentrations are, moreover, only small species. The smaller fish are simply caught by hand or catapulted onto dry ground using a scoop, a shield or a heavy branch. Where the body of water is deeper they drive the fish into a shallow part which is then blocked off with an eathen dam. In parts of the MacDonnell Ranges small spears are used to catch the larger species. On the Frew River I met some Aborigines who made catching by hand easier by chasing the fish from the middle of a waterhole under twigs that had been securely installed at the edge.

In the north, between the coast and the Ashburton Range, fish are caught with nets or spears. As these bodies of water begin to dry out in winter and spring the fish begin to die

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in the stagnant water, making it easier to catch them in large quantities without any equipment. If fishing with small boat-shaped hand nets (see Chapt. 19) one wades out in the water while supporting the top edge of the mesh, through which rods have been inserted, with both hands in

such a way that it forms a sort of oval. When spearing fish, spears with several prongs are employed (see Chapt. 18) or, if these are not available, a hunting- or fighting spear.

The principal fishing equipment utilised by the *Diari* and their neighbours is a long trap net of saplings (see Chapt. 19). It is stretched between two poles anchored in the ground, usually in the evening; during the night the fish become easily trapped headfirst in the mesh. Sometimes they use a drag net such as I saw on Coopers Creek. They fish with drum nets in swift flowing water.

I never observed the *Narryngieri* while they were fishing. Smaller fish are found in large numbers that they catch in shallow pools of water with heavy twigs in much the same manner as the people of the interior. According to an elderly dependant of the Point Macleay Mission two people held a wide net taut (see Chapter 19) while two or three others tried to force the fish into it by wading out and making lots of noise.<sup>1</sup> Those pictured in the sketch in Fig. 3 of Table 34 show how this tribe fished as described by the previously named Aborigine. In former times the *Narryngieri* also speared larger fish from the bark canoes at night, often using firebrands to provide light.

The tribes with which I came into contact, as stated earlier, had no knowledge of fishing with hooks; according to Spencer and Gillen<sup>2</sup> the South Australian Aborigines on the rivers that flow into the Gulf of Carpentaria use hooks made from bone or wood.

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<sup>1</sup> The Narrinyeri

<sup>2</sup> The Northern Tribes of Central Australia

## CHAPTER 13

### Foodstuffs and Cookery

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The Aborigines mainly rely on the animal kingdom for sources of food. Plant foods play a minor role as much of the vegetal resources used are diminutive and sparse, or damaging to their health if eaten in large quantities.

During the frequent droughts, when edible vegetables are scarce and there is a lack of plump game, the diet of the Aborigines of the interior is rich in protein, although deficient in fat and carbohydrates. They easily loses weight even when there is no famine; even though there is a high level of consumption it is unlikely that they can satisfy their appetite and the diet is not balanced. Although many nitrogenous components are contained in the food it is evident there are times when they crave fats and starch.

Roaming, unemployed cattle-hands from the inland cattle stations also suffer from this same deficiency. These men beg at the stations to satisfy their craving for meat; the flour to make their dampers they usually buy from a store at a high price. Many of them have an incredible craving for sweets of all kinds, like children with a sweet tooth.

With animal foods the Aborigines are not very choosy. All mammals, birds, reptiles, amphibians and fish are considered to be edible; also the larger molluscs are considered digestible fare. Not many insects are eaten. Even the grasshopper, which is consumed by many foreign peoples on a higher cultural level in more favourable circumstances than our Australians, is neglected.<sup>1</sup> These do not occur in such concentrations as they do in many parts of Africa and Asia - I only once saw a large swarm on the north coast - although many of the larger species appear in such vast quantities at certain times of the year that even a child could gather enough in one hour for a meal for one person.

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The plant foods in the interior consist mainly of seeds, fleshy fruits, rhizomes and tubers; other plants are not utilised much anywhere. The meal made from what has been gathered, with a few exceptions, has a disgusting taste and would give Europeans indigestion.

On the north coast vegetable foods are a more significant factor in the Aborigines' diet than they are in drier areas. This is because the floodplains produce many edible fruits and roots.

As I stated earlier, the Aborigines enjoy the flesh of all the vertebrates from their country, not scorning anything even when other juicy, tasty cuts are immediately available. We cannot assume that mouthwatering beef is preferred to the flesh of wild animals. Because he rarely revels in abundance, and famine often touches his family, the hunter focuses all his senses and faculties to catch larger game and so relieve his hunger and that of his wife and children. His prey therefore consists, in most cases, of the commoner animals that are easily caught.

In this regard only one kind of bat is in question, namely the *Pteropus gouldi*, the large flying fox that lives in parts of the north coast. Despite its penetrating smell this animal is still not scorned by the Aboriginal connoisseur.

The dingo is eaten by all tribes. The meat is not considered a delicacy by any of them. Tame dingoes are not usually slaughtered.

*Hapalotis* species [parrots?] provide many meals for the Aborigines between the MacDonnell Ranges and Lake Eyre, where they appear in huge flocks and temporarily take up residence on the steppes.

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<sup>1</sup> According to Spencer and Gillen grasshoppers are eaten by the Mara on the Gulf of Carpentaria ("The Northern Tribes of Central Australia" p. 771).

The Aborigines like hunting kangaroos and wallabies because they are easily outwitted, their large body mass and excellent meat, besides being common in most parts of the colony.

In the interior both *Macropus* species (*M. robustus* and *M. rufus*) are the most important game. The tribe becomes very excited every time a lucky hunter comes home with a euro or kangaroo; they all hope they will get a little bit of the prey. Even the dogs show their pleasure even though they only get bones that have already been gnawed. The tribes on the south coast hunt all the larger types of kangaroos (*M. rufus* and *M. gigantus*). On the north coast crocodiles are more important than the marsupials that live there (*M. antilopinus*) because of their size; however, they are hunted less often.

The wallaby is as important for many of the tribes as the kangaroo. Although they are smaller they are generally not as shy of people as many of the more commonly hunted species. The species in question are: *Macropus greyi* (south coast), *Petrogale laterale* (in the interior of the colony), *Macropus unguifer* s. *onychogale unguifer* and *Macropus agilis* (north coast).

Kangaroo-rats (*Bettongia lesueuri*) are common throughout the inland and are eagerly pursued by the Aborigines when they appear in large numbers on the porcupine-grass steppes where other large marsupials are rarely seen.

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*Trichosurus vulpecula* [common brushtail possum] is the most common game caught by all the tribes of the colony. This ill-named "opossum" is easily captured by people; therefore they are seldom seen in the neighbourhood of missions and the Aborigines' old camps. Its flesh is considered inedible by the settlers because it has a strong tang of gum leaves.

The pouched badger or bandicoot (*Peramelidae*) is also an important smaller game animal. In the times when the smaller bandicoots of the interior were as numerous as field mice are with us, in the so-called good years, the local Aborigines could easily obtain a tasty meat meal. In August 1896, when I was staying between Tennant's Creek and Barrow's Creek the *Kaitische* existed almost exclusively on *Perameles castanotis*. With the tribes that once inhabited the south roasted bandicoot was also a regular repast. Another pouched badger, the rabbit-eared bandicoot (*Peragale lagotis*) which was found in the interior of the south of the colony, was extensively hunted, resulting in a reduction in numbers, as people between Tennant's Creek and Lake Eyre often utilised the tails as a form of decoration.

In respect to the small rat-like marsupials, these are easily caught by women with their digging sticks.

The flesh of the wombat is considered to be tender and wholesome by the southern tribes. Therefore they think nothing of the trouble required to dig it out of its deep underground burrow. Nowadays it is no longer considered food just for the Aborigines of the colony.

That a considerable proportion of the Aborigine's animal foods are from feathered species is understandable as they form a particularly important part of the fauna of the colony. The tribes of the south coast, it can be said without exaggeration, kill birds and animals in equal proportions. This also applies in the arid inland areas where the inhabitants' homelands border one of the large lakes or have numerous permanent "rockholes" or "waterholes". During the breeding season the Aborigines in many coastal districts live almost exclusively on eggs. Hatchlings are in fact appreciated almost as much as freshly laid eggs. When the birds have finished their hatching then it the nestlings turn; though naturally they don't bother with those birds that are fully hatched.

Concerning birds, it would appear the Aborigines share our tastes. For example, the meat of pigeons, bustards, geese and ducks is highly valued, while that from birds of prey, ravens and gulls are not considered a delicacy.

Next I will discuss the species that are important game foods for the Aborigines. This will include some remarks on the birds from the inland and the north coast and the quality of the meat itself. During my travels in South Australia I was often forced to live on birds for weeks on end. Also I had ample opportunities to taste the wild birds caught by the Aborigines.

Of the birds of prey that are about in the daytime only the *Aquila audax*, *Haliastur sphenurus* and *Milvus affinis* are considered. They are present over the whole colony and, in the interior, are the largest species of their families.

*Aquila audax* is killed primarily for its feathers, a proportion of which are used during secret ceremonies.

*Haliastur sphenurus* and *Milvus affinis* usually fall into the hands of the Aborigines when they expose themselves to danger whilst scavenging.

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Regarding the nocturnal birds I will only mention *Ninox boobook*. These owls often lose their lives at the hands of the Aborigines because they frequent the same roosts and are easily surprised.

The different species of parrots, which seek their food on the ground in large flocks and fly together to drink at their watering points, are often, of course, extremely vulnerable if a club is thrown at them.

The flesh of all these parrots is tasteless and noticeably dry. That from the parrot has to be cooked for four hours before it is sufficiently tender to be edible.

A rose-coloured cockatoo found in the inland (*Psittacus roseicapillus*) is frequently roasted by the Aborigines, judging from the slate- and rose-coloured feathers normally found strewn around old campsites. The small white cockatoo (*Cacatua gymnopis* and *C. sanguinea*) is more difficult to catch, however, because they are so shy. Moreover, they only occur in large numbers in well-watered areas where there is usually no shortage of better game.

With the cuckoos I would especially mention the *Centropus phasianus* (north coast) and from the polar birds *Dacelo gigas* and *Dacelo cervina* (north coast).

Bowerbirds are nevertheless important game birds to some tribes. This is the case with *Chlamyododera nuchalis* which appear in large numbers in the jungle along the northern rivers. In the neighbourhood of Rum Jungle I often lived for days on the tasty meat of these birds.

Among the ravens I would draw particular attention to *Corvus coronoides*. I know from experience that these crows are not very palatable when roasted. They are not intimidated by the presence of people in the camps when they are looking for animal scraps and even enter their huts, although they are always in unsuspected danger from an accurately thrown club.

In the interior pigeons are the most preferred of the feathered game as their flesh is superior in delicacy and taste to that of all the other birds that frequent those areas. Moreover they are easily approached when they visit their drinking places in the mornings and evenings. This relates to *Ocyphaps lophotes*, *Lophophaps leucogaster* and *Phaps chalcoptera*. In the north *Geophaps smithii* is most notable.

The emu is pursued by the Aborigines with same cold-blooded intensity as any other form of prey. The reason for this is the excellence of its meat and the size of its body. The importance of this bird in the life of the Aborigines is clearly shown by the fact that they have been incorporated into their secret ceremonies. The flesh resembles beef in its taste. The meat from the leg is quite coarse. While the Aborigines have a distinct preference for them the settlers are not so partial. I haven't tasted an emu egg but one of the settlers assured me that it is quite tasty.

*Leipoa ocellata*, a shy bird, generally avoids any confrontation. Their eggs, however, are a much sought after delicacy at certain times of the year for many of the tribes.

The bustard (*Otis australasianus*) [bush turkey?] is more important to the Aborigines than the *Leipoa*; they can be found anywhere in the colony. Although they seem to be shy they often still fall into people's hands because of their insatiable curiosity. The Europeans value their meat over most of the other wild species.

Of the ground- and swamp-dwellers *Oedicnemus grallarius*, *Lobivanellus*

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*lobatus* and *Sarchiphorus pectoralis*, *Grus australasiana*, *Gallinula tenebrosa*, *Tribonyx* spp. etc. are also game of some importance to the Aborigines.

The herons are zealously pursued because of their large size, although usually without success, I believe, owing to the cautious nature of the bird. Ibises, however, are hunted much more often, principally in the northern coastal areas where they can be found in considerable numbers along the shoreline. The species in question are : *Threskiornis strictipennis*, *Geronticus spinicollis*, *Ardea pacifica*, *Ardea novae-hollandiae*, *Herodias syrmatophorus*, *Platalea flavipes* and *Platealea regia*. The aforementioned heron I observed on the coast as well as inland.

The waterbirds are virtually indispensable to the inhabitants of the coastal areas and neighbouring regions of the inland where there are large bodies of water; at certain times of the year the daily fare of these people consists entirely of such birds and their eggs.

Geese, ducks are foremost in the north, ducks and pelicans in the interior and swans, geese, ducks and pelicans in the south. Cormorants are also taken.

Gulls, divers, etc., understandably are targeted much less frequently by the hunter. A list of the species of waterbirds under consideration follows. However, there are more species that come under consideration than just those listed.

South :

<i>Cereopsis novae-hollandiae</i>	<i>Cascara tadornoides</i>
<i>Bernicla jubata</i>	<i>Malacorhynchus membranaceus</i>
<i>Cygnus atratus</i>	<i>Anas punctata</i>
<i>Anas superciliosa</i>	<i>Anas superciliosa</i>
<i>Anas punctata</i>	<i>Nyrocaaustralis</i>
<i>Spatula rhynchos</i>	<i>Pelecanus conspicillatus</i>
<i>Bizura lobata</i>	<i>Phalacrocorax melanoleucus</i>
<i>Pelecanus conspicillatus</i>	
<i>Phalacrocorax melanoleucus</i>	<i>Phalacrocorax sulcirostris</i>
<i>Phalacrocorax sulcirostris</i>	

Inland :

North :

<i>Nettapus pulchellus</i>
<i>Anseranas melanoleuca</i>
<i>Tadorna radjah</i>
<i>Dendrocygna arcuata</i>
<i>Anas superciliosa</i>
<i>Malacorhynchus membranaceus</i>
<i>Pelecanus conspicillatus</i>
<i>Phalacrocorax melanoleucus</i>
<i>Phalacrocorax sulcirostris</i>

The meat of the cormorant has a strong oily taste, pelican is certainly better.

Regarding reptiles, such as the water lizards, all the larger snakes and the land lizards, all are considered game animals with even the smallest specimens being eaten in an emergency.

Based on size the crocodile (*Crocodus porcatus* and *Phyllis johnsonii*) is considered first. As their distribution has now contracted to the extreme north of the colony they are of little importance for most tribes. A priest from the Jesuit Mission told me that they are not killed very often by the Aborigines. One can feel quite safe in open water. At the end of the dry season they are easily speared as the pools in which they have become stranded, following the floods when the rivers break their banks, become shallower.

On the lower reaches of the Daly River I once met a *Malack-Malack* who was hungrily gnawing on a piece of roasted crocodile meat. I had the notion that he should give me a small piece to taste, but

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one look at his face spoiled my appetite: not because of the fat and tender meat with which it was smeared but because of the disgusting way mucus ran from his nose.

The toads that live in the waters of the northern coastal districts are gladly eaten by the Aborigines. When I camped at Knuckey's Lagoon one time I observed a black married couple catch three such animals by hand within the space of two hours, each about 20 cm long. In regard to the sea- and freshwater toads in the south I cannot provide any information on; in any case they are considered to be quite tasty by the Aborigines.

The larger snakes and lizards are considered a delicacy by all tribes. Many of my readers who have had a lifelong repulsion for all that is named "Reptile" and are affected by it will be of the opinion that "tastiness" does matter. Before I was convinced otherwise I also believed that these types of animals were only consumed through necessity, as a substitute for furred and feathered game. Following the principle I adopted in my travels in South Australia, to ascertain, as far as possible, the value of the foodstuffs consumed by the Aborigines, I soon found out that many species from both classes of reptiles provided meat that was not unpalatable when roasted. In any case they are no worse than our much treasured lobster, which for the most part lives on buried animal remains.

Among the lizards it is mainly the *Gattung varanus*, the largest and tastiest, which is hunted by the Aborigines. The flesh of the iguana is white and soft. I found it comparable to the meat of a young fledgling. A settler that I knew was so fond of it that he ate "iguanas" (the generally used name for all the iguana-type lizards) which he had obtained from his "boys" and women in exchange for salted meat. The best known of the *Varaniden*, *Varanus gigantus*, is seldom preyed upon by the Aborigines. A missionary from the inland told me that these giant lizards defend themselves valiantly against their attackers when cornered. I cannot vouch for the truth of this statement. The species of the type just mentioned include *Amphibolurus barbatus* ("jew lizard"), *Chlamydosaurus kingii* ("frilled lizard") and *Trachydosaurus rugosus* ("stump tailed lizard").

Snakes are eagerly sought because normally they are quite fat, which is often not the case with other animals that are hunted. Furthermore, their meat is notable, according to the inhabitants, for its wholesome taste. Poisonous species are also eaten, but the head is removed during preparation. The non-poisonous "carpet snakes" (*Python* sp.) seems to be the most valued.

Amphibians are a minor source of meat for the inhabitants. Frogs are easy to obtain in the interior following very heavy rain as they sleep the rest of the time in hiding places they dig for themselves. Also, on the north coast they can't be found in the months of the dry season. In the south I didn't see a single frog.

Fish, on the other hand, are of considerable importance to the Aborigines. They understandably play a major role as a source of food along the coast; but many fish are also caught in the interior, though fishing, when compared with hunting, is still not as significant. Many of the northern tribes depend on fish for weeks on end, and become ichthyophages in the truest sense of the word, when, towards the end of the dry season the lagoons are drying out and fish can be caught without much effort. Also in the south there are periods where the Aborigines, without much difficulty,

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are able to obtain large hauls of fish. When I roamed the Coorong between Adelaide and Victoria in February 1900 I came across hundreds of large, dead, sticklebacks on the bank of the south eastern end of the lagoon.

I need not stress that fish are an advantageous food for the Australians. I would take the opportunity here to point out that amongst the tribes that are heavily engaged in fishing, the most skilful and strongest individuals are to be seen.

Of the fish found inland two small sticklebacks, *Therapon truttaceus* and *Th. percoides* are the main ones. In the rivers of the south and north large, highly palatable, species can be caught. The sea is also rich in fish close to the coast. Unfortunately I cannot supply any more information on this.

As mentioned previously there are few insects in the Aborigines' diet. The reason for this is that the insect world is poor in different species fit for human consumption.

Though a certain distaste for insects also comes to the fore with our Aborigines - more than once I saw maggots being thoroughly removed from meat during preparation - nevertheless certain larvae living in trees counts as their greatest delicacy. I mean the well-known witchetty grub of the inland. Remarkably it has never been established what the adult creature is that develops from the young form. The species that is prevalent in the neighbourhood of Sterling Station was called *nematt* by the Aborigines, and where numerous had a length of 8 - 10 cm and a circumference of 4 - 5 cm. Both ends of the body are yellowish brown. The remaining part toward the front is a purply colour and behind that a dirty white colour. These larvae live in the wood of gum trees between 19 and 27 deg. latitude and mainly occur in the redgum (*Eucalyptus rostrata*). In other parts of the interior, where the aforementioned tree is scarce, east of Lake Eyre for instance, they occur in the boxwood (*Eucalyptus microthera*). According to Mr Rudigers, an intelligent German from the Kilalpanina Mission, a large nocturnal moth develops from it. Another kind named *schabba* by the west Arunta and *impita* by the *Lurritje* exceeds the aforementioned in size. The largest examples that I saw had a length of 11.5 cm and a girth of 5.5 cm. These larvae are bluish white; in the sunlight it soon turns a grey blue colour. In the places where they occur, I must add, the Aborigines dig them up from the sand in the creeks near redgums where they are found in tube-like webs that go vertically into the ground. A third yellow-white type can be found among the roots of acacias north of the MacDonnell Ranges.

The Aborigines of the south coast also eat larvae that live in wood. I am unable to say whether the same occurs on the north coast.

The witchetties provide a not inconsiderable portion of the food for many tribes. They are not easily obtained - as a rule to obtain them their passages in the wood or the web in the ground must be exposed, which involves some labour with an axe or shovel, or digging stick - for a man it is not difficult to collect sufficient; in half a day on the larger creeks lined with gum trees it is possible to get a substantial meal. For example, I once met a group of six *Diari* near the mission's woolshed marching down Cooper's Creek - the riverbed there being

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eight miles wide and closely covered with *Eucalyptus microthera* - who got 700 white and purple witchetty grubs. A woman carried out the following actions while collecting witchetties at the western end of Reynolds Range: First of all she partially opened the entry hole with an axe and then brought out the animal with a stiff stalk of grass. When the passages were higher up in the branches, or the trunk was thick and slippery, she would cut notches in the tree with an axe to obtain a hold for her big toes.

Witchetties should not be considered as disgusting food of little value. Slightly roasted they taste like boiled eggs. They are quite filling as their bodies contain a lot of oil. Many of the settlers that I know consider them to be very tasty. I heard that a "lady" who lived for years on an inland cattle station was so passionate about eating witchetties that, using her Aboriginal "boys" and women to gather them, in the end they were exterminated in that locality..

There exists in the interior a large cicada. According to information from the white people at the Hermannsburg Mission these are eaten by the Aborigines.

Termites, or their larvae, are another foodstuff, which it appears they simply put in their mouth. Usually they only serve as a temporary measure when there is nothing else available. More than once I entered a camp struck by bitter famine; the termite mounds scarcely a stone's-throw away had been left untouched. A woman from Pine Creek told me that at times termite larvae are eaten by the women. Just how tasteless these insects or larvae are is apparent from the infrequency with which the traveller sees a termite mound that has been opened by human hand.

The larvae of ants are in some exceptional instances included in their list of foods by some tribes.

A highly regarded food, derived simultaneously from the insect and plant world, is the walnut sized gall that occur on branches and twigs of gum trees.

In this vein I will discuss the Aborigines' sweets. This relates to honey from bees, a syrupy liquid from *Camponotus* species and secretions from aphids. Though these substances can only be gathered in small quantities, they are nevertheless important to the Australians as they are one of the few easily digestible foods rich in carbohydrates.

Regarding honey, it firstly has to be counted as one of the few of the Aborigines' delicacies that are also valued by the whites. According to Missionary Schulze two different sorts of bees are found in the catchment area of the Finke River. Near the Hermannsburg Mission, and elsewhere, I have seen a small species that has an uncanny resemblance to our common fly which nests in hollow trees. They are relatively common and their hives are easy to find in the scrub of the interior because there is no deep shade and the vegetation consists of dwarf-like trees. Plundering of the hives, which in some tribes is a privilege restricted to the men, is done without difficulty; the bees are as harmless as a fly. The honey from the honeycomb is not thoroughly cleaned of larvae etc. At Birdum Creek I came across a camp of the

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*Goarango* where I saw a young man consuming a mixture of honey and water with the help of a bundle of grass, which he dipped in the liquid and then sucked.

Another highly valued sweet is formed by the syrup - a honey-like substance that is obtained, with a little work, from a *Componotus* species. A crop, slightly larger than a pea, serves as a reservoir (in the rear) of such individuals; since these honey ants are not only widely distributed but appear to be numerous, many tribes of the interior are able to gather this sweet in such large quantities that it plays a significant role in their food supply. Honey ants are also found in Mexico, New Mexico and Colorado and the swollen rear of the honey bearers is also a source of nourishment for the people there. According to Dr. Wetherell the sweet liquid from these ants is like a solution of uncrystallised grape-sugar in water. I must mention that during extended walkabouts young children catch bumblebees so as to eat their honey-filled stomachs.

The secretions produced by aphids are found in the interior on the twigs and branches of gum trees (*Eucalyptus rostrata* and *Eucalyptus microthera*). These are basin shaped, like the shell of the patella and are similar in the colour and taste of their sugar. It can easily and certainly be established that this tit-bit is an animal secretion. By removing one of these basin-shaped objects an orange-coloured insect, attached by its abdomen, becomes apparent, approximately 1.5 mm long, it vigorously creeps around and after strong stimulation randomly exudes a soft white thread which completely covers the outside of the basin.

In regard to the insect itself I am unable to provide any more information. Brough Smyth, in his work "The Aborigines of Victoria", reports that in the south east of the continent a leaf flea (larvae) deposits small, scale-like, objects on the leaves of gum trees which are white in colour and taste sweet like sugar. A Dr. Th. Dobson of Hobart also mentions the same *Psylla eucalyptus*. I don't know if this insect is identical to the one to which the Aborigines owe their sweet tooth; in all likelihood both animals are clearly related.

It is amazing the quantity of secretions that are found on the "redgum" and "boxwood". I have only seen a few trees of the latter species that were not infested. An Aborigine from the

interior, whose country includes an area that is covered with the trees mentioned above, is, at certain times of the year, in a position to completely satisfy their need for sweet things. As for the small basin, in all cases they are very small - an average height of 1.5 - 2 mm and a diameter of 4 - 5 mm - they are, however, easily removed with teeth and tongue from the leathery leaves. When I stayed at the Kilpalpanina Mission in July 1900 the young charges of the mission often made excursions to Cooper's Creek to feast on the "manna of the desert". Needless to say an eight year old boy, on one occasion, ended up with a bad attack of indigestion.

As well as the inhabitants of the interior those on the south coast may have the capacity of obtaining a similar sweet. Taplin reports that the *Narryngjeri* enjoy "the manna which falls from the peppermint gum (*Eucalyptus*)" dissolved in water.<sup>1</sup>

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The larger crustaceans found in the sea and rivers are prized by the coastal tribes because of their fine taste.

A small crab (*Telephusa transversa*), found in almost all the waterholes along the inland creeks, forms part of the provender of the inhabitants. I have, unfortunately, been unable to further these inquiries. As a result they do not come under consideration as edibles here; I never saw them being eaten and did not find any remains of these creatures at their campsites. The dead ones that often lay at the edge of waterholes in many instances showed unmistakable signs of having been pecked.

Molluscs are of prime importance for the tribes in the extreme north and south of the colony in their sustenance relating to this branch of the animal kingdom. But for the Aborigines of the inland they do not rate. A *Larakia* told me that they eat the larger molluscs that are thrown up on the beach by the waves. The other coastal tribes are not backward either in this regard, as is apparent from the anthropogenic middens of casings and mussel shells found by the sea shore. It cannot be said, however, that they have a particular predilection for these species.

In the wetter areas of the north molluscs from fresh water sources also play a role in providing nourishment. They have a certain preference for the *Unio* which is frequently found there. Besides these, they collect *Paludina* in large numbers. During my sojourn in the jungle along the Daly River I saw around the pools many heaps consisting of hundreds of casings of these snails. Pieces of charcoal were lying around showing that it was a miniature midden.

Before discussing vegetable foods I will briefly describe the value of particular animals to the Aborigines.

Firstly I must mention cattle, which in their wild state are found in herds on the plains of the interior and the north, and in all probability in areas still unknown to the whites. These cattle are nowadays considered to be of some importance to the tribes of the central inland. They hunt not only these unowned animals but also those that are owned. As a result many of the cattle breeders suffer incalculable losses. At Tempe Downs station a policeman told me, having just returned from an unsuccessful manhunt, that the *Luritji* had, during the week he was absent from the station, speared approximately 20 head of cattle. Though the cattle breeders often exacted bloody revenge, or had some of the culprits sentenced by a Special Magistrate or like person performing the office of a judge, this did not deter the *Arunta*, *Luritji* or whoever else from recklessly killing any head of cattle that came within reach of their spears in some out of the way place. When an Aborigine has killed a head of cattle he becomes quite edgy, so he takes the tastiest pieces of the meat, which he keeps long enough on the fire to char the outside to preserve it, and then distances himself from the scene of the crime to eat his fill in peace in some hiding place. However, when he is not in fear of a white man's bullet then he will kill cattle with impunity. For example, in 1898 a year-old calf was killed with earshot of Hermannsburg.

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<sup>1</sup> Rev. G. Taplin, "The Narrinyeri"

The buffalo (*Bos indicus*) which is found in the north is similar in many respects to the feral cattle found in the interior, but it is not hunted much by the Aborigines

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#### Table 11 [Illustrations]

A - Placing of an adult in the *Waramunga* country [Platform burial]

B - Placing of a child's body in *Tjingali* country [Platform burial]

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because they keep to swampy areas where there is little other procurable game.

Rabbits are a real boon to the many tribes that reside between the south coast and 27 deg. latitude. One sees them occasionally even in the most inhospitable places seldom visited even by kangaroos. They fall into Aboriginal hands very easily. I heard from Mr Reuther, the manager of Kopperamana Mission, that in 1899 the residents, with the help of some white people, killed around 50,000 of these rodents which had come to the Lake Kilalpanina because of a prolonged drought.

Remarkably, the wild horse of the interior is not eaten; the pony from the north, on the other hand, is very popular as its meat is considered to be very tasty.

The domestic pig, which recently has appeared in a feral state here and there on the Roper and Catherine Rivers, easily falls victim to the Aborigines. A *Wulwonga* told me that their meat is considered a real delicacy by the members of his tribe.

Finally, the domestic cat is not safe from a hungry Aborigine. Close to the Giles Ranges I chanced upon the camp of a lonely, very old woman, shivering from the cold, sitting near a fire on which she was roasting a cat. Nearby were three kittens, the young of the cat that had been killed, which were crying pitifully. As soon as roasted cat was ready she stilled her hunger with it and then fed the kittens with the leftovers. She told me the kittens were to be roasted the next day.

I often heard it said in Australia that the whites were partly to blame for the demise of the Aboriginal race because they crowded out their main game in each region with their herds and because of their numbers near "permanent waterholes", which could no longer provide a "guaranteed refuge" in times of prolonged drought. This reproach is totally unjust. Everywhere the marsupials and the emus have decreased in numbers since English settlement, but the Aborigines are compensated for that through the feral domesticated animals, which provide a rich substitute for them.

I have already mentioned that the plant world does not provide many edible plants for the Aborigines and that many of the foods in question are not very nutritious or palatable. At certain times fruits and certain bulbs cannot be gathered. We should not forget that many of the food producing plants do not provide a yield in years of poor rainfall.

A list of vegetable foods whose origin I have been able to determine follows. I will here remark that in roaming around a particular locality it did not take me long to learn of all the seeds, fruits, leaves, roots, etc. that contribute to the plant food diet.

I begin with the seeds. These come under consideration chiefly in the summer and autumn months as it is rare for the Aborigines to store provisions. In good years many of the tribes on the plains and in the scrubby areas of the inland live almost exclusively on the seeds of one or more plants. The coastal tribes appear to have no particular preference for any single plant species. The seeds of certain acacias, in terms of the types of seeds collected in the interior,

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are the most important, mainly on the grounds that they can be harvested in large quantities when other plants produce little or no fruit because of drought conditions. In spite of this type of food being consumed in such large quantities that during the last two months of 1896 the women and children of the western groups of the *Arunta* lived almost exclusively on them - they cannot be considered to be one of the more appetizing or easily digestible plant foods available to the

Aborigines. They are of absolutely no value to the whites because of their high tannin content. Two of the children of one of the missionaries at Hermannsburg who had been fed with bread made from the ripe seeds by a half-caste attendant got a bowel condition accompanied by bleeding.

Acacia seeds are not eschewed on the south coast. It is correct to assume that the vast majority of all the southern Australian tribes consider the acacia to be a viable source of food.

The seeds of the "boxwood" (*Eucalyptus microthera*) are eaten everywhere where they can be collected in sufficient quantities, especially in the neighbourhood of Lake Eyre. It is the size of a grain of sand; by shaking the twigs covered with ripe seeds over a hollowed out piece of wood it is possible to obtain enough in a short period of time to satisfy ones hunger. The largest quantity of vegetable food - about 1 hectolitre - I saw in the possession of the Aborigines of a central tribe consisted of these seeds.

The fruiting kernel of *Cycas media*, approximately the size of a walnut, is generally sought after on the north coast. *Encephalartos macdonnelli*, the Cycadee of the rocky mountain ranges south of 24 deg. latitude is not utilised as a food plant.

The kernels of the *Pandanus* are also eaten by the tribes of the humid north of the colony. The same is the case, as you know, on the Nicobar Islands and islands of the South Seas where they are an important source of food for the people there.

A few metres high, *Sterculia* is considered by the tribes of the interior to be one of their seed food sources. I have constantly heard from Englishmen and Aborigines that the seeds of "munyeroo" (*Claytonia balonnensis*) are treated as a valued source of food.

*Nelumbium speciosum* - the holy lotus plant of the Indies - and *Nymphaea gigantea* are highly valued by the inhabitants of the extreme north as most parts of the plant are edible. The seeds, which look like our beans, taste like hazelnuts. In India the lotus plant is still eaten in the present day, either raw or roasted.

Some of the grasses found in the interior will also be discussed as food plants.

East of Lake Eyre the spores of the well-known "nardu" (*Marsilea quadrifolia*) are eaten. They are as large as grains of sand and tastes similar to old flour. What small nutritive value it has is apparent from the pastry (damper) and such circumstances as the starvation of Burke and Wills. If it were possible to separate the spores better from the refuse, as is done now, then one would obtain a much more nourishing and attractive form of bread.

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I now turn to the question of which fruits provide a significant contribution to the sustenance of the Aborigines from the wetter areas of the north like they do in the interior and on the south coast.

During my stay on the north coast - in the spring and summer - I did not, unfortunately, have the opportunity to learn personally about the majority of fruits eaten by the local tribes. In the following I will discuss the more succulent kinds from a tree like the gardenia, used here and there as provisions near Palmerston. The fruits from it are long and egg-shaped and contain a few seeds encased in a mushy mass that is a highly valued treat because of the sweet taste inside.

Another small tree with a light grey trunk and oval, leathery leaves (*Barringtonia* sp.?) produced fruit about the same time as the gardenia. I noticed they were common in the vicinity of Knuckey's Lagoon. The fruit, the size of a lemon, has a round stone covered by thick, blood-red, warty, juicy flesh 7 mm thick. Only the flesh is eaten by the Aborigines. It tastes like a half ripe apple.

From the screw pine (*Pandanus*) one can relish not only the kernels but the flesh parts of the fruit, as well as the white part, the size of an apple, to which it is attached.

In the eucalypt forests of the north a low vine is commonly found, the berries of which are quite tasty.

In the swampy areas near Rum Jungle I saw a tree sprout seeds that strongly reminded me of mistletoe.<sup>1</sup> A climber with tasty yellow fruit as large as a hazel nut also occurs.

A fruit known as the “native orange”, of the *Capparis* family, is sought after as a delicacy in the interior. They are round and almost reach the size of a small apple. As with the gardenia the flesh consists of a leathery outer skin with sweet mushy flesh inside that surrounds the pea-sized seeds. In taste these seeds are similar to our stone fruit.

The stone fruits *Santalum acuminatum* (“native peach) and *S. lanceolatum* (“native plum”) are also gathered in the interior. They are one of the few vegetal products of the colony that also appeal to the taste of the whites. Unfortunately both of these native stone fruits produce only insignificant quantities of fruit. The Aborigines on the south coast also pick stone fruits. Presumably the inner fruit was eaten as well.

The fruits of the “yellow wood”, a shrub approximately 2 m high with lanceolate leaves, are more important than the *Capparis* and *Santalum* species. They are egg-shaped, black in colour, and about the size of a pea. Because of their high sugar content they are highly regarded by the Aborigines as well as the whites. I also note that the “yellow wood” occurs rather commonly in the interior and carries a lot of ripe fruit even when no rain has fallen for months.

A creeper (*Marsdenia leichhardtiana*) from the scrubby areas in the centre provide a most welcome fruit for many tribes. These fruits are 6 cm long, shaped like an oval cone, and contain, like all above-ground plants,

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a white sticky sap. They are only edible when unripe. Because of their shape and their pear taste the settlers call them the “native pear”.

The slimy pea-sized fruits of the mistletoe belonging to the *Gattung loranthus* species are highly valued because of their sweet taste. They are of little importance, however, as their produce, in the tops of the trees, cannot be reached in most cases.

The fruits of the *Ficus* species are only used to relieve hunger when there are no better alternatives.

Remarkably the larger berries of several nightshades (*Solanaceae*) are also eaten. I did not consider trying them.

In the interior there are one or more *Kurbis* species which provide food for the Aborigines.

The inhabitants of the south east (south coast) consume astoundingly large quantities of the slimy sweet fruits of the “pig face” (*Mesembryanthemum*). Moreover, it is notable that these fine tasting fruits are the same as the Hottentot Figs of the South African *Mesembryanthemum*.

As an edible fruit from the south coast I can also nominate the “native cherry” (*Exocarpus*).

The subterranean parts of plants which are used for food are important vegetal foods normally, but only because they are available throughout the year, while other seeds and edible fruits can only be gathered in summer and autumn. Their food value is not high and their taste does not compare with the juicier fruits but they are, nevertheless, very important to the Aborigines as they provide a necessary change in diet. With the settlers and English-speaking Aborigines edible underground organs are subsumed under the name “yam”.

The starchy tubers of *Amorphophallus*<sup>2</sup> are without doubt the most valuable plant food in South Australia. Unfortunately the distribution of these plants is quite restricted; they only occur in the jungle along the northern rivers. There they are very commonly seen. During my stay on the Daly River – it was in July – the dependents of the Jesuit Mission and many other groups there lived exclusively on these “yams”. The tuber normally is shaped like half a ball and ranges in size from a fist to a child’s head. Properly prepared they taste like a cooked potato; and should be considered a food that the settlers ought not scorn. Among the tubers one always find some – they

<sup>1</sup> Maybe this tree is identical to *Nauclea Leichhardtii*.

<sup>2</sup> It probably is *A. variabilis*.

grow in poor soils – that can cause a significant degree harm to one's health, as I know from experience, affecting the soft tissue of the mouth, the throat etc. and followed by a painful stool.

Also the bulbous rootstock of the *Nymphaea gigantea* and *Nelumbium speciosum* must be mentioned here. They are, however, not easily digestible products. If one does not exercise moderation in enjoying these tubers then “abdominal pains” and “insomnia” follows.

In the beginning of March 1898 five species of “yam” formed the sole food for the Aborigines at Rum Jungle. The above-ground parts of these plants had already withered.

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*Cyperus rotundus* plays almost as an important role as a food source for the Arunta and their neighbours as the *Amorphophallus* does for the tribes of the north coast. Their bulbous roots are a little larger than a pea in size; but the Aborigines whose home range is in the vicinity of a creek can collect, at certain times of the year, a quantity sufficient for a meal without any difficulty. In regard to the taste it is certainly similar to that of a walnut. It may have the same nutritive value as the ground almond (*Cyperus esculentus*) that is generally cultivated in southern Europe and north Africa. In the neighbourhood of the MacDonnell Ranges the plant is called *yilka* by the settlers and the civilised Aborigines.

Another *Cyperacee* considered to be one of their plant foods, with a preference for the edges of waterholes, grows approximately 60-80 cm high and is prolific on the Finke River and adjoining creeks. The Aborigines from the Hermannsburg area call it *calepara*. The edible enlargement of the root stock, the size of a hazel nut, is blacky-brown on the outside and brownish-white on the inside. I never noticed large amounts of these in the possession of the Aborigines, not even where the plant was growing in abundance as, for example, near the aforementioned mission. The bulbs don't have a pleasant taste and they also seem to detrimental to ones health; when I tasted the flour obtained from them I noticed a light irritation in the inside of my mouth.

Furthermore *Typha augustifolia*, a tubular bulb that occurs in our crops as well, is also related to the above mentioned plants. Understandably they do not occur in quantity as they require a moist situation. Their tuberous underground parts also serve as food. It carries the name *unga* in western Arunta.

In the inland I noticed a small climbing plant which has three parts to the leaves.<sup>1</sup> On the roots of these are sausage- or rosary bead-shaped tumescences that have a circumference of some centimetres. They have a somewhat bitter taste but are eaten with relish by the Aborigines.

According to the dependents of the Point Macleay Mission the Aborigines of the south east incorporate a larger proportion of roots in their diet. Unfortunately I was not able to ascertain from which plants these roots came. My experiences even extended to the inside of the mealy trunk or the upper parts of the roots of the *Xanthorrhoea* species, which I enjoyed.

The buds of the leaves, young shoots, leaves, juicy stems etc. that are eaten have, like our salad vegetables, very little nutritive value as they are notable for their high water content.

The parts of the leaf buds of *Livistonia inermis* and *L. humilis* lacking in chlorophyll are readily consumed, as a consequence both of these palm species are called “cabbage-palms” by the colonists everywhere, also between the north coast and 15 deg. Latitude. They are quite tender and taste like walnuts.

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In the area just mentioned they also gather, because they are so tasty, the very juicy stems of both lake-dwellers, *Nelembium speciosum* and *Nymphaea gigantea*.

<sup>1</sup> These plants occasionally produce on their roots, flowers and fruits, even under the ground. The flowers are only a few millimetres long and are white in colour. They always remain closed. The fruits are 1.5 cm long, bell-shaped and of a similar colour to the flowers. They contain one or two violet and off-white marked pea-sized kernels. I further note that the plant grows in the loose sand found in creeks which in summer becomes so hard that a native is unable to walk there bare-footed in the middle of the day. A sample of this plant brought by me to Dr. H. Hellier in Hamburg was classed as *Vigna lanceolata* (Leguminose).

In the Finke River region the softer parts of the small-leaved tubular butt of the reed-mace (*Typha augustifolia*) provide some delectation. They taste like unripe gherkins.

Extracts and sap from plants also provide sustenance for the Aborigines.

On the south coast the gum from the acacia (*Acacia decurrens* and *A. pygnatha*) is occasionally consumed. Also on the Catherine River the gum of certain trees are much sought after. Gum is, however, not totally lacking in nutritive value, as can be seen from the fact that the Arabs often live exclusively on it for months on end. The gum of *Acacia pygnatha*, which is found in large quantities in the south east, can be harvested and has, when fresh, not an unpleasant taste. I once saw a white "swagman" appease his hunger with it.

According to Ch. Wilhelmi a "resin" plays a major role as a source of food for the Adelaide tribe. In his essay about the manners and customs of the Port Lincoln Aborigines<sup>1</sup> he says:

"As the real gum trees (*Eucalyptus*) in Port Lincoln are not very extensive they only produce a small amount of the resin that the Adelaide tribes exclusively subsist on during the summer months"

As an aside it may be said that I am unaware if the exudations from the gum tree are consumed on the south coast.

Fruits, as an above ground component of plants, also produce sweets for the Aborigines.

When I began my second overland trip from Palmerston to Adelaide – towards the end of the rainy season – I often saw the Aborigines chewing with great pleasure green stalks of a grass. This particular grass, *Andropogon refractus*, reaches a height of 2 m. Only the juice from the stems covered by the leaf sheaves, sucked out after chewing, is consumed. The juice has a sweet but by no means pleasant taste.

The inhabitants in many parts of the colony sweeten their drinking water by squeezing nectar the honey-rich flowers into it. The *Arunta* and their neighbours use the blossoms of the *Hakea* for this purpose and the *Narryngeri* those from the *Xanthorrhoea* and *Banksia*.

Before continuing on to the second part of this chapter I must strongly warn against any false impression being gained regarding the proportions of foodstuffs consumed by the inland tribes. Though the foodstuffs discussed thus far provide an impressive list, the majority of these plant foods cannot be considered as important. In conclusion it cannot be said that the inhabitants of the interior are blessed with abundance. They do not experience such times very often, when all the waterholes are full, the red and yellow earth is carpeted in green and there is no shortage of game, fruit and root species. On the other hand they experience great misery during the frequent droughts, when all the wild animals, by and large, have gone to ground or moved elsewhere and the food plants provide a poor harvest. But even on the coast times of hunger are not unknown.

The Aborigines seldom enjoy the fruits of nature in the same condition as they are produced. Normally they are made more palatable by the use of fire, making them tastier and easier to digest. Meat, for example, is never eaten raw. The method of cooking is, however, simple, in keeping with their cultural level.

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The larger animals are roasted in the embers or with hot stones in shallow pits; smaller ones are made ready, however, in hot ashes or flickering embers. Many vegetable foods are also heated before eating. The knowledge of cooking in water was only obtained from the whites when they came into the country. That they had not learned to bring water to the boil using cooking utensils, such as hot stones, animal hides or wooden troughs, demonstrates their lack of inventiveness.

The preparation of higher animals mainly involves removal of the hair, feathers, scaly skin or scales and the removal of the digestive system or all the intestines. The lower animals lacking in

<sup>1</sup> From All Parts of the World. Year 1

fur were, without much ado, placed on the fire. Vegetable foods did not need much preparation either. As a rule only the smaller seeds were separated from inedible waste; the remaining material not eaten raw was prepared without much effort.

Apart from mixing the mash of smaller chopped up parts of plants with water, some of which was slightly baked, the Aborigines know nothing of mixed foods.

Next I will describe the directions and preparation of the aforementioned animal and plant materials. I can be rather brief in this regard because most foods are prepared in a similar manner.

The larger marsupials are actually prepared the same everywhere before they are roasted. First of all the fur is removed by putting the animal on a low fire for a few minutes or holding it over the fire and rubbing it with a boomerang, a quartz splinter or sand. Once the animal is divested of its fur in this manner then the abdomen is opened with a long incision and all the innards (north), or part thereof (interior), are removed. The cut is usually made to one side, close to the thigh bone, and is made long enough for the hand to be inserted into the abdomen. If it is a female then the Aborigines of the interior split the abdomen up to the pouch. When game is killed far from the camp then the procedure is different from that just described, with the parts being removed immediately to lighten the load.

The preparation of kangaroos and wallabies is done in three different ways. The northern tribes use a cooking method that is very similar to that used by the Polynesians. They make a longish pit about 40 cm deep. In that they pile broken bark that is very dry, together with some kindling, followed by the placement of a thick branch on each of the longest sides which is then decked with a layer of thick sticks placed crosswise. When someone has set the pile of twigs and bark well alight by fanning then the others throw a mixture of fist-sized stones on the decking created by the branches. As soon as the wood has been reduced to ashes they remove the stones from the fire and fill up the abdominal cavity of the animal which has been gutted in the meantime. The last remaining stone is forced up the animal's rear passage. To prevent the flesh being spoiled by ashes and sand they close the entry point with sharp little sticks. Next they lay the animal, whose legs and tail are tied together with bark, on the embers in the pit and cover it with the remainder of the hot stones.

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To prevent heat and moisture escaping as much as possible they carefully cover the stones with bark from the "paperbark tree" (*Melaleuca leucadendron*) and finally heap soil over all of it.

The *Tjauen* of the Catherine River, and perhaps other tribes, place a layer of moistened leaves between the bark covering and the stones, and on the glowing embers a few handfuls of wet grass, before the animal is placed in the pit. The intent in this process is to produce a large amount of steam.

The tribes of the interior are less particular in their preparation of the animal. When they want to make a kangaroo or wallaby more tender they light a large fire in a shallow pit and simply char the animal in the embers, without paying any heed to retention of the heat; at best they cover up the ashes with warm sand. The back legs are removed previous to this, and the abdomen is also closed up with little sticks.

On the south coast the animal, whole or in pieces, is usually roasted on glowing embers or cooked in a pit similar to that used on the north coast. According to a *Narryngjeri* from the western shore of Lake Alexandrina his tribe proceeded in such cases in the following manner; firstly they lit a large fire in a long shallow pit and when this had burned down they covered the embers with preheated fist-sized stones and scattered damp grass over these. They then placed the gutted animal on this bed and covered it with moist grass, followed by more preheated stones, finally heaping soil over the whole.

It should not surprise us that the inhabitants of the south coast are a little more advanced in their culinary efforts than the inland tribes. This is because they skinned many of the larger marsupials in years past, to make coats etc., prior to the animal's preparation, so that in order to

braise the meat and not just roast it on an open fire they had to devise a process whereby the meat was not spoiled by sand.

All the innards, or a significant proportion of them, are, after gutting, lightly roasted on glowing embers and immediately devoured by the cooks. The intestines are simply cleaned by perfunctorily removing the contents by hand. In the north the stomach is either placed under the last stone inserted in the animal's body, or it is filled with the animal's blood, which collects in the abdomen, and then it is roasted.

The northern tribes also make a kind of black pudding. In this regard the Aboriginal inhabitants of Victoria use blood in a similar fashion. Brough Smith [sic] states in his work *The Aborigines of Victoria*, Vol. 1 p. 187: "Sometimes the body of a large kangaroo is cut up, and separate portions of it are broiled. The blood is collected in one of the intestines, and a sort of 'black pudding' is made." Homer's songs tell of a similar dish that is the forerunner of our modern day sausage. It consists of a stomach filled with fat and blood that is roasted in glowing coals.

The dingo is prepared by the Aborigines in the same way as the larger marsupials.

Small mammals are firstly divested of their hairy coats and then the digestive tract with a crooked index finger through a

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small incision in the middle of the abdomen. They are then cooked in the hot ashes of a camp fire. I frequently observed that in the interim they nibbled on the "possum's" knee-joint, lower leg bones and femur, etc. roasted in the ashes, or before going to sleep. In any case, when hungry they avoided creating large quantities of ashes and consequently the legs remain partly uncovered and inadequately exposed to the heat.

All the other animals are cooked in hot ashes or glowing coals. The procedures are not always the same and depend in large part of the availability of the animals in question.

In the interior they prepare emus by plucking out or singeing the feathers first, and, following the removal of the digestive tract, close the incision with a handful of feather and remove the legs. The relatively thin skin is protected from the glowing embers by layers of feathers underneath and on top.

Other birds are treated in a similar way, although the legs are not removed as a rule; also I have never seen a single instance of the bodies, stripped of their feathers, being protected from the effects of the fire.

Reptiles and amphibians are also not completely gutted. At most only the scaly skin of lizards and snakes are removed prior to cooking.

Lizards are put on the fire for a short time to make it easy to tear off the skin. In the north the stomach and intestines are removed through a small incision on the underside of the neck. Inland, however, the abdomen is opened for this purpose or the intestines are extracted through the anus of the animal; apart from that they break the legs of larger species ("iguanas").

Snakes are also slightly singed. The northern tribes, in cases such as these, also make a cut close to the head and split the skin lengthwise. These reptiles are then placed on the embers in a spiral. The heads of poisonous snakes are cut off.

Smaller fish are fried ungutted in the coals.

Most meat meals are eaten in a semi-raw state. This is largely due to imperfect cooking rather than any peculiarity of taste of the Australians. Larger game is left standing so long in the ashes, up to several hours, that it ends up nearly cold. Even then the meat is still very gory. However, after the animal is cut up the pieces are light roasted separately over the coals; the inside of these pieces is not altered much.

The preparation of smaller animals and other vertebrates is more to our taste. "Iguanas" and snakes are nearly completely cooked through when they are, depending on the type, removed from the ashes after about twenty minutes.

Lower animals have already been discussed, being cooked without any preparation.

Witchetty grubs are left in the ashes until crisp, while molluscs etc. are not exposed to the heat for very long.

Many of the seeds are unpalatable in their unprocessed form following harvesting. Consequently they require complicated processing before they become a proper comestible.

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Acacia seeds are first roasted in glowing embers, then separated from the waste, and finally crushed and pulverised. I will describe this method of preparation in some detail because it common to most other seeds.

The roasting, which occurs in the ashes of the campfire, is intended to make the seeds rather brittle and remove their bitterness. Cleaning in these instances is then easily carried out as the waste only consists of ashes and sand while the seeds are proportionally larger. One then proceeds in the following manner; next a small quantity of uncleared seeds are placed in a flat wooden container and a rocking motion is made by which means the ash component comes to the surface and the sand collects at the bottom. By slightly inclining one end during this rocking motion and vigorous shaking the ashes are flung over the edge. The remaining smaller and lighter material is often blown away by the wind, this being assisted by pouring a handful of the mixture from a small height back in to the wooden container. Further winnowing is not necessary in most cases as the seeds are now able to be easily separated from any foreign material. Once roasted the seeds lose all their hardness; but they still require some effort from the masticatory muscles if they are to be eaten without any further preparation. Consequently it is common practice everywhere to reduce their bulk by firstly grinding them into a coarse powder and then grinding this again with a fist sized rock from a creek. In the process of grinding the flour is moistened from time to time. The mash so formed is, as a rule, eaten immediately by pushing it into the mouths with a cocked index finger. What isn't required to still the hunger is then collected in a wooden vat that is placed under the grindstone. In the Krichauff Range I saw an Aboriginal woman separate the coarse powder from the seed casings by sweeping it with a possum skin.

Green acacia seeds are also a source of food in the interior and on the south coast. The whole fruit is slightly roasted in hot ashes, hulling the seed, which loses its bitterness and is then eaten without any further preparation. If completely raw seeds are eaten one runs the risk of endangering one's health. At the Hermannsburg Mission I treated a fourteen-month-old English boy, who, after having eaten the raw seeds, suffered from a stomach and intestinal catarrh and inflammation of the soft tissue of his mouth.

The seeds of *Eucalyptus microthera*, *Claytonia*, grasses etc. are cleaned, where possible, by winnowing, grinding them with the addition of water on grindstones to produce a pap or paste. This is baked in hot ashes and then consumed without any further ado.

The seed kernels of *Cycas media*, like the unripe seeds of the acacia, are completely inedible in their natural state. These can only be eaten without harming ones health after they have been immersed in water for a considerable time.

The seed germs of the *Pandanus* are not eaten raw but only after they have been ripe for some time.

A dish prepared from the fruits of *Marsilea quadrifolia* involves considerable effort. The procedure is similar to the preparation of acacia seeds; instead of a mash a powder-like mass is made into dough which is baked in hot ashes. Preparation begins with roasting. The fruits are then cleaned with the help of a sieve to remove the ashes and ground into

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a coarse powder. Before mixing the dough the larger bits of waste are removed from the powder by winnowing. The pastry, a kind of "damper", is formed into a loaf that is so small that it can almost be covered with one hand. It looks like a coarse rye-bread in appearance. The value of this food is quite small as only half of it consists of the whitish spores; the rest of the contents derive from the outer coverings and is next to useless.

Nearly all the fleshy fruits are eaten without any preparation. Normally they are not brought back to camp but are eaten when picked. *Pandanus* fruits are an exception; the soft parts of the outer covering, as well as the apple-sized fruit, are lightly roasted before being consumed.

The subterranean parts of plants having roots, rhizomes and bulbs are, with few exceptions, put in hot ashes prior to their enjoyment, to make them brittle, to improve their taste or to reduce their bite.

The bulbs of *Amorphophallus* are tenderised by the northern tribes in a similar manner to larger game. In order to do this they scratch out a circular depression and layer it with stones. On this layer they make a large fire, and as soon as it has died down and the stones have become very hot the ashes are removed and the pit filled with bulbs. To increase the intensity and duration of the heat the whole is covered soil once a covering of leaves has been put in place to prevent soiling. In addition I saw near Rum Jungle that the bulbs, including smaller ones, were placed together on the uncovered stones.

The bulbs of *Typha augustifolia*, *Nymphaea gigantea*, *Nelumbium speciosum* etc. are, following their removal from the ashes and crushing of their seeds, eaten as a pulp.

The bulbs of *Cyperus rotundus* and *Vigna lanceolata* are eaten raw, softened or roasted.

Leaf tips, young shoots, leaves, juicy stems etc., where they are used as food, are usually not subject to such preparation. When what nature has to offer is considered unpalatable then they change it to some degree with heat. So, for example, I saw in camps in the north that some people ate raw the leaf tips of both *Livistonia*, while others enjoyed them roasted.

On the south coast gum is normally consumed without any preparation. In the north, along the Catherine River, an Aboriginal woman who had gathered a few handfuls of bright gum told me that she would be roasting it and then dissolving it in water before eating it.

The Aborigines do not have meals at set times of the day. They eat whenever they feel hungry and will have something to eat even if it is the middle of the night. As a rule in the morning they go out to look for something to eat on an empty stomach. In the middle of the day they return home from their excursions. When a man has been successful in hunting then a cheerful spirit prevails in the camp and the necessary preparations to cook the prey are carried out with great zest. In preparing the game it is cut up immediately with stone flakes. With the sharing of meat nobody misses out, including those who returned empty-handed. The lions share is claimed by the elders of the tribe. There is seldom anything left over as the Aborigines, because of their unsatisfactory diet, often have an

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enormous appetite. When the men return without success in their hunting then the whole mob must content itself with what has been gathered by the women. In such cases food sharing is not usually considered. On days when hunger reigns the women are treated very badly because they are burdened with work and have to suffer as a result of the foul moods of their husbands.

The Aborigine has no manners when eating. He devours his food with great gusto, as a result his face and hands are often smeared in a disgusting way. He does not usually cut up larger or medium sized chunks of meat, (possum, bandicoot etc.), before eating but rips pieces off with his teeth like a beast of prey. Naturally the food is not very clean because of the manner of preparation. It is difficult to understand why he doesn't prevent the contamination of the meat with earth and ashes. Furthermore, in this regard the inhabitants of the interior pay little attention to hygiene. If their food was not so often soiled by sand then their teeth would not be ground down to the roots when they reach old age.

On both coasts excellent drinking water is readily available. In the interior, however, conditions are rather different. Here sources of water are not only scarce but many dry up when there is a prolonged drought. Moreover, long before that point is reached, the water, apart from the poor quality caused by pollution, becomes so rich in inorganic matter that often it cannot be drunk without harm to your health.

As the water sources vary in the mix of the inorganic matter found in suspension, as well as the location, size and form of the pools, I will now discuss the methods employed by the Aborigines to obtain drinking water.

Most lakes do not come under consideration here because of their high salt content. Only a few small ones fed by creeks, such as Lake Kilalpanina, Lake Koppermania etc. occasionally contain fresh water following floods. After a while they become salty. The Aborigines then dig a small pit in a sandy part of an exposed creek-bed. The water that collects in the bottom is usually better to drink than the "surface water" of the lakes.

While a creek continues to flow its water remains very turbid, but later, when only large "waterholes" are left in the bed, they usually become clear and the taste acceptable. This state of affairs doesn't last very long. Soon most of the pools dry up and the water quality deteriorates but normally stays drinkable to the end, though with the passage of time it becomes polluted with plant debris and animal excrement. When it does become undrinkable for the Aborigines they filter sufficient drinking water to meet their needs by digging a small "soakage" in the sand a few feet away from the source and this soon fills with clean water. Soon the salt content increases considerably in the "waterholes", some in the Finke River, for example, become as salty as seawater. "Rockholes" are of greater value than "waterholes". The water contained in them is often crystal clear. I will, however, not hide the fact that at times I had to drink from this type of pool when the ground was covered in kangaroo and dingo droppings, bones, and charcoal etc.

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Water in all the claypans, because it sits on clay soil, soon becomes a reddish-brownish colour as well as slimy and cloudy to a significant degree. It would appear that it isn't harmful to use this sort of water as I drank similar water, which was already thickening, for weeks on end without it affecting my health.

The best water comes from springs.

"Native wells" are found in sand or in solid rock. In all probability they are of some antiquity.

Wells which are dug in the sand are funnel shaped, or of a quite irregular shape if in proximity to hills. Their depth is not very great. They only produce a small quantity of water and disappear during long droughts. It should also be noted that people I got to know in the bush had wells of this sort that were 6-8 m deep and had steps in the walls of the shaft – how did these underground sources come to be discovered as their presence is not betrayed by any surface indications? We must necessarily accept that the Aborigines have either to thank the animals for these discoveries or that they found them accidentally while digging for roots, interring the dead etc. Farmers, and most probably animals such as the dingo, kangaroo and wallaby as well, dig pits in the sand in the creek beds to obtain water.

Regarding wells situated in the rocks I am unable to say if they vary much. The few wells that I saw did not differ much from each other. Only these are considered below.

These wells are not very deep, but are slightly larger than the ones mentioned earlier. The shaft has irregular walls that do not appear to have been made by human hands. They extend for their full depth through soft limestone, extensive outcrops being common in the interior, which provides for the indigenous inhabitants an "indication of water" being present. As the existence of these sedimentary formations is often caused by rainwater trickling down from ground level it is not surprising that water finds its way into many depressions. The hardness of these rocks must surely preclude the possibility that these wells are the work of the Aborigines. From their appearance it would seem they are natural hollows that reach down to the water. I do not dispute, however, one or two of the shafts have been widened to allow easier access. Maybe in some cases animals caused the water to be discovered after they had removed the debris from the passage. Larger types of animals – according to the indigenous people the *Peragale lagotis* – prefer to den in such passages.

If there isn't any surface water suitable for consumption, or other water fit for consumption, the Aborigines try to obtain water by digging in the sandy beds of the creeks. Their efforts are only met with success when the loose sand is underlain by an impermeable layer; most of the time this consists of a layer of clay. These places are known from old. When substantial rains have fallen, or the creek has recently flowed, one can easily find water in many places along the stream bed, usually at no great depth. Also one does not dig without success in the bottom of a dried-up waterhole as long as the sand is still moist. Some creeks are quite exceptional in this regard

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as one can obtain water in their deepest beds year after year by constructing a soak. This includes the Finke River which has a constant supply of soaks. These soaks are shallow (down to 1.5 m) and are, as a rule, funnel-shaped. They are simply dug by hand, no support for the sides being required, or by using a digging stick, a basin-shaped shovel, a piece of bark, etc. When the sand contains contaminants or dark, iron-stained gum leaves, which is often the case, the water takes on a darker colour and tastes so awful that even the indigenes must overcome their aversion before they will drink it. But then it has an unpleasant tang even when it is not contaminated with rotting plant material. Undoubtedly this is caused by iron. The multi-coloured film that accumulates on the surface in daytime shows that the water from these subterranean creeks contains ironoxydalcarbonate in solution. Furthermore, due to the added presence of ironoxyhydrate and sand, a solid precipitate often forms. At times the water is so rich in soluble iron that it makes tea black and gives it an unpleasant taste. At such times it produces, in the real sense of the word, the colour from the tannin in the tea leaves reacting chemically with the iron. Additional and considerable contamination of the water by animals is another great drawback. The dingos, for example, not only drink the water but bathe in it as well. When I've been camping I have heard them during the night splashing in soaks for hours on end, one morning I had to remove a live young dingo from a deep soak with steep walls.

The Aborigines frequently obtain water for their needs from "waterholes" and "soaks". "Rockholes" produce, as previously stated, much better water, where the rocks are exposed or appear after floods, so that rocky outcrops therefore rule their existence. Rarer still are the wells. "Claypans" have considerable importance as they increase in such quantities in rainy weather that the Aborigines can camp in many places in their home territories for extended periods, which is a boon as it allows them the opportunity hunt everywhere and collect small animals and plants at their leisure. Unfortunately these depressions dry up very quickly so that if it there is no rain for a only a month few claypans have water remaining, and that is usually muddy. Fresh water lakes are rare and therefore unimportant. Wells are slightly more common than lakes. Their reliability, as already mentioned, leaves a lot to be desired; besides they are frequently contaminated by animal corpses. Where they occur, which, strange to say is not uncommon, in poor areas where there are no other waters sources available, they assume some importance as they make it possible for the Aborigines to exploit the food supplies in that particular country.

It is known that each tribe calls a particular area its' own, the boundaries of which they will not cross out of fear for their neighbours. It is understandable that the Aborigines are seldom forced to look for water as being nomads they are carefully instructed in the location and quality of all water sources in their territory. According to many whites in the interior they possess a particular ability for finding water. I cannot enlighten them; it is clear, however, that in this respect the Aborigines

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have been surpassed by the old settlers who have passed the greater part of their lives roaming the inland. As excellent observers of the natural world, ground animals and plants serve as guides in the search for water. During my frequent visits to the colony over a number of years I have gained some experience in finding "waterholes" etc. What follows will inform the reader as to which places in particular one looks for water and where one directs one's attention.

One can readily discern the existence of a "waterhole" from some distance. When a creek, easily detectable because of the tall gum trees, changes direction the bend shows up as a dense clump of trees with lush green foliage, then in all probability water or a dried up "waterhole" will be found there. One should not neglect other bends either, even when they are in the middle of a plain. In those parts where a larger creek takes its course through a narrow rock chasm one can always expect to find water. When a dry spell is of short duration, but also during extended droughts, the nomads are often able to quench their thirst because the water- or rock-hole is deep and the walls keep the water shaded. In a stony escarpment the best places to look are the most likely cross valleys, the bottoms of which run down in steps to form the bed of a creek; at the foot of the highest and steepest steps one not infrequently finds a small kettle-shaped rock-hole with crystal clear water.

The best place for digging "soaks" is where a stream has flowed very strongly and at the deepest place of the bed, toward the outer bank of a bend. When one strikes moist sand while digging then it is advisable to continue until water has either collected in the pit or until one strikes a clay or rocky bottom.

"Claypans" can be found anywhere in an area naturally provided, as long as the ground in the particular place where the rainwater drains to is impervious. Finding these is usually accidental as there are, in some cases, no surface indications that water is present. Quite often, while riding in the scrub of the desert steppe and in the seemingly endless chains of dunes, I suddenly saw before me one of those small round pools, with its slimy content of reddish-brown water, which I had not expected to see for miles around. Also plants disappeared here: only occasionally are trees (for example *Eucalyptus microtheca*), as a rule only found by creeks and lakes, found at the edge of these basins.

Neither a settler nor an Aborigine would hit upon the idea of looking for wells or springs in unknown country as these are rarely found in such places.

I have already stated that the Aborigines are good observers of nature, in the search for water they direct their attention not only to the local conditions but also to the behaviour of animals and to the plant world. Only the behaviour of animals is considered in this work - mainly for people who have not had much experience of life in the bush. Usually, when the attention of the Aborigines has been drawn to the presence of water by birds, they are able to find it. However, I will not, in this type of discussion, consider the long and difficult task of looking for water through diligent observation of the surrounding animal world.

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Which animals are in question here and how do they render assistance? At times the Aborigines find water by following the paw prints of a dingo or a larger marsupial. Though they are masters at discovering, reading and following tracks they do not usually choose this method because it offers little success in the quest for water. When they come to a creek and hear the calls of the parrots from the tops of the gum trees, or the melodious chirping of Zebra finches (*Amadina castanotis*) from the bushes, then they quicken their stride in expectation of satiating their thirst. If, however, they see swamp- or waterbirds fly up from the creek bed they are sure there will be a rock- or waterhole there. Another sign comes when a couple of crows, upon being disturbed, show no inclination to fly away but behave most fearlessly, indicating that that is their home territory. Pigeons also provide a good indication as they themselves rarely move far from their drinking place. The best time to look for water is in the morning and evening as many birds, such as the red-winged and pink parrots (*Nymphensittich*), the crested pigeon etc., fly in flocks to drink and the Aborigines, in favourable conditions, are able to determine from the direction of their flight where there is water. Pigeons provide a good indication of water because they don't go far from their water source. The Aborigines particularly observe the bronze-wing pigeon. Shortly before dawn or after sunset they fly as straight as an arrow in a certain direction to their water source, and if startled at these times from a tree near a creek then the sought for water will probably not be far

away. In the same manner it is possible to conclude that water is close by, as particular insects will seldom move far away from water. In the central parts of the colony a clay wasp – I don't know its name – will only build a nest where the female can find moist clay. I have frequently observed this insect around the waterholes in the Finke River. Dragonflies are also seen near water sources.

The plant world offers the Aborigines only a few signs of water. I will add to what I have already said about trees near waterholes and clayspans, that the vegetation, consisting of reeds and tubers, found near some of the wells found in creek beds that flow, is really lush and green and forms a circle around them, such as in the Finke River for example.

When the Aborigines cannot get water they quench their thirst with sap from plants, circumstances permitting. Sometimes they will not consume any other sort of liquid for weeks on end. In many of the more well-endowed areas of the world a person would easily die of thirst while looking for water, while at the same time they could save their life, without much trouble, as do the Australian, through the utilisation of sap from plants. In the worthless interior of the colony nature has produced trees, shrubs and herbs that absorb, in the rainy season, a considerable amount of moisture. A significant proportion of this can be obtained without difficulty, so that a human being is never open to the danger of dying of thirst, as long as these sap-rich plants are available.

In Australia it is apparent from writings about the Aborigines that there are quite a few plants whose sap is drunk in place of water. Also a small portion of the flora of the interior of the colony

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consists of these sap rich plants, with several Eucalypts, the "needle bush" (*Hakea leucoptera*), the "desert oak" (*Casuarina decaisneana*), the kurrajong (*Brachychiton gregorii*) and parakeelya (*Claytonia* sp.) being amongst the most notable. The Aborigines only use the roots of these trees and shrubs for the purpose of extracting moisture. To obtain the moisture the Aborigines proceeds by placing pieces of root of two to three fingers thickness upright in a hollow; the bulk of the sap drips out in a short space of time. The inhabitants of the Lake Eyre district used to put a fire in the twigs of the "needle bush" that was to provide the water before they start digging up the roots. What the aim is, in this, is not clear to me. Maybe it forces the sap, or a portion of it, through the action of the heat, into the roots. Of the previously mentioned plants parakeelya is the only one in which the above-ground parts are used. Gathering of its sap in this instance is simply done, namely by squeezing and sucking the leaves and stalks. The sap is rather slimy and has an unpleasant taste. It would appear, therefore, to be a bad substitute for water. When I stayed with a settler and some Aborigines near Anne's Reservoir we shot a feral heifer whose flesh was very dry and dull to the taste. This peculiar condition affects the flesh when cattle feed almost exclusively on parakeelya and it consequently goes for weeks without a drink.

A particular animal produces moisture to quench in an unusual way. In the interior there is a frog 6-7cm long<sup>1</sup> (*Chiroleptes platycephalus*) that, shortly before the water catchments in which it lives dry out, stores so much water in its body that it swells up to the size of an apple, digs itself in and falls into a deep sleep from which it only awakens as the result of heavy rainfall and the return of favourable conditions. According to what I have been told the Aborigines show great skill in finding their hiding place.

In the inland, where the air is hot and very dry, not only the whites but also the Aborigines require considerable quantities of water. Therefore a nomadic tribe, when on long treks, is careful not to run out of water, so it has to be dragged along by the women in wooden troughs.

During droughts there is only just enough for the people of the interior not to suffer too much from a lack of water. On my second trip overland I heard at Barrow Creek station that a few months before, in the area of 100,000 sq. kms between the MacDonnell Ranges and Tennant Creek, apart from the squatters wells, there were only about half a dozen places where the Aborigines were

<sup>1</sup> Report on the Work of the Horn Scientific Expedition to Central Australia. Part II - Zoology

able to quench their thirst. Moreover, the waterholes of the Frew River and the splendid “permanent” rockhole at Elkidra had dried up. In these times of need the sick and the elderly often die. One night, for example, a tribe that had lived near Lake Kilalpanina for more than thirty years left all the weaker members at Lake Hope and Lake Gregory and went walkabout because the water in the lake had become barely drinkable owing to the long drought.

## CHAPTER 14

### Stimulants

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From time immemorial tobacco (*Nicotiana sauveolens*) and Duboisia (*D. hoopwoodi*[sic]) have served as a luxury in many tribes. The inhabitants of the south coast do not appear to have known of any narcotics in former times. Those of the north coast, according to what I heard at the St. Catherine Mission on the Daly River, smoked the leaves of the previously mentioned *Amorphophallus* species in order to become intoxicated. Since the arrival of the white and yellow races spirits, as well as English and American smoking tobacco and opium, have come into common use.

Regarding the native tobacco plant, its range covers, as far as I can ascertain, from 21 to 28 deg. Latitude. As it is accepted that there is only one species so the reputation of the plant and its location must have a far-reaching influence. Specimens that grow in moist soil often reach a height of 1-1.5 m and have large, salty, elongated, ovate leaves. The funnel-shaped flower blooms have a length of 2-2.5 cm, which is about double the size of a cup. Specimens found in the hills and in sandy or dry soils are much smaller however, but their flowers are considerably larger; the length of their crown is 6.5-7 cm and the cup is 1.5-2 cm.

Duboisia and *pitcherie*<sup>1</sup> of the white settlers appears principally in the area between the Tropics and 30 deg. latitude and in the west and east up to the border of the colony. It is a shrub from 1-1.5 m high with yellow brown twigs, bright green lance shaped leaves, small off-white funnel-shaped flowers and small black fruits. I have only seen it in the hills running through the Hermannsburg Mission.

Native tobacco is mainly used in the area where it grows, though it is popular as an item of exchange for the tribes living to the north and south. For example, a *Waramunga* from Tennant's Creek told me that the plant did not grow in his home territory but his fellow tribesmen obtained it in trade for other articles.

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As far as I know the Duboisia serves as a luxury good for the tribes living between Lake Eyre and Queensland. As there is only one particular plant that grows there a thriving trade is conducted. When being transported for trade it appears the dried leaves are packed in half-moon shaped or tightly bound bags.

Tobacco is only chewed, and rarely smoked by those who associate with the whites, who have become passionate smokers of stick tobacco. As a rule they treat the leaves in a certain way to obtain the most desired result. I once asked an old Aborigine at Palm Valley, who was busy preparing a plug to chew, why he didn't chew the leaves when green and he replied that they were only good for children and were too mild for adults.

As the word chew can easily lead to a misunderstanding I must point out that the Aborigines don't chew it continuously while it is in their mouth but, like a European, put the plug between the cheek (usually on the left) and the teeth and leave it there until their craving is satisfied. Part of the extract ends up in the stomach, more through accident than by intentional swallowing it. When an Aborigine decides to suspend his enjoyment of it for a while he then removes the spit dampened ball from his mouth with a crooked finger and puts it in his headband or behind his ear like a scribe does with his quill.

The Australian isn't as passionate about chewing tobacco as the European is about smoking it. This is partly because of his lack of forethought, and his failure to stock up on tobacco and these

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<sup>1</sup> Besides this spelling other English names are *pitchery*, *pitchiri*, *pitchuri*, *pituri*, and *pituri*. The spelling used by me is more in accordance with the way it is pronounced in the colony.

plants when there is a drought, most of these plants only being found near waterholes or larger creeks. Chewing of tobacco has become an unbridled passion for coastal populations as well as the Aborigines. In one instance I know of an old fat "boss" of the western *Arunta* who constantly had a large plug in his mouth and who could not bring himself, before going to sleep, to take it out of his mouth. In general the Aboriginal women were more abstinent in this regard than the men. I have never seen small children chew tobacco. In many places inland during the dry season the discovery of a tobacco plant is met with great joy. Not surprisingly the little piece of chewing tobacco, as it passes from mouth to mouth, soon begins to look like a kangaroo's stomach contents.

The leaves and juicy stems that serve as chewing tobacco are dried by them for so long in the sun that the leaves become quite brittle. Growing specimens from the hills and drier areas are preferred over those growing in moister areas.

When an Aborigine wants the pleasure obtained from a plug he lays a mouthful on a flat stone he has previously warmed up and passes a bundle of burning acacia twigs closely back and forth over it until it is covered in ashes. When finished he mixes this with the tobacco. The alkaline salts in the ashes serve in this case to exclude the chemical parts that stimulate the nervous system and produce a happy state of mind. It is worth noting that African tribes use a similar process for the preparation of their snuff and chewing tobacco.

Our tobacco, like the Australian tobacco, gives a strong flavour to the spit. As for the excitatory effect of the last mentioned tobacco species I,

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as a "non-smoker", can give no indication. The settlers who have smoked it told me that it is very mild. One cannot draw a satisfactory conclusion from this, however, as such people have become used to the decidedly stronger stick tobacco.

*Duboisia* is also chewed by the Aborigines, in this case they put a ball of the chewed leaves – the leaf tips are particularly valued – in the side of their mouth between the cheek and the teeth; a small part is mixed with spittle which, through unintentional swallowing, then gradually ends up in the stomach. The leaves are gathered in the spring when the plant begins to flower and can be kept dry. Preparation of the plug is the same as for tobacco; first the leaves to be chewed are warmed up and then mixed with acacia ash.

The authors of the writings on *Duboisia* in English ethnographic works in large part acknowledge the settlers and the Aborigines as their sources. One author claims that moderate use reduces the feelings of hunger and fatigue, another is of the opinion that it produces pleasant dreams, a third that it provides complete numbness and day-long painkilling. That *Duboisia* is chemically identical to hyoscyamine, which is very similar to opium in its effects, corroborates that statement.

To learn more of the effect of the plant on the human body I have swallowed some finely chewed leaves while sober. They have a bitter, biting taste and produce a light burning sensation on the tongue which soon becomes numb. A short while later, following the consumption of the leaves, sleepiness, dizziness, a flood of saliva and a feeling of pressure in the head begins to manifest itself. At the same time a calming influence on the nervous system becomes noticeable. I didn't notice any effect on the heart rate. I cannot say if my pupils were enlarged during the experiment as I had no mirror available.

The Aborigines are less excessive in partaking in their own narcotic substances than those we can thank the immigrant races for introducing. When the Australians become habituated to spirits, the smoking of opium or tobacco as a rule they then offer all their possessions, their wife's chastity, even their freedom, to gain access to these stimulants of the nervous system.

One can justifiably say that a half to a quarter of all Aboriginal inhabitants of the colony have taken up the habit of imported tobacco. In the neighbourhood of the telegraph line and at the remote telegraph stations many of the men and women possess a pipe. Even the tribes that rarely come into contact with strangers manage to obtain stick tobacco through trade. This trade is very

brisk on the north coast. To the east of the railway line, in areas where there are few cattle stations, hundreds of Aborigines pass through in the course of a year to Palmerston and other places to trade tobacco and pipes, exchanging weapons and other items of equipment etc. with their fellow men, or the use of their women with men of the lighter coloured races. I only became aware of what role tobacco plays in the life of many of the north Australians in 1897 when, shortly before the start of the rainy season, I camped for several months at Knuckey's Lagoon

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close to an Aboriginal pathway. Almost every day during the oppressive summer small groups of residents from the Alligator River area passed by my camp site in single file, on their way to Palmerston, to obtain supplies of tobacco. Nevertheless the Aborigines living well to the west of the railway line also occasionally obtain tobacco although, out of fear for their countrymen from the east, they avoid the settlements as much as possible. For example, during my stay at the Jesuit Mission the *Pongo-Pongo* obtained tobacco, a mild form which had been grown there, called in jest Father Mackillop's cabbage leaves, from the missionaries in exchange for yam tubers (*Amorphophallus*). Other tribes from the lower reaches of the Daly River also traded these items with the residents of the mission.

In the settlements on the north coast the Aborigines earn money from permanent employment with the English; however they often come into camp to buy tobacco for themselves and their dependents when they are able to gain enough from begging or performing small services. Besides this the generosity of Europeans and Asians, to whom they at times lend their women, provides enough for them and their families to enable them to spend their time from morning till night smoking and still have sufficient supplies to trade with visitors.

Far inland the Australians have to work very hard and undergo a lot of humiliation to acquire tobacco. Amongst the English between the Catherine and Finke Rivers payments are made by cheques written against a bank or someone who is wealthy. But never a single coin finds its way into the hands of a "blackfellow" in these places; wages for their services consist of foodstuffs, clothes and, above all, tobacco. It is also understandable that the women who visit the strangers settlements are eagerly sought and so are able to obtain the "precious herb". The wages of sin are, however, much smaller than in the north, often consisting of only a small piece of tobacco, just enough to fill a pipe.

The desire for the excitatory effects of tobacco is often so strong with the Aborigines that in certain circumstances they are not afraid to satisfy it in the most unappetising way. During my overland trip from Palmerston to Adelaide I met two *Tjingale* men at Frew's Ironstone Ponds who were using a rather strange substitute for tobacco. They made a paste from the pulverised powder from the blackened stem of a much used pipe. This "damper", as they called it, they put in their mouth for a few minutes and swallowed the saliva that had dissolved some of this substance. Both of them immediately passed a lot of wind; the younger one had an attack of dizziness. I heard the inhabitants of that particular area frequently use this method. Sometimes they use as this "damper" the black crust that builds up in the bowl as the result of frequent usage.

As a rule the Aborigines, as well as the settlers, smoke imported tobacco in short wooden or clay pipes. They proceed in the usual way; however one notices ways that are different to ours, whereby they blow the smoke out through their nose. They prefer stronger types of tobacco; our loose tobacco is too mild for them. The desire for a really strong narcotic effect is certainly the main reason they prefer a clay over a wooden pipe. Furthermore they warm up the tobacco in warm ashes

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before they cut it up and put it in their pipe.

Almost without exception the Aborigines in the areas through which I travelled made their own pipes. On the Gulf of Carpentaria, in the area where the MacArthur River runs in to it, one

often sees, according to Spencer and Gillen<sup>1</sup>, pipes that have been carved by their owners which, like a typical Chinese opium pipe, consist of a long straight tube with a small bowl.

With a few of the tribes of the interior, such as the *Diari*, who habitually used *Duboisia* or the other tobacco-like herbs found in their country, stick tobacco is chewed. In the neighbourhood of Powell's Creek, where tobacco is highly prized because of its scarcity, I saw older Aboriginal men put a pea sized ball of tobacco on their lips in the corner of their mouths. Their skill in retaining this tiny plug was remarkable as they didn't drop it even while speaking.

It is scarcely credible the way the Aborigines of the north surrender to the passion for smoking opium. Fortunately only those who stay with the Chinese misuse this narcotic as up till now it has not been an article of trade. Normally the opium user smokes from a pipe with a long, thick stem and a cone-shaped bowl; they often use the remnant residue ("opium shit"), a black, crumbly mass, mixed with water, to derive their enjoyment.

Not only men but women as well have surrendered to the pleasure of opium. When I was at Rum Jungle two Chinese, who were my next door neighbours and worked on the railway, were smoking opium on one or more nights of the week along with two young Aboriginal and an old man, and at Knuckey's Lagoon a *Wulna* told me that the older women had to make do with "opium shit" as they could usually get this "cheap" from the Chinese who spent a lot on smoking opium.

With opium and the loan of a pipe the sly Chinaman makes the Aborigines his willing slaves: he gets the men, with their faces dripping in sweat, to do their work for them and takes everything from them which he can make money from, and forces the women and pre-pubescent girls to give in to his lust. It is, however, punishable by imprisonment for twelve months to provide the Aborigines with opium, the use of which is forbidden; how effective is it making something forbidden when it involves money or lust.

How the Aborigines and their teachers, the Chinese, proceed in smoking opium can be seen in the following. One evening, in the Knuckey's Lagoon area, I accidentally came across the hut of a *Larakia* who was using opium at the time and was lying on a blanket on the ground while his head was resting on a bundle of clothes. Smoking utensils, a lamp, a bottle and a pipe were lying alongside him on a kind or serving board. The lamp was the size of a small glass spirit-lamp and had a cylinder of similar dimensions to the top half of a wine bottle which was filled with oil. One little bottle contained the opium, a dark syrup-like liquid, and the other the by-product of opium smoking, "opium shit". The pipe was made of wood three fingers thick and three spans long,

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with a cone-shaped bowl and a thick mouthpiece. The bowl was placed with the base squarely in the tube which had in the middle of the flat side on the top (base of the cone) a small opening the size of a pinhead. At my request the *Larakia* showed me how the smoking of opium was carried out. First of all he dipped a long wire, the thickness of a needle, into the opium and then held it over the flame of the lamp until the adhering opium had become much thicker. Then, by rolling the wire, he smeared it on the flat side of the bowl and quickly put it into the opening in the cylinder. While smoking he kept the bowl over the lamp in such a way that the opium rose a bit on the outside but, as it did not come into contact with the flame, it just smouldered, gradually becoming a mass of "opium shit". He quickly sucked the smoke into his lungs, with one could say a rattling noise, while the "opium shit" that formed went deeper into the hole. When the pipe had burnt out he sank, half dazed, back onto the bundle of clothes. After he lay there for a while without moving the narcotic effect subsided and he started smoking again. In this way he passed several hours smoking in dream-like tranquillity.

The Aborigines are very partial to drink. This vice, however, has not become very widespread because of the price of spirits. Around Palmerston, on the northern goldfields and on

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<sup>1</sup> Spencer and Gillen, "The Northern Tribes of Central Australia", p. 706

the south coast I saw some drunkenness but inland, between Lake Eyre and Pine Creek, few of the Aboriginal people have had any “grog” pass their lips.

Tea drinking is something that is very popular the Aborigines, but only if it is sweetened with sugar. They are unfamiliar with similar drinks like coffee and cocoa.

During my sojourn of several years in the colony I came to the conclusion that the need for narcotic indulgence is much stronger with the Aborigines than with the whites. I believe that the reason for this difference lay mainly in the way of life of both. The Aborigines often experience chronic hunger, for weeks or even months at a time. When they are successful in hunting they gorge themselves on the flesh of their prey. For example, three hungry fellows consumed a whole emu I had given them in one evening. I could see with the settlers where the craving for tobacco or spirits was strong they are also immoderate in eating meat after a period of abstinence. A monotonous diet creates the desire for more interesting food.

Spices are unknown to the Aborigines living in South Australia; they do not even use cooking salt. I believe, however, that they will quickly get used to the spices which we use to enhance and improve the appetising qualities and taste of our food. At Knuckey’s Lagoon I met several half civilised married couples who had recipes for producing soup that was so peppery that I couldn’t eat a spoonful. It is not surprising that cooking salt isn’t used, though if there is a metabolic insufficiency of this condiment it produces a craving for it (“salthunger”). As we have seen in the preceding chapter meat, on average, forms the main food of the Aborigines. It contains all the salt needed by the human organism, in

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sufficient quantities. However, when only consuming vegetable foods the bodies of the Aborigines receive many salts, even from drinking water that is a bit brackish or ashes that get into most foods prepared on the fire.

The extinction of a race is often attributed to the abuse of narcotic stimulants received from the hands of their white oppressor. I will not state as a certainty that this claim contains in many cases a grain of truth; in the rapid decline of the Australian race a similar misuse has played a part.

The heavy smokers among the settlers soon suffer from digestive problems, trembling of the hands, insomnia and so forth. The Aborigines appear unable to obtain stick tobacco. Those who are able to obtain sufficient quantities for their own use, the “boys” that are employed by the pastoralists or drovers and the married men from prostitution, know how to obtain a rich diet and because of this they look healthier and better fed than their tribesmen in the bush.

Apart from that opium and spirits don’t play a significant role in the decline of the Aboriginal population as only a small proportion of that population are able to devote themselves to these pursuits on the previously mentioned grounds.

The harmful influence of opium on the body and mind is overstated according to me. During my last month at Knuckey’s Lagoon I lived in a hut made from corrugated iron that was divided into two parts by a wall a few metres high. One room was mine and the other was occupied by four Chinese railway workers as their living and sleeping quarters. I had a good opportunity to observe the habits and customs of these “Sons of the Middle Empire”. Their opium smoking occupied many hours each evening, the four of them, and yet they performed their seemingly heavy labour during soporific summer days to the full satisfaction of their English overseers.<sup>1</sup>

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<sup>1</sup> In California it is commonly thought that the Chinese who smoke opium less often are more prone to infections than the others.