THE FOOD RESOURCES OF THE ABORIGINES OF THE SOUTH-WEST OF WESTERN AUSTRALIA

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INTRODUCTION

The Aborigines in the South-West of Western Australia, in common with Aborigines in other parts of Australia, were hunters and gatherers. Like them they neither reared domestic animals nor cultivated crops, and were dependent on the environment for their food supply, moving from place to place within defined areas as the availability of food and the seasons dictated.

From our present knowledge of the fauna and flora of the south-west area of Western Australia, the sources of food most readily available to the Aborigines would have been mammals, birds and their eggs, most reptiles, some frogs, fish (where there was adequate water, especially in marine inlets) and some invertebrates (e.g. larvae of beetles), but most invertebrates seem to be unpalatable. As far as it is known the plant species available for food did not lend themselves to cultivation and no crops were grown. Seeds, fruits and roots of various sorts were gathered.

Few observers, apart from Nind (1831, p. 36), make positive statements on the division of labour between the sexes of their hunting and gathering activities, but from their descriptions it is reasonable to infer that the men were the hunters, they procured the larger animals, in particular kangaroos and emus, while the women were the gatherers, they collected seeds, dug for roots, and caught some of the smaller animals; but it is known that men also caught smaller animals and gathered roots. A further inference as to this division of labour can be drawn from the distribution between them of their implements; spears, axes, throwing-sticks or clubs, and boomerangs belonged to and were used by the men, while the women's main implement was the digging-stick.

The men and women usually went about their hunting and gathering activities independently; however, there were some of these, such as fishing, or catching animals by setting fire to the bush, in which they all took part.

By comparison with native peoples of most continents the Australian Aboriginal had access to relatively few major sources of animal protein, because, despite the appearances of the above list, mammals, with the exception of the great kangaroos, were mostly small, and the major protein sources available to man elsewhere in the world, which are provided by the ungulates (e.g. sheep, cattle, antelopes, deer, horses, etc.), are lacking in Australia (Ride 1971, p. 5).

Large mammals may once have been available to Aboriginal man in Australia because large marsupials of the families Diprotodontidae and Sthenuridae certainly occured in Australia in Aboriginal times (Merrilees 1968, p. 1) and would almost certainly have provided a major food source.

It is one thing to go through the lists of the species of fauna and flora and say what could be eaten by man; it is quite another thing to be sure that the species were in sufficient numbers to be a recognized source of food, or that the Aborigines had techniques which were adequate to take and use them.

The object of this paper is to discover from records of explorers and early settlers, tradition, and archaeological data, which of these food sources were utilized and what techniques were employed in taking and using them. A list of animal foods, mostly from literature sources, is given in Appendix 1; it is arranged in alphabetical order of

Aboriginal names. Where these have been identified to species, the identification is included. The same species are arranged in alphabetical order of scientific names grouped according to major zoological taxa, e.g., mammals, birds, etc., in Appendix 2.

FOOD SOURCES

Kangaroos

The grey kangaroo (*Macropus fuliginosus*) is the largest mammal in the area. It is widely distributed, being found on the coastal plain as well as the forest and woodland areas. It occurs in small mobs and was probably common throughout the area.

There is no doubt that the kangaroo was taken and eaten by the Aborigines as there are many references to it in the literature as a source of food (Anon. [Collie] 1834, p. 315; Armstrong 1871, p. 27; Backhouse 1843, p. 541; Bradshaw 1857, p. 98; Browne 1856, pp. 490, 534–5; Chauncy 1878, p. 248; Drummond 1843a; Eyre 1845, vol. 2, p. 277; Grey 1841, vol. 2, pp. 268–75; Hammond 1933, p. 29; Irwin 1835, p. 22; Moore 1884b, pp. 18, 37; Nind 1831, pp. 28, 29–30; Roth 1903, p. 47).

Skeletal remains of kangaroos are common in bone deposits in southwestern caves but, with the exception of Devil's Lair (Dortch & Merrilees 1971), they are not definitely associated with man. In the case of Devil's Lair, Dortch and Merrilees suggest (p. 112) that the presence of charred grey kangaroo remains in the deposit reveals that they were left by man.

Of the other large kangaroos the wallaroo (Macropus robustus) occurs on rocky outcrops in the area, but is only common at a few restricted localities. The red kangaroo (Megaleia rufa) occasionally enters the area in the vicinity of Morawa, but it is not known whether it did so before European settlement opened up the country.

The two main ways of taking kangaroos were by spearing them or catching them in traps. The methods used in spearing kangaroos varied according to the number of people involved. An individual hunter, or a small party, stalked a kangaroo until elose enough to spear it. In winter they took advantage of the wind and/or rain to conceal their approach (Anon. [Collie] 1834, p. 315; Browne 1856, p. 534; Grey 1841, vol. 2, pp. 268–70, 273–4; Moore 1884b, p. 18; Nind 1831, p. 29). Moore (1884b, p. 18) also described the use of a portable leafy screen by the hunter.

When a large number of people were assembled they hunted kangaroos by surrounding an area frequented by them, and then they gradually closed in, driving the kangaroos from their retreats, and speared them as they attempted to escape (Anon. [Collie] 1834, p. 315; Backhouse 1843, p. 541; Bradshaw 1857, p. 98; Browne 1856, p. 490; Grey 1841, vol. 2, pp. 270-1; Moore 1884b, p. 37; Nind 1831, p. 28-9, 30). In the winter they drove the kangaroos out by shouting and striking their spears and spear-throwers together (Browne 1856, p. 490), while in the summer they set fire to the bush (Grey 1841, vol. 2, p. 270: Nind 1831, p. 28). Although hunting was primarily a task for the men, Nind (1831, p. 28) noted that the women sometimes went with them when they set fire to the bush to eatch kangaroos or wallabies. According to Bradshaw (1857, p. 98) and Irwin (1835, p. 22) dogs occasionally accompanied the Aborigines when they were hunting kangaroos. [White (1972, p. 204) in a study of hunting dogs at Yalata, which lies outside the area of this study, questions whether native dogs were suitable for hunting. However the point which she raises does not rule out the contribution which semi-domesticated dogs could make in creating a fuss and flushing game from cover.]

The most common type of traps used to eatch kangaroos were deep narrow pits, which were lightly covered with branches and earth. These pits were dug along the tracks frequented by kangaroos, or near their watering places. A kangaroo falling into one of these pits was wedged in by the narrow sides and was unable to get a footing to escape (Anon. [Collie] 1834, p. 315; Armstrong 1871, p. 27; Breton 1834, p. 22; Drummond 1843a; Eyre 1845, vol. 2, pp. 288–8; Grey 1841, vol. 2, p. 273;

Nind 1831, p. 30; Roth 1903, p. 47; Stokes 1846, vol. 2, p. 230; *pers. comm.*, Doust). The branches placed over the pits seem to have played some part in preventing the escape of the kangaroo from them (Drummond 1843a; Eyre 1845, vol. 2, p. 278). The pits were also sometimes associated with a system of fences (Drummond 1843a).

A less common type of trap was a row of pointed stakes placed on the banks of streams where the kangaroos usually crossed. However it is not known whether the kangaroos impaled themselves on these stakes when crossing the stream, or whether they were caught on them only when attempting to escape from the Aborigines (Anon. [Collie] 1834, p. 315). Netting and ambushing at drinking places seem also to have been employed (Grey 1841, vol. 2, p. 273).

There are very few accounts of how the kangaroo was cooked. The most detailed of these is that by Grey (1841, vol. 2, pp. 274–5) in which he describes two methods, the animal was either placed in a hole, covered with ashes and a slow fire built over it, or it was cut up and the pieces broiled on the fire. The blood, entrails and the marrow were considered delicacies, and the young men were not permitted to eat these (Grey 1841, vol. 2, p. 275). Bradshaw (1857, p. 100) described an Aboriginal eating the entrails and drinking the blood of a freshly killed kangaroo before it was cooked.

The by-products obtained from kangaroos included cloaks and bags made from the skins; nose-bones and awls from the bones; sinews from the tails (which were used for sewing cloaks and binding implements); and scrapers made from the teeth (see Dortch & Merrilees 1971, p. 109, for archaeological evidence of this).

Wallabies

The other principal source of large to medium-sized mammals is treated here under the generic grouping "wallaby" (including rat-kangaroos). This is not particularly meaningful zoologically, but informants do not often distinguish between the various species occurring in the area which go to make up the group unless, like the woylie (see below), they have distinctive habits.

The principal species are:—

Brush wallaby (*Macropus irma*). This species, which is the largest of the wallabies, is confined to the forested areas and extends on to the Swan coastal plain.

Tammar (*Macropus eugenii*). This is the principal wallaby of the South-West inland¹ of the jarrah forest area, and occurred in fairly large numbers in thickets.

Quokka (Setonix brachyurus). This small wallaby occurred in large numbers in swampy thickets where it makes runs and tunnels through dense undergrowth.

Woylic (Bettongia penicillata). This rat-kangaroo was a fairly common mammal in the sclerophyll woodland. It makes its nest under bushes.

Various other species of wallaby occurred (Shortridge 1910, pp. 803-48), but were probably never common through the south-west area.

Most descriptions of how wallabies were caught refer to those which lived in thickets. The Aborigines surrounded an area in which these animals lived and destroyed their runs by trampling or breaking down the bushes (Grey 1841, vol. 2, p. 290; Nind 1831, p. 30; pers. comm. Blakers, Brockman). In some areas fences or snares were constructed at the ends of the runs (Drummond 1844 MS.).

¹Both the tammar and the quokka occur on offshore islands; the tammar on Garden Island, the Recherche Archipelago and the Abrolhos, and the quokka on Rottnest and Bald Islands (Ride 1970), but as far as is known the Aborigines did not visit these islands.

Towards the end of the summer the Aborines set fire to the bush to drive the wallabies from their retreats (Anon. [Collie] 1834, p. 335; Gilbert (in Wagstaffe and Rutherford 1955, p. 12); Grey 1841, vol. 2, p. 291; Nind 1831, p. 28). At other times of the year they drove them out with their dogs, or by making a loud noise (Drummond 1844 MS.; Nind 1831, p. 30; pers. conum., Blakers, Broekman).

As the wallabies attempted to eseape they were speared, elubbed, caught in snares set at the ends of the runs, or they became entangled in the trampled bush and were easily taken (Anon. [Collie] 1834, p. 335; Drummond 1844, MS.; Gilbert (in Wagstaffe and Rutherford 1955, p. 12); Grey 1841, vol. 2, p. 291; Nind 1831, p. 30; Roth 1903, p. 47; pers. comm., Blakers, Broekman).

Nind (1831, p. 30) notes that they were also eaught in pits in the same manner as kangaroos.

There are no details as to how wallabies were cooked, but since they are like small kangaroos the techniques were probably the same.

According to Goldsworthy (1886, p. 338) the *bullua* (or eonjurors) would not eat the male wallabies.

The rat-kangaroo, (Bettongia penicillata), known by the Aborigines as walyo, woail, or woile (see Appendix 1), which made its nest on the ground, was taken and eaten by them. The Aborigines speared them in their nests, or jumped on the nests, erushing the animal; if an animal tried to escape, it was chased until it took refuge, often in a hollow tree, where it was speared (Anon. [Collie] 1834, p. 339; Grey 1841, vol. 2, p. 290; Moore 1884b, p. 72).

As in the ease of kangaroos, wallaby bones are present in eave deposits but, apart from the study made by Dorteh and Merrilees (1971), there is no attempt to associate these with human utilization. Dorteh and Merrilees list (p. 107) the following species in the upper part of the deposit in Devil's Lair which they associate with human activity: brush wallaby (*Macropus irma*), tammar (*Macropus eugenii*), rock wallaby (*Petrogale penicillata*), quokka (*Setonix brachyurus*), woylie (*Bettougia penicillata*), potoroo (*Potorous tridactylus*). Bones of the woylie were charred, possibly as the result of their having been eooked or disearded into a fire (p. 112).

Possums

Of the arboreal mammals in the area the principal moderately large-sized ones were the following species of possums:—

Brush possum (*Trichosurus vulpecula*). This species was common and widely distributed throughout the area; it sheltered in the broken limbs of large trees.

Ringtail possum (*Pseudocheirus peregrinus*). This species was usually restricted to swampy thickets, and was really only common in the peppermint country of the coastal area of the South-West; it made nests or dreys in trees.

The eommon brush possum, known by the Aborigines as *comal*, *gumal*, *kumal* (see Appendix 1), was taken and eaten by them: that the ringtail possum, known as *uworra* (see Appendix 1), was taken at King George Sound can only be inferred from the statement by Nind (1831, p. 32) that the fur of both species was easily detached from the skin. Although Grey (1841, vol. 2, p. 263) lists two species of possum as being eaten by the Aborigines, my informant Elvard said that the ringtail was not eaten.

On moonlight nights the Aborigines hunted brush possums with their dogs. The possums were speared as they fled, or were driven into hollow trees from which they were extraeted (Grey 1841, vol. 2, p. 285; Nind 1831, p. 32). However most descriptions of eatehing possums refer to those which were taken by day (Anon. [Collie] 1834, p. 319; Armstrong 1871, p. 27; Chauney 1878, p. 248; Grey 1841, vol. 2, pp. 285–6; Hammond 1933, p. 41; Moore 1884b, p. 45; Nind 1831, p. 32; pers. comm., Broekman, Elvard).

The most usual method of taking the brush possum was to extricate it from its haunt in a hollow tree. The Aborigines were able to determine whether a possum had ascended a tree and whether or not it had come down again by examining the bark (Armstrong 1871, p. 27; Bradshaw 1857, p. 99; Chauney 1878, p. 248; Grey 1841, vol. 2, p. 286; Hammond 1933, p. 40; Nind 1831, p. 32).

The Aborigines climbed trees to catch possums, cutting toe-holds in the bark of the larger ones with their stone axes (Bradshaw 1857, p. 99: Chauney 1878, p. 248; Grey 1841, vol. 2, p. 286; Moore 1884b, p. 45; Nind 1831, p. 32; pers. comm., Brockman, Elvard, Hassell (W); see Eyre 1845, vol. 1, plate facing p. 68 for an illustration of this method being used in South Australia).

The easiest way to take a possum was to pull it out of its haunt by the tail; however, if it could not be reached, then it was smoked out, or poked out with a stick, the stick sometimes being twisted into the fur (Bradshaw 1857, p. 99; Grey 1841, vol. 2, p. 286; Nind 1831, p. 32; pers. comm., Elvard). A possum which tried to escape by running along a branch was shaken off or knocked down with a stick (Grey 1841, vol. 2, p. 287).

Possums, like most of the other smaller animals, were cooked whole. They were roasted on the hot coals, or were covered with hot ashes. Before being cooked, however, the intestines were taken out, and the fur plueked off and stuffed into the stomach which was then pinned together with a stick. When the possum was cooked the fur, which had been stuffed into it, was removed and sucked to obtain the juices it had soaked up (Bunbury 1930, p. 88; Hammond 1933, p. 29; Knight et al. 1886, p. 329; pers. comm., Brockman, Hassell (W)). Knight et al. (1886, p. 330) states that before it was cooked, the thigh bones of the possum were invariably bent back and broken, "this being a superstitious observance which is never neglected".

The main by-product from the possum was its fur, which was spun into long strands for use as belts and bands (see Meagher *in preparation*).

Dortch and Merrilees (1971, p. 107) include both brush and ringtail possums among the species associated with man in the Devil's Lair excavation. Bones of the brush possum were charred (p. 112). Roc (1971, p. 184) records both species in a deposit in a cave near Poison Hill, Gingin where struck flakes also occur at the same levels in the deposit.

Burrowing mammals

The two principal burrowing mammals of the South-West are the dalgyte (*Macrotis lagotis*), and the boodie, a rat-kangaroo (*Bettongia lesucur*). Both were fairly common in the dry country of the inland part of the area.

Dalgytes, known as *dalgyte*, *dolgyt* (see Appendix 1), were dug out of their burrows, or were taken when they were feeding (Grey 1841, vol. 2, p. 291). They were also eaught when the Aborigines set fire to the bush to drive out the larger animals such as the kangaroos and wallabies.

Burrowing mice djilyur (see Appendix 1), were also eaten (Moore 1884b, p. 105). Dortch and Merrilees (1971, p. 107) record the remains of the boodie (Bettongia lesueur) associated with man in the Devil's Lair deposit; and Roe (1971, p. 184) records it associated with struck flakes in the cave near Poison Hill, Gingin. The dalgyte is not known to have occurred in the area of Devil's Lair (pers. comm., Ride).

Dingoes

The dingo (Canis familiaris) was eaten by the Aborigines (Grey 1841, vol. 2, p. 279; Hassell 1936, p. 688; Nind 1831, p. 29). No information is given on how they were taken; Grey only noted that there was "nothing peculiar in their mode of killing wild dogs". The puppies were regarded as a delicacy, although these were sometimes reared by the Aborigines for hunting.

According to Hassell (1936, p. 688) the young people were not allowed to eat dingos, and if they eaught one then they had to give it to the old people.

Dingoes were not cut up before being cooked. They were placed in a hole and covered with hot ashes (Grey 1841, vol. 2, p. 279).

Bracelets were made from the tails (King 1827, vol. 2, p. 143), and fur from the tail was worn as an ornament across the forehead (Moore 1884b, p. 26).

Other land mammals

Grey (1841, vol. 2) notes that among the food eaten by the Aborigines there were "five animals, something smaller in size than rabbits" (p. 263), and "nine species of rats and mice" (p. 264). Moore (1884a, p. 285) lists mice as being one of the staple foods.

Bandicoots (*Isoodon obesulus*, *Perameles* sp., and ? *Chaeropus eeaudatus*) were eaten (as was the dalgyte *Macrotis lagotis*—see above under burrowing mammals) (Anon. [Collie] 1834, p. 339; Moore 1884b, p. 45). Nind (1831, p. 37) notes that "girls, after eleven or twelve years of age, seldom eat bandicoots, such food being considered a preventive to breeding".

Names given for various small mammals which were eaten include *kundi*, *mardo*, *nuji*, *quoit* (see Appendix 1).

Dortch and Merrilees (1971, p. 107) list the species associated with human artifacts in the Devil's Lair deposits. These include the bandicoots, *Isoodon obesulus* and *Perameles* cf. *P. bougainville*; and the mardo, *Antechinus flavipes*.

In addition to the species which fall into the categories for which we have historical evidence (already discussed above) the Devil's Lair deposit includes the native cat, Dasyurus geoffroii; the wambenger, Phascogale tapoatafa; the dunnart, Sminthopsis murina; the Tasmanian devil, Sareophilus harrisii; the mundarda, Cereartetus concinnus; the native rats and mice, Pseudomys praeeonis, Ps. alboeinereus, Ps. shortridgei, Notomys cf. N. mitehellii and Rattus fuscipes; and unidentified bats. Only one of these species (Ps. praeconis) occurs exclusively at levels above the first recovered human artifact (as do the known prey-species, the wallabies, M. irma, M. eugenii); it is therefore not possible to allocate these species unequivocally to human prey-species. The record of Ps. praeconis is probably not significant; it is represented by the remains of a single individual.

The probability that some of these (e.g. *Notomys* cf. *N. mitchellii*, the Tasmanian devil, the dunnart and the native cat) were taken by man is suggested by an apparent increase in their numbers in the upper levels of the deposit (i.e. those believed by Dortch and Merrilees, p. 112, to represent, "in part, food remains and other debris of human predators"). These authors point out that artifacts do not occur in lower parts of the deposit excavated by them and that it is in these lower parts that small animals predominate over large ones. That this increase means that they were taken by man is supported by a similar increase of numbers of individuals shown by the known prey-species (wallabies and possums) which also occur at these levels. Dortch and Merrilees (p. 112) suggest that the Tasmanian devil was a prey-species.

A small cave exeavated near Poison Hill, Gingin, by Roe (1971, pp. 183–4), which contained human artifacts as well as mammal and plant remains, in two defined horizons, also yielded the remains of bandicoots (i.e. the quenda, *Isoodon obesulus*) and the following species of small mammals (as well as possums and the boodie—see above): ? mardo, *Anuechinus flavipes*, ? dunnart, *Sminthopsis* sp., and the rats and mice *Pseudomys shortridgei*, ? *Ps. alboeinereus*, and *Rattus* sp.

Other records of fauna obtained from deposits containing human remains or artifacts do not clearly indicate the nature of the association between the artifacts and animal specimens. Thus Glauert (1948, pp. 103-4), in listing material obtained from

Yonderup Cave by D. S. Davidson, merely states that grey kangaroo, (Macropus fuliginosus), brush wallaby (M. irma), tammar (M. eugenii), potoroo (Potorous tridactylus), boodie (Bettongia lesueur), woylie (B. penicillata), brush possum (Trichosurus vulpecula), ringtail (Pseudocheirus peregrinus), quenda (Isoodon obesulus), native cat (Dasyurus geoffroii), and Tasmanian devil (Sarcophilus harrisii) were obtained in addition to human remains. Butler (1969, pp. 87–8) lists from coastal sand dunes lying between the Scott River and the Southern Ocean (east of Augusta) Macropus "probably M. fuliginosus", Setonix, Bettongia penicillata, Pseudocheirus, Isoodon, Dasyurus, and Sarcophilus as well as Aboriginal implements and other bone material including much of marine origin. The deposit is actively weathering out of the dunes and is clearly an admixture of a number of horizons. Hallam (1971a, p. 102) indicates that she has identified a fauna from Orchestra Shell Cave, near Wanneroo, upon which she intends to publish.

Birds

Many species of birds occurring in the South-West of Western Australia could have been eaten since almost all are palatable and a number are relatively easy to capture because of their behaviour. Grey (1841, vol. 2, p. 281) says that birds "formed a very considerable article of food for the natives, and their modes of killing them are so various that it would be impossible to enumerate them all".

Those birds which one might expect to identify from general descriptions in historical accounts are the emu, various species of water fowl, flocking birds such as parrots and cockatoos, and colonially nesting birds such as mutton birds (shearwaters) and various gulls and terns. Although Moore (1884b) includes the Aboriginal names for a number of birds in his vocabulary, and most of these names have been identified to species by Serventy and Whittell (1962), apart from the emu and the swan he does not state which of these were taken and eaten by the Aborigines.

The cmu (*Dromaius novaehollandiae*) occurred throughout the area. It was stalked and speared by the Aborigines (Chauncy 1878, p. 248; Moore 1884b, p. 78; Nind 1831, p. 30; Roth 1903, p. 47). Grey (1841, vol. 2, p. 281) says that emus were caught in the same manner as kangaroos (see above), but Roth (p. 48) says that they were never trapped in pitfalls or nets. Nind (p. 30) noted that they were mainly speared in the winter, when they were nesting.

The flesh of the emu was highly prized, and, according to Grey (1841, vol. 2, p. 281) there were restrictions on its distribution and heavy penalties were "pronounced against young men, and unauthorized persons", who ventured to touch it.

I was unable to find any descriptions of how emus were cooked.

The feathers were used as decorations.

Grey (1841, vol. 2, pp. 283–4) described how water fowl in general were either speared or eaught with a noose, but, apart from the black swan, there are no references to species by name.

The black swan (*Cygnus atratus*) is abundant in the South-West and is particularly common in inlets and estuaries such as Peel Inlet, Leschenault Estuary, Augusta, Wilson Inlet, Pallinup, and Bremer Bay estuary where large flocks occur (Serventy and Whittell 1962, p. 127). It was easily taken by the Aborigines when it was moulting (Grey 1841, vol. 2, p. 283; Moore 1884b, p. 30), and large numbers of both young and old birds and eggs were also taken when it was nesting (Bunbury 1930, p. 72).

According to my informant Doust, water fowl were cooked by first being covered with mud, placed in a hole, and then covered with ashes, where they were left for several hours. When the baked mud was cracked open the feathers came away in the mud leaving the body clean. Chauncy (1878, p. 250) noted that this method of cooking large birds was also used in other parts of Australia. Hammond (1933, p. 29) however, says that large birds were always cut up before being cooked. Grey (1841, vol. 2,

p. 285) says that birds were plucked before being cooked but Hammond (p. 29) says that the feathers were wetted and then burnt off.

References to the taking of flocking birds are given by Grey (1841, vol. 2, pp. 281–2), Roth (1903, p. 47) and Brockman (pers. comm.); of these, the most complete description (of taking cockatoos) is given by Grey who describes the use of boomerangs and spears. This description also includes the use of a wounded bird as a decoy.

Some birds were restricted to elasses of people by prohibition, thus young men could not eat wedge tails ("eagle hawk": Hassell 1936, p. 688; "black eagle": Nind 1831, p. 37), and quails were old men's diet (Nind, p. 37).

Pigeons were noted as being eaten (Grey 1841, vol. 2, p. 285; Nind 1831, p. 3.1). Serventy and Whittell (1962, p. 239) state that:

"Bronzewing Pigeons... are given to feeding on the seeds of the box-poison plant, *Gastrolobium bilobum*, and as a result their entrails and bones, but not the flesh, are poisonous to dogs and eats. After eating such pigeons, dogs and eats are apt to have fits, become mad, bit at anyone within reach, and finally die in convulsions."

There is nothing in the literature to suggest that the Aborigines took any special precautions to avoid possible poisoning from eating bronzewing pigeons, although it is possible that the custom of drawing birds as described by Grey (1841, vol. 2, p. 285) is in part related to this problem.

Birds' eggs were taken and eaten (Grey 1841, vol. 2, p. 263; Moore 1884b, p. 49; Nind 1831, p. 31; Ogle 1839, p. 63). Nind (p. 31) says that:

"At the spring time of the year, they live principally upon the eggs and young of birds, chiefly of the parrot tribe, but also of hawks, ducks, swans, pigeons, etc."

When eggs were cooked they were placed on end in moderately hot ashes. A small hole was pierced in the upper end to prevent them from bursting (Goldsworthy 1886, p. 338).

I have not been able to find any reference in the literature to the eollection of the eggs or young of eolonial nesters.

Snakes and lizards

Snakes and lizards are extremely numerous in the South-West, and for women and children would probably have provided the most abundant, and most easily obtained, source of animal protein. Except in cold weather they are active during the day and can be easily caught by such methods as digging, turning over stones or logs, and searching through leaf litter, and lifting bark.

Grey (1841, vol. 2, p. 263) included in his list of animals eaten by the Aborigines "eight sorts of snakes", and "seven sorts of iguana". From the literature (see Appendix 2—Reptiles) it is possible to identify six kinds of snakes and four kinds of lizards known to the Aborigines. These are the dugite (*Demansia affinis*), known as dubyt, karbarda, tornock, or tookyte; the tiger snake (*Notechis scutatus*), known as norne; the earpet snake (*Python spilotus*), known as wakel, or wackul; the bardiek, which was also the Aboriginal name, (*Brachyapis curta*); Mueller's snake (*Rhinoplocephalus bicolor*), known as torkite; and the crowned snake (*Denisonia coronata*), known as werr; the eommon goanna (*Varanus gouldii*), known as carta or munnaar; the King skink (*Egernia kingii*), known as wandie; the bobtail lizard (*Tiliqua rugosa*), known as yonern; and Burton's snake-lizard (*Lialis burtonis*), known as kerrygura or william lunger. While Moore (1884b) includes the Aboriginal names for a number of other snakes and lizards in his voeabulary, his descriptions of these are very brief and it is not possible to identify them.

Snakes were eaught behind the head, either by hand or with a forked stick, to prevent them from biting themselves or their captors (Neill 1845, p. 417; pers.

comm., Doust, Brockman).

Although some snakes (and in particular the tiger snake) were feared by the Aborigines, they were eaten nevertheless, but only if they had been killed by an Aboriginal. Neill (1845, p. 417) says that this was due to some superstition, but it is more likely that it was so that they could be sure that the snake had not bitten itself. Nind (1831, p. 31) noted that, after a snake had been killed, its head was beaten to pieces. He also noted that, if its stomach contained undigested food the Aborigines would not eat the snake, as they believed that this would make them ill.

There are no detailed descriptions of lizard-eatening. According to Hassell (1936, p. 690) the eggs of the common goanna were roasted in the ashes and eaten, but these were restricted to the old men and women.

Snakes and lizards were placed in a fire (Pl. 24 in Histoire du voyage; atlas, vol. 1. Voyage de . . . l'Astrolabe . . . pendant . . . 1826–29, sous le commandement de M. J. Dumont d'Urville. Paris, Tastu, 1830–33.) or roasted in the ashes.

Frogs

Frogs are abundant in the area, but numbers of species are poisonous, or at least distasteful, and one would have expected to find rather specialized treatment of them by the Aborigines, but the only indication that they differentiated between different species is given by Moore (1884a, p. 281):

"It appears that the natives do not consider every frog fit for eating, for some of a greenish colour were under the stack, but they would not eat them, and said they lived above the waters, but the good ones lived in the ground."

Various frogs, known as *goya*, *guya*, or *wurgyl*, (see Appendix 1), were collected from the swamps and shallow lakes throughout the year, but the greatest number were taken in the summer, when the water in these areas was low. They were dug out of the ground with the aid of the digging-stick (Grey 1841, vol. 2, p. 287; Moore 1884a, p. 265; Moore 1884b, p. 79).

As noted above not all frogs were considered as being fit to eat; and, in some cases, the females were preferred to the males because their eggs were regarded as a delicacy (Moore 1884a, pp. 265, 281; Moore 1884b, p. 79).

Frogs were cooked in the ashes (Grey 1841, vol. 2, p. 288; Moore 1884a, p. 184). Knight *et al.* (1886, p. 329) noted that before being cooked the thigh bones, like those of the possum, were invariably bent back and broken "this being a superstitious observance which is never neglected".

Fish

Fish were a major source of food for people living near the coast, particularly during the summer months (Browne 1856, p. 492; King 1827, vol. 2, p. 122; Nind 1831, p. 32; Neill 1845, p. 425; Stirling 1826 MS.).

The Aborigines confined their fishing activities to sheltered areas such as lakes, rivers and estuaries. They were not a scafaring people; they had no form of water transport; at King George Sound it was noted that they could not swim and were afraid of the water, although those living on the western coast were good swimmers (Armstrong 1871, p. 27; Barrow 1831, p. 12; Browne 1856, p. 540; Flinders 1814, vol. 1, p. 66; King 1827, vol. 2, p. 137; Hammond 1933, p. 17; Lockyer 1827a MS.; Moore 1884b, p. 9; Nind 1831, p. 32; Roth 1903, pp. 61, 65; Stirling 1926 MS.).

Fish were either speared or eaught by hand. The Aborigines did not have any nets or lines with which to eatch fish; nor is there any account of poisonous or narcotic plants being used to stun the fish.

Weirs or dams made from stones, bushes and/or sticks were built aeross rivers and streams; fish trapped in these were either speared or eaught by hand (Anon. [Collie] 1834, p. 335; Armstrong 1871, p. 27; Bunbury 1930, pp. 69, 87; Grey 1841, vol. 2, p. 275; Hackett 1886, p. 343; Hammond 1933, p. 46; Irwin 1835, p. 22; Lockyer 1827a MS.; Nind 1831, p. 32; Paterson 1896, p. 288; Roth 1903, p. 47; Stirling 1826 MS.).

When a shoal of fish was sighted in the shallows of an estuary it was driven towards the shore, the fish penned in with branches and stones, and then either speared or taken by hand (Anon. [Collie] 1834, p. 335; Browne 1856, pp. 492–3; Chauney 1878, p. 248; Grey 1841, vol. 2, p. 275; Neill 1845, p. 425; Nind 1831, p. 32).

Catching fish in weirs or drives was a group activity in which both men and women took part, and these methods were used when a large number of people were gathered together. However fish were also speared by individual fishermen in shallow water, or when crossing fords in the rivers (Anon. [Collie] 1834, p. 335; Baekhouse 1843, p. 527; Hammond 1933, pp. 19, 46; King 1827, vol. 2, p. 122; Nind 1831, p. 32; Neill 1845, p. 425).

Bait was sometimes used to attract fish; the fisherman sitting on a rock that jutted out into the sea, pounded up pieces of small shell-fish and threw it into the water; fish attracted by this bait were speared (Neill 1845, p. 424; Nind 1831, p. 32; pers. comm., Hassell). There is no record of baited spears being used (as mentioned generally for Australia by Aflalo, 1896). Fish were also speared at night with the aid of torehes made from *Xanthorrhoea* (Bunbury 1930, p. 76; Irwin 1835, p. 22; Neill 1845, p. 425; Nind 1831, p. 32).

By these various methods large quantities of fish were eaught, particularly in weirs or drives (Anon. [Collie] 1834, p. 335; Browne 1856, p. 493; Chauney 1878, p. 248; Hammond 1933, p. 46; Irwin 1835, p. 22; Nind 1831, pp. 32–3). When the Aborigines eaught more than they could eat they either left them to die (Irwin 1835, p. 22; Hammond 1933, p. 46), buried a quantity for another day (Anon. [Collie] 1834, p. 335), or cooked them, and wrapped the flesh in soft bark (Nind 1831, p. 33).

There were a number of fish which could be easily eaught, but were not eaten by the Aborigines; Bunbury (1930, p. 133) found that the Aborigines would not eat King Fish (? Belone gavialoides) or "Guard" Fish (? Hyporhamphus melanochir), as they believed that green-boned fish were poisonous, and Neill (1845) noted that they would not eat Rynchana greyi, Ostracian flavigaster, or Platyrhina. Sharks, sting-rays and maiden-rays were sometimes eaught, but it seems that this was done mainly for sport as they were not eaten (Grey 1841, vol. 2, p. 275; Moore 1884b, p. 4; Neill 1845, pp. 428-431; Nind 1831, p. 33).

The larger fish were cut up before being cooked on the fire (Hammond 1933, p. 29), while the smaller ones were either roasted whole on ashes, or were wrapped in soft bark and covered with hot ashes (Bunbury 1930, pp. 87–8; Grey 1841, vol. 2, p. 276; Hammond 1933, p. 29; Irwin 1835, p. 23).

The only by-product obtained from fish was the oil from the mullet. The Aborigines used this for greasing their heads and bodies (Neill 1845, p. 426).

Marine mammals-whales and seals

Whales and seals inhabit the waters off the coast of the south-west area of Western Australia. But as the Aborigines were not a seafaring people they did not actively hunt these animals and depended upon their coming ashore, or being washed ashore, or stranded in the shallow waters. Some indication of the frequency of strandings of whales (including the small species such as dolphins) is given by records held at the Western Australian Museum. For example, between 1960 and 1967, from just north of Perth to Eucla, there are 20 records, comprising approximately 130 individuals, of remains washed up or animals stranded (pers. comm., J. L. Bannister). The greatest

number of animals stranded at one time was approximately 45. The species most commonly represented are the sperm whale (*Physeter catodon*), the false killer whale (*Pseudorca crassideus*) and the bottle-nosed dolphin (*Tursiops* sp.); the two former generally strand in schools, the latter occurs most often as single careases, probably washed ashore. Some areas, c.g. Doubtful Island Bay and the Bremer Bay area on the south coast, are more prone to strandings than others, presumably because of the proximity of the continental shelf to the shore (allowing oceanie species to come close to land) and the configuration of the coast line.

When a whale, known by the Aborigines as *mimauga* (see Appendix 1) was washed ashore they feasted upon it, eutting off pieces of its flesh and roasting it on the fire (Grey 1841, vol. 2, p. 277; Johnston 1962, p. 71; Moore 1884b, p. 53; Nind 1831, p. 34). They greased their bodies with the blubber (Grey 1841, vol. 2, p. 277).

Seals were speared or struck with an axe when they were stranded in shallow water or eame in close to the shore (Grey 1841, vol. 2, p. 278; King 1827, vol. 2, p. 126).

Insects

Edible insect larvae, known by the names bardi, bardie, or wulgang, (see Appendix 1), were obtained from a number of trees including Xanthorrhoea, Acacia, Eucalyptus, and Banksia.

The grubs found in the blackboy (*Xanthorrhoea*) were the larvae of the beetle *Bardistus cibarius*. These were small white grubs and were to be found in large numbers, up to as many as a hundred, in the one tree.

The larvae of *Bardistus cibarius* occur in deeayed or rotting trees, and so, to ensure a supply of them, the Aborigines killed the blackboy trees by knocking the tops off them (Grey 1841, vol. 2, p. 289; Nind 1831, p. 34). The grubs which were later found in such trees were regarded as the property of the man who had knocked the top off, and were jealously guarded by him (Grey 1841, vol. 2, p. 289; Nind 1831, p. 34).

The grubs which were found in the other trees were the larvae of the ghost moths (Hepialidae) which deposit their eggs in living *Acacia*, *Encalyptus* and *Banksia*. The larvae were larger than those of *Bardistus cibarius*, but only one or two were found in each tree.

The larvae of both beetles and moths were eaten either raw or roasted; they were sometimes tied in a piece of bark before being roasted (Bradshaw 1857, p. 99; Hammond 1933, p. 30; Hassell 1936, p. 688; Moore 1884b, p. 5; Grey 1841, vol. 2, p. 289).

Scale insects (Hemiptera, superfamily Coecoidea) and their secretions known as *meenah*, *waumilyar* or *womela* (see Appendix 1) which were found on particular plants and trees, were collected and eaten by the Aborigines (Hammond 1933, p. 29; Moore 1884b, p. 75).

Ants' eggs (? larvae) were also collected and eaten (Hassell 1936, p. 690; Nind 1831, p. 34).

Vegetable foods

Vegetable foods collected and eaten by the Aborigines included roots, bulbs, tubers, seeds, nuts. fruit and fungus. In addition to these nectar was obtained from the flowers of *Banksia*, *Dryandra* and *Eucalyptus*, and gum was collected from *Acacia*. A list of vegetable foods, mostly from literature sources, is given in Appendix 3; it is arranged in alphabetical order of Aboriginal names. Where these have been identified to species, the identification is included. The same species are arranged in alphabetical order of scientific names in Appendix 4.

Roots, bulbs and tubers appear to have been the main sources of vegetable food, some of which were available throughout the year. Those collected and eaten by the Aborigines included species of *Caesia*, *Dioscorea*, *Haemodorum*, *Platysace*, *Praso-*

phyllum, and Typha. Gathering roots was a task for the women and ehildren, and for this the women used a long "digging" stick (Baekhouse 1843, p. 546; Bradshaw 1857. p. 99; Browne 1856, p. 537; Grey 1841, vol. 2, pp. 292–3; Hammond 1933, p. 28; Hassell 1936, p. 691; Moore 1884b, p. 73; Nind 1831, p. 36; Ogle 1839, p. 63; Roth 1903, p. 69). Vegetable foods were eaten either raw or roasted. The women and ehildren ate some of them during their day's activities and took the remainder back to their eamp.

It is known that eomplex methods of preparation were used for certain items, probably to rid them of poisonous or injurious qualities, for example Irwin (1835, p. 23) mentions that certain bitter nuts (not identified) were made edible by being rubbed with elay and baked in hot ashes. Another example is provided by the roots of *Haemodorum spicatum* and *Haemodorum* sp., known as *mean*, *meen*, *meernes*, *mein*, or *mene* (see Appendix 3). These roots, which had a hot taste when eaten raw, were roasted, and then pounded with a quantity of a particular type of earth, or "mould", which the women carried in their bags (Anon. [Collie] 1834, p. 319; Baekhouse 1843, p. 527; Grey 1841, vol. 2, p. 266). Different reasons for adding earth, or mould, to these roots have been given, including that it was a type of seasoning (Anon. [Collie] 1834, p. 319; Grey 1841, vol. 2, p. 293), or that it was rubbed on the grinding stones to prevent the roots from sticking to them (Nind 1831, p. 34), but, as it was known that these roots, when eaten by themselves could eause dysentery, it would seem that the most likely reason for the Aborigines using the mould was to remove the noxious qualities from the roots (Grey 1841, vol. 2, p. 293).

Another food which required eonsiderable preparation before it eould be eaten was the fruit of the Zamia palm (*Macrozamia riedlei*) which, being one of the few trees in the area which bore edible fruit (see below), was an important source of food. The "Zamia nuts", known as *baio*, *bayio*, *boyoo*, or *byyn* (see Appendix 3), eaused vomiting if they were eaten raw, and were considered poisonous by the Aborigines (Grey 1841, vol. 2, p. 295; Drummond 1839a MS.).

Towards the end of March, when the fruit was ripe, it was eolleeted, soaked in water for a period, and then buried until the pulp was then safe to be eaten either raw or roasted (Baekhouse 1843, p. 541; Grey 1841, vol. 2, p. 296; Hammond 1933, p. 28; Moore 1884b, p. 17; Stokes 1846, vol. 2, p. 132).

Neetar was obtained from the flowers of Banksia, Dryandra and Eucalyptus. Banksia grandis flowered in September and October, Banksia sphaerocarpa from October till January, and Dryandra fraseri and Eucalyptus calophylla in February and Mareh.

The flowers of Banksia grandis, and the neetar obtained from them, were known by the same name, mangaitch, mangite, mangyt, moncat, mungat, munghite, mungite, or mungyte and those of Banksia sphaerocarpa as nugoo (see Appendix 3). Neetar was primarily obtained by sueking the spikes (Anon. [Collie] 1834, p. 319; Bunbury 1930, p. 80; Hassell 1936, p. 689; Irwin 1835, p. 23; Moore 1884b, p. 7; Nind 1831, p. 35; Roth 1903, p. 49; Drummond 1839a MS.), but a sweet drink was also made from them. This was done by lining a hole in the ground with paper-bark, filling it with the spikes, and then covering these with water and leaving them to soak (Moore 1884b, pp. 7, 63; Roth 1903, p. 49).

The flowers of *Eucalyptus calophylla* (red-gum), known as *ngumbit*, *numbit*, or *numbrid* (see Appendix 3) were used to make a similar drink (Drummond 1843e; Moore 1884a p. 213; Moore 1884b, pp. 62, 67).

Neetar was also sueked from the flowers of *Dryandra fraseri* which were known as budjan or butyak (see Appendix 3).

In the summer months gum known as galyang, kwonnat, manna, meen, or menna (see Appendix 3) was collected from Acacia trees and made into cakes, which eould be eaten as required (Bradshaw 1857 p. 115; Drummond 1839b MS.; Hassell 1936

p. 689; Grey 1841 vol. 2 p. 294; Moore 1884b pp. 27 52; Moore 1884b also adds p. 3 balga [=Xanthorrhoea] and p. 23, dolgar [=Hakea]; Drummond 1843c comments on another substance called mnkar obtained from a Eucalyptus—see Appendix 3 under mnkar).

As mentioned above edible fruits were not common, but, in addition to the Zamia, the fruit of the Quondong, the "wild cherry", the "small Hottentot fig", and a creeper known as *kuruba*, were collected and eaten by the Aborigines. (Hammond 1933, p. 28; Hassell 1936, p. 689; Moore 1884b, pp. 46, 48.)

The women collected seeds from the *Acacia*, known as *kunart* or *kwonnart* (see Appendix 3). These were ground up when required and made into cakes, which were baked in the ashes (Hammond 1933, p. 30; Hassell 1936, p. 690; Moore 1884b, p. 45).

The seeds from the sandal-wood tree, *poilyenum* or *willarak* (see Appendix 3) were sometimes eaten but they were mainly collected for the oil which they contained. The men used this oil for rubbing on their bodies (Hassell 1936 p. 689; Moore 1884b p. 77).

Of fungi growing in the South-West some species, including the common mushroom, were considered inedible by the Aborigines. However other species, including those known as *butogo*, *bwyego*, *dtalyil*, *mord*, *numar*, and *wurdo* (see Appendix 3) were eaten by them (Anon. [Collie] 1834, p. 339; Drummona 1839b MS.; Grey 1841, vol. 2, p. 294; Moore 1884b, pp. 16, 17, 98; Nind 1831, p. 35; *pers. comm.*, Brockman).

From discussion with my informants it is clear that it would still be possible to gain considerable knowledge of gathering, from the women, although some of the Aboriginal names of material gathered may not be known, these having been replaced by European names.

The following example illustrates the potential for study which still exists and should be pursued in depth. That studies are possible outside the South-West is clear from the recent literature (e.g. Gould 1968, Scott 1972).

I cannot judge whether first hand experience of traditional hunting techniques by men can still be gained in the South-West.

On August 19 and August 20, 1967, I accompanied two part-Aboriginal women (Maggie Bell and Nellie Parker of Mingenew) while they collected vegetable foods. We visited five sites and collected samples of eleven kinds of plants eaten by the Aborigines.

The plants were subsequently identified by the Department of Agriculture in Perth.

Site 1 (4.3 kilometres south-east of Mingenew)

Dioscorea hastifolia. This plant, which was called worrain, has a long tuber which grows to a considerable depth (i.e. about 2 metres) and was dug up with a digging-stick. It was cooked in the ashes and pounded before being eaten.

Platysace maxwellii. This plant, which was called karno, has a large number of round tubers; eighty-four were collected from one plant. The tubers are about half a metre below the ground and are dug up with a digging-stick. The younger tubers, which were nearer the surface, were preferred. These tubers are available throughout the year and, besides being roasted in the ashes, are sometimes eaten raw to quench the thirst.

Thysanotus patersonii. The leaves and flowers of this creeper, which was known as tjungoori, were collected and rolled into a ball. It was cooked in the ashes for about ten to fifteen minutes and then ground with a grinding stone. The green powder which resulted from this was eaten with the root of the York gum, Eucalyptus loxophleba.

Site 2 (8 kilometres south-east of Mingenew)

Haemodorum paniculatum. The tuberous root of this plant, known as mutta, has a hot taste when eaten raw. It was usually roasted in the ashes before being eaten.

Haemodorum spicatum. This plant, known as koolung, has a tuberous root similar to H. paniculatum.

Prasophyllum sp. This plant is known as the "wild potato". It has a tuber which grows about a quarter of a metre below the ground, and is dug with a digging-stick. It was roasted before being eaten.

Site 3 (0.8 kilometres east of Mingenew)

Amyema fitzgeraldii. This plant, which is a parasite, grows on the jam tree. The Aboriginal name was not known and it was referred to as "mistletoe". The berries were eaten by the Aborigines.

Astroloma serratifolium. The small green berries of this plant, known as murrumburru, were eaten by the Aborigines.

Brachysema aphyllum. This plant has a red flower. The Aborigines sucked the flowers to obtain neetar from them.

Site 4 (e. 22 kilometres west of Mingenew)

Banksia sphaerocarpa. Neetar was obtained from the flowers of this plant which were known as nugoo. On eool damp days the neetar was sucked from the spikes, but at other times the spikes were soaked in water which was then drunk.

Site 5 (e. 25 kilometres east of Dongara)

Haemodorum simulans. The tuberous root of this plant, known as mutta, was similar to H. paniculatum and H. spicatum (see above).

It has been noted in the literature (see p. 25) that special treatment was used in the preparation of the roots of *Haemodorum* but neither of my informants volunteered information that any special method was used in cooking these roots.

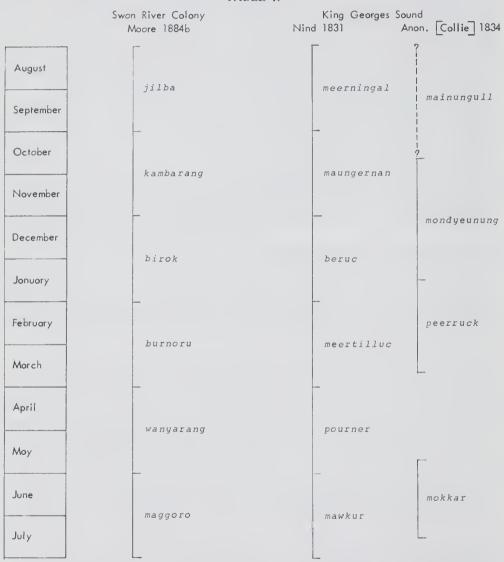
Seasonal utilization of food resources

There is considerable evidence in the literature that the contemporary writers were struck by the mobile nature of Aboriginal groups (Anon. [Collie] 1834, pp. 315, 331, 335; Browne 1856, pp. 492, 534; Grey 1841, vol. 2, pp. 260, 262, 292, 297, 298; Hallam 1971b, pp. 2–3; Irwin 1835, p. 22; Nind 1831, pp. 28, 35, 36; Roth 1903, p. 59). Most writers attributed these movements to the abundance or lack of food in certain areas at certain seasons. There is particular evidence of movement between the coastal areas and the interior; the coastal areas being inhabited during the summer months and the interior during the winter (Anon. [Collie] 1834, pp. 315, 335; Browne 1856, pp. 492, 534; Nind 1831, pp. 28, 36). Hallam (1971b, pp. 5–6) has discussed other data showing movement between various places on the Swan Coastal Plain.

Information on the seasonal distribution and abundance of food species (e.g. kangaroos, fish, etc.) in the South-West of Western Australia, may in due course allow further interpretation of historical records and, in particular, the hypothesis that movements are related to these. Information that a prey species does not move (e.g. that the grey kangaroos in eastern Australia are sedentary—pers. comm., Oliver), may be directly contrary to the inferences drawn by contemporary observers but this need not rule out the possibility that movement was the result of a shift in predation onto a more abundant, or concentrated, part of a non-mobile resource. In assessing modern zoological data it must also be remembered that factors causing seasonal abundance of species today may be different from those in the past as the result of European development. Social motives not understood by observers may also have underlain the reason for seasonal movement by the Aborigines. Finally, elimatic effects may have played a considerable part.

In this section is presented, without comment, month by month, and season by season, such information as is in the literature which may reveal seasonal utilization of food resources. The information is summarized in the accompanying table. In literature the writers use months, Europeans seasons, and Aboriginal seasons. In the table these have been translated into months, but in the body of the text I have listed them under the temporal headings used by the original observers.

TABLE 1.



Aboriginal names for seasons: MOORE (1884b, p. 10) "The aborigines seem to distinguish six particular seasons. They are:—1. Maggoro—June and July—Winter. 2. Jilba—August and September—Spring. 3. Kambarang—October and November. 4. Birok—December and January—Summer. 5. Burnoru—February and March—Autumn. 6. Wanyarang, or Geran—April and May." NIND (1831, p. 50) "Seasons, beginning with June and July, or Winter. Mawkur, Meerningal, Maungernan, Beruc, Meertilluc, Pourner". ANON. (Collie) (1834) p. 315 "... on the 24th May, after some rain had fallen, and in the commencement of Mokkar, (winter, or the rainy season,)..."; p. 339 "In the middle of July (end of Mokkar,)..."; p. 331 "As the spring advanced (in the native season of Mainungull)..."; p. 335 "At this period of the year (Mondyeunung of our tribe) comprising from the latter part of October to the middle of January,..."; p. 335 "The native season of Mondyeunung is succeeded by Peeruk, which continues till about the 20th of March,..."

TABLE 2: SEASONAL UTILIZATION OF FOOD RESOURCES

Tabular arrangement of bibliographic references according to kinds of food and their monthly and seasonal distribution. The superscript to each reference indicates whether it is to a month * or a season **. Grey (1841, vol. 2, p. 287)** Grey (1841, vol. 2, p. 287)** GRUBS FROGS Grey (1841, vol. 2, p. 287)** FRUITS BERRIES ETC. NECTAR GUM (1834, p. 335)** Anon. [Collie] (1834, p. 335)** [Collie] Anon. Moore (1884b, p. 12)** Gilbert (in Wagstaffe & Rutherford 1954, p. 496)* Moore (1884b, Moore (1884b, p. 12)** p. 12)** Moore (1884b, Moore (1884b, pp. 20, 36)* Nind (1831, p. 36)* pp. 20, 22)* Nind (1831, p. 36)* ROOTS Anon. [Collie] (1834, p. 331)** Anon. [Collie] (1834, p. 335)* Nind (1831, p. 36)* Anon. [Collie] (1834, p. 331)** Nind (1831, p. 36)* Anon. [Collie] (1834, FISH p. 331)** REPTILES Anon. [Collie] (1834, p. 335)** Moore (1884b, Anon. [Collic] (1834, p. 335)** Moore (1884b, p. 27)* Nind (1831, p. 31)** Nind (1831, p. 31)** p. 27)* Nind (1831, p. 31)** BIRDS MAMMALS Nind (1831, p. 30)** Nind (1831, p. 30)** Nind (1831, p. 30)** SEA-SON** S 9 N В d SEPTEMBER NOVEMBER *HLNOW OCTOBER

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| GRUBS | Grey (1841, vol. 2, p. 287)** | Grey (1841, vol. 2, p. 287)** | Grey (1841, vol. 2, p. 287)** |
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| FRUITS BERRIES ETC. | | | Moore (1884b, p. 16)* |
| NECTAR | Bradshaw (1857, p. 100)** Bunbury (1930, p. 80)* Grey (1841, vol. 2, p. 294)** Moore (1884b, p. 45)** | Bradshaw (1857, p. 100)** Grey (1841, vol. 2, p. 294)** Moore (1884b, p. 45)** | Bradshaw (1857, p. 100)** Grey (1841, vol. 2, p. 294)** Moore (1884b, p. 45)** |
| ROOTS | Moore (1884b, p. 12)** | Backhouse (1843, p. 540)* Moore (1884b, p. 12)** | Moore (1884b, p. 12)** |
| FISH | Browne (1856, p. 492)** Bunbury (1930, p. 80)* Grey (1841, vol. 2 p. 279)* Moore, (1884b, p. 73)** Neill (1845, pp. 419, 425)** Nind (1831, pp. 32, 34)** | Browne (1856, p. 492)** Grey (1841, vol. 2, p. 279)* Moore (1884b, p. 73)** Neill (1845, pp. 419, 425)** Nind (1831, pp. 32, 34)** | Browne (1856, p. 492)** Moore (1884b, p. 16)* Moore (1884b, (p. 73)**, pr. 419, 425)** Nind (1831, pp. 32, 34)** |
| REPTILES | Moore (1884b, p. 10)* Nind (1831, p. 28)** | Moore (1884b, p. 10)* Nind 1831, p. 28)** | Nind (1831, p. 28)** |
| BIRDS | Anon. [Collie] (1834, p. 335)** Grey (1841, vol. 2, p. 283)** | Anon. [Collie] (1834, p. 335)** Grey (1841, vol. 2, p. 283)** | |
| MAMMALS | Anon. [Collie] (1834, p. 335)* Bradshaw (1857, p. 102)** Nind (1831, p. 28)** Nind (1831, p. 28)** | Anon. [Collie] (1834, p. 335)* Backhouse (1843, p. 541)* Bradshaw (1857, p. 102)** p. 102)** p. 28)** | Anon. [Collie] (1834, p. 335)* Bradshaw (1857, p. 102)** Gilbert (in Wagstaffe & Rutherford 1955, p. 12)** Nind (1834, p. 28)** |
| SEA- SON** | В | I W W N S | |
| MONTH* | DECEMBER | JANUARY | FEBRUARY |

| | GRUBS FROGS | Grey (1841, vol. 2, p. 287)** Moore (1884a, p. 220)* | Grey (1841, vol. 2, p. 287)** Moore (1884b, p. 33)* | Anon. [Collie] (1834, p. 319)* Grey (1841, vol. 2, p.287)** Moore (1884a, pp. 184, 265)* Moore (1884b, p. 33)* |
|---|---------------------------|---|--|--|
| ontinued | FRUITS BERRIES ETC. | Grey (1841, vol. 2, p. 296)* Moore (1884b, p. 16)* Stokes (1846, vol. 2, p. 132)* | | Moore (1884b, p. 17)* |
| | NECTAR | Moore (1884a, p. 213)* | | |
| TABLE 2: SEASONAL UTILIZATION OF FOOD RESOURCES—continued | ROOTS | Moore (1884a, p. 220)* Moore (1884b, p. 12)** | Moore (1884a, p. 220)* Moore (1884b, p. 12)** Moore (1884b, p. 81)* | Anon. [Collie] (1834, p. 319)* Moore (1884b, p. 12)** Moore (1884b, p. 81)* |
| ION OF FOOD | FISH | Moore (1884b, p. 16)* Nind (1831, pp. 32, 36)** | Nind (1831, pp. 32, 33, 36)** | Nind (1831, pp. 32, 33, 36)** |
| L UTILIZAT | REPTILES | | | |
| 2: SEASONA | BIRDS | | | |
| TABLE | MAMMALS | | | Anon. [Collie] (1834, pp. 315, 319)* Nind (1831, p. 36)** |
| | SEA- SON** | N W | υтι |) V |
| | MONTH* | MARCH | APRIL | MAY |

TABLE 2: SEASONAL UTILIZATION OF FOOD RESOURCES—continued

| | GRUBS | Grey (1841, vol. 2, p. 287)** | Grey (1841, vol. 2, p. 287)** | Grey (1841, vol. 2, p. 287)** |
|---|---------------------------|---|--|--|
| | FRUITS BERRIES ETC. | | | |
| continued | NECTAR | | | |
| KESOURCES— | ROOTS | Grey (1841, vol. 2, p. 294)* Moore (1884b, pp. 12, 74)** Moore (1884b, pp. 12, 74)** p. 36)* | Anon. [Collie] Moore (1884b, (1834 p. 331)** Moore (1884b, p. 47)* Neili (1845, p. 426)** | Moore (1884b, p. 12)** Moore, (1884b, p. 36)* |
| IABLE 2: SEASONAL UIILIZATION OF FOOD RESOURCES—continued | FISH | Anon. [Collie] (1834, p. 331)** Eyre (1845, vol. 2, p. 97)* Moore (1884b, p. 47)* Neill (1845, p. 426)** Paterson (1896, p. 2289)** | Anon. [Collie] (1834 p. 331)** Moore (1884b, p. 47)* Neill (1845, p. 426)** | Anon. [Collie] (1834, p. 331)** Neill (1845, p. 426)** |
| UILLIZALI | REPTILES | | | |
| 2: SEASONAL | BIRDS | Bradshaw (1857 p. 98)** Nind (1831, p. 30)** | Bradshaw (1857, p. 98)** Nind (1831, p. 30)** | Bradshaw (1857, p. 98)** Nind (1831, p. 30)* |
| IABLE | MAMMALS | Anon. [Collie] (1834, p. 315)** Bradshaw (1857, p. 98)** Browne (1856, p. 534)** | Anon. [Collie] (1834, p. 315)** Bradshaw (1857, p. 98)** Browne (1856, p. 534)** | Anon. [Collie] (1834, p. 315)** Bradshaw (1857, p. 98)** Browne (1856, p. 534)** |
| | SEA- SON** | | TNIV | \ |
| | MONTH* | JUNE | JULY | AUGUST |

SEPTEMBER

Moore (1884b, p. 20)

Djakat,—A small root eaten by the natives; in season in the months of September and October.

Moore (1884b, p. 36)

Jilba,—The spring; August and September. Djubak is now in season.

Nind (1831, p. 36)

They begin to return to the coast about September or October, and at this season they chiefly subsist on roots. In calm weather, however, they procure a few fish.

OCTOBER

Anon. [Collie] (1834, p. 335, October 24)

Every hand engaged procured about a dozen [fish], and I think there were ten of them. Nor was this the only shoal they caught that morning, so that they feasted all day to gorging, buried a quantity for another day, and gave us several.

Gilbert (in Wagstaffe & Rutherford, 1954, p. 496, October 9, 1842)

... their [the Aborigines'] Season of meeting in great numbers to dig the edible Root called by them Wargae is now in full force . . .

Moore (1884b, p. 20) [see SEPTEMBER]

Moore (1884b, p. 22)

Djubak,—An orchis, the root of which is the size and shape of a new potato, and is eaten by the natives. It is in season in the month of October.

Moore (1884b, p. 27)

Kambarang,—Beginning of summer—October and November. The natives leave off building huts about this time. Young birds begin to be plentiful.

Nind (1831, p. 36)

[see SEPTEMBER]

NOVEMBER

Moore (1884b, p. 27) [see *OCTOBER*]

DECEMBER

Anon. [Collie] (1834, p. 335)

In December, but more particularly in January and February, the natives burn large tracts of country to catch wallabee, or bush kangaroo. For this purpose they generally go in considerable numbers and select a fine and warm day, and, having fired a portion of thick shrub or grass where they know these animals to live, they watch their being driven by the fire, and either spear them or knock them down with a short and rather slender batoon called *toollila*. As the fire when once lighted cannot be extinguished when they have supplied themselves with a sufficient number, they go on catching not to lose the opportunity, and having thus procured a superabundance, they are glad to exchange them in the Settlement for bread, rice &c.

Bunbury (1930, p. 80)

At this season [December] food was plentiful—both fish, the favorite of which seems to be the Mullet, and "Munghites" as they call the flower of the Banksia,

from which they extract by suction a delicious juice resembling a mixture of honey and dew.

Grey (1841, vol. 2, p. 279)

... fresh-water turtle are extremly abundant, (p. 280) and are in high season about December and January. At this time the natives assemble near the freshwater lakes and lagoons in large numbers; ... I have known two or three of them to catch fourteen turtle, none of which weighed less than one, and many of them as much as two or three pounds, in the course of a very short time.

Moore (1884b, p. 10)

Birok,—The summer season, December and January. ... This is the very height of summer, when iguanas and lizards abound.

Nind (1831, p. 36)

About Christmas they commence firing the country for game, and the families, who through the winter have been dispersed over the country, reassemble.

JANUARY

Anon. [Collie] (1834, p. 335) [see DECEMBER]

Backhouse (1843, p. 540, January 20, 1838)

We examined some holes, where the Natives had been digging for roots of a Dioscorea, or Yam, for food.

Backhouse (1843, p. 541, January 22, 1838)

Much of the bush, on the road, had been recently burnt, and one house had been consumed by fire. The Natives are now setting fire to the scrub, in various places, to facilitate their hunting, and to afford young herbage to the Kangaroos.

Grey (1841, vol. 2, p. 279) [see *DECEMBER*]

Moore (1884b, p. 10) [see *DECEMBER*]

FEBRUARY

Anon. [Collie] (1834, p. 335) [see *DECEMBER*]

Moore (1884b, p. 16)

Burnur, or Burnuro,—The autumn of Western Australia, including the months of February and March. . . . This is the By-yu or Zamia-fruit season; and mullet, salmon and tailor-fish abound.

MARCH

Grey (1841, vol. 2, p. 296)

The native women collect the nuts from the [Zamia] palms in the month of March, and having placed them in some shallow pool of water, they leave them to soak for several days.

Moore (1884a, p. 213, March 6, 1834)

Have been beset all day by natives. They pull the blossoms of the red gum tree (now in flower), steep them in water, and drink the water, which acquires a taste like sugar and water by this process.

Moore (1884a, p. 220, March 29, 1834)

They [the natives] are now busy digging the root of a broad sort of flag which grows in a swamp near this; some people say that this makes sago, or rather arrowroot.

Moore (1884a, p. 220, March 30, 1834)

The natives have been feasting on a sort of grub or worm which they find in numbers under the bark of the red gum trees. . . . The grub is a sort of long four-sided worm or maggot, with a thick flat square head and a small pair of strong brown forceps set on the end of the head.

Moore (1884b, p. 16) [see *FEBRUARY*]

Stokes (1846, vol. 2, p. 132)

[Zamia palm] Red fruit, nut, called *baio* ripe in March, is considered a delicacy by the natives.

APRIL

Moore (1884a, p. 220, April 2, 1834)

Got from the natives a piece of bread made of the root of the flag which they called *yandyett*.

Moore (1884b, p. 33)

Gu-yu, or Goya,—A species of frog that burrows in the sand, and is eaten by the natives. It is in season in the months of April and May.

Moore (1884b, p. 81)

Yanjidi,—An edible root of a species of flag (Typha angustifolia), growing along fresh-water streams and the banks of pools. . . . The natives dig the roots up, clean them, roast them, and then pound them into a mass, which, when kneaded and made into a cake, tastes like flour not separated from the bran. This root is in season in April and May, when the broad leaves will have been burned by the summer fires, by which the taste, according to native ideas, is improved.

MAY

Anon. [Collie] (1834, p. 315)

... on the 24th of May, after some rain had fallen, and in the commencement of Mokkar, (winter, or the rainy season,) ... they took their departure from the coast, and even to a boy proceeded inland for the purpose of spearing kangaroo—the season for that species of hunting commencing at that time,

Anon. [Collie] (1834, p. 319, May 3 & 4)

The animals which they [two men, a woman and child] had consisted of a possum, bandicoot, kangaroo rat, and frogs; . . . Next day, which was at first very rainy, our native companions followed us and stopped when we did to lunch. They had picked out of the hollow of some trees as they went along, an opossum or two, which were treated as the preceding night, but our afternoon's march did not lead through so good a foraging country, and they came to the evening's bivouac with empty hands and unfilled bags. As this place, however, was early selected, they made an excursion and returned before dark ladened with mean, (Haemodorum spicatum,) and this constituted their supper, . . .

Moore (1884a, p. 184, May 4, 1833)

Two natives came here today: . . . One of them had a number of frogs (which I think he called "dweep") nicely packed up in the bark of the tea-tree, and tied with grass; these he signified they roasted for food, with a long white root, growing like a parsnip, which they dig up in wet weather.

Moore (1884a, p. 265, May 6, 1835)

One of the little native boys was busy eating frogs today. They looked so tempting that I ate one also, and it was delicious. The part I ate, however was the eggs of the female, which they seem to prize most, as they say, "the men frogs are no good," the taste was much like that of an egg. . . . The natives dig them out of the ground with their hands.

Moore, (1884b, p. 17)

By-yu,—The fruit of the Zamia tree. This in its natural state is poisonous; but the natives, who are very fond of it, deprive it of its injurious qualities by soaking it in water for a few days, and then burying it in sand, where it is left until nearly dry, and is then fit to eat. They usually roast it, when it possesses a flavour not unlike a mealy chestnut; it is in full season in the month of May.

Moore (1884b, p. 33) [see *APRIL*]

Moore (1884b, p. 81) [see *APRIL*]

JUNE

Eyre (1845, vol. 2, p. 97, June 28, 1841)

Upon getting up [near East Mount Barren] this morning we saw the smoke of native fires along the margin of the lake, at less than a mile from us. . . . Soon afterwards we saw them in the midst of the lake carrying boughs, apparently fishing.

Grey (1841, vol. 2, p. 294)

The former of these [roots] resembles, in appearance and taste, the unripe seeds of Indian corn; it is in season in June, and is really very palatable.

Moore (1884b, p. 36)

Jetta,—The root of a species of rush, eaten by the natives, in season in June. It somewhat resembles a grain of Indian corn, both in appearance and taste.

Moore (1884b, p. 47)

Maggoro,—The winter of Western Australia, including the months of June and July. . . . At this period of the year cobbler-fish abound, and the mullet become blind, occasioned it is supposed, by the superabundant mixture of the fresh water with the salt water in the estuaries.

JULY

Moore (1884b, p. 47) [see *JUNE*]

AUGUST

Moore (1884b, p. 36) [see SEPTEMBER]

SPRING

Anon. [Collie] (1834, p. 331) [see *WINTER*]

Anon. [Collie] (1834, p. 335)

At this period of the year (Mondyeunung of our tribe) comprising from the latter part of October to the middle of January, the Natives bring in considerable numbers of young parrakeets, and some cockatoos, to exchange for food. In the commencement of it, too, they brought us a liquid they had long talked about, which they call mungat, and, from some similitude or other, compared it to our oil and to honey.... It proved in reality to be the nectareous fluid of the flowers of the banksia, ...

Grey (1841, vol. 2, p. 287)

The season of the year in which the natives catch the greatest quantity of frogs, and fresh-water shell-fish, is when the swamps are nearly dried up; these animals then bury themselves in holes in the mud, and the native women with their long sticks, and long thin arms, which they plunge up to the shoulder in the slime, manage to drag them out; at all seasons however they catch some of these animals, but in summer a whole troop of native women may be seen paddling about in a swamp, slapping themselves to kill the mosquitoes and sandflies, and every now and then plunging their arms down into the mud, and dragging forth their prey. I have (p. 288) often seen them with ten or twelve pounds weight of frogs in their bags.

Moore (1884b, p. 12)

Bohn, or Bohrn,—A small red root of the Haemodorum spicatum. This root in flavour somewhat resembles a very mild onion. It is found at all periods of the year in sandy soils, and forms a principal article of food among the natives. They eat it either raw or roasted.

Nind (1831, p. 30)

They [kangaroos] are also sometimes killed in woits, but this plan is more used for the small or brush kangaroo. In this case a portion of the brush is surrounded, and each person begins breaking it down and treading over it, so as to make a complete road all round, carefully stopping the runs of the animals. One or two of the hunters then go in with their dogs, and as the game attempts to pass the clear spot, they are entangled in the brush and knocked on the head. In this way they kill a great many; it is practised almost entirely in the spring before the burning season commences, but it requires a number of people, and the whole of the males of the tribe are generally present.

Nind (1831, p. 31)

At the spring time of the year, they live principally upon the eggs and young of birds, chiefly of the parrot tribe, but also of hawks, ducks, swans, pigeons, &c.

SUMMER

Anon. [Collie] (1834, p. 335) [see *SPRING*]

Bradshaw (1857, p. 100)

During the summer months the natives collect quantities of fine gum which they make into cakes, it is equally good as gum arabic; . . .

Bradshaw (1857, p. 102)

During the summer months they often get game by setting fire to the bush and burning out the different animals concealed amongst the logs of timber and scrub.

Browne (1856, p. 492)

During the summer months the tribes of the interior generally make towards the sea coast for the purpose of enjoying a feast on the various kinds of fish which are there to be obtained.

Gilbert (in Wagstaffe & Rutherford, 1955, p. 12)

It [a small kangaroo "which I suppose is identical with the *Halmaturus brachy-urus*"] inhabits thickets and is destroyed in great numbers at the close of the dry Season, by firing the Bush; the Natives waiting in a clear space to spear them in their attempts to escape the Fire.

Grey (1841, vol. 2, p. 283)

During the period of the moulting season, they catch many black swans.

Grey (1841, vol. 2, p. 287) [see *SPRING*]

Grey (1841, vol. 2, p. 294)

Kwon-nat is the kind of gum which most abounds, and is considered the nicest article of food. It is a species of gum-tragacynth. In the summer months the acacias, growing in swampy plains, are literally loaded with this gum, and the natives assemble in numbers to partake of this favourite esculent.

Moore (1884b, p. 12) [sce *SPRING*]

Moore (1884b, p. 45)

Kunart, or Kwonnat,—A species of acacia abundant on the banks of estuaries, and in districts having salt lakes. It produces a great quantity of gum in the summer months.

Moore (1884b, p. 73)

Wappi,—A small species of fish, found in the pools of rivers in summer, and taken by pushing boughs through the water from one end of the pool to the other.

Neill (1845, p. 419)

It [Australuzza novaehollandiae, or Sphyraenella obtusata] comes into the shallow bays in summer; and being a sluggish fish, is easily speared by the (p. 420) natives, who esteem it to be excellent food.

Neill (1845, p. 425)

Very common in all shallow bays in the summer time, where it [? Phyllichthys punctata] may be taken by the seine. The natives detect it when its body is buried in the sand, by the glistening of its eyes, and spear it. When fishing with the torch, in the night time, the natives feel for this fish with their naked feet.

Nind (1831, p. 28)

During the winter and early spring they [the Aborigines] are very much seattered; but as summer advances they assemble in greater numbers. It is at that season that they procure the greatest abundance of game. It is done by setting fire to the underwood and grass, which, being dry, is rapidly burnt... As soon as the fire has passed over the ground, they walk over the ashes in search of lizards and snakes, which are thus destroyed (p. 29) in great numbers, and those which have escaped in their holes are easily discovered.

Nind (1831, p. 32)

During the summer and autumn months, the natives derive a large proportion of their food from fish. They have no canoes, neither ean they swim, . . . They ean, therefore, only catch those fish which approach (p. 33) the shores, or come into shoal water. They have neither nets, nor hook and line, and the only weapon they use is the spear, with which they are very dexterous. In the mouths of streams or rivers, they take large quantities, by weirs made of bushes, but the most common method is pursuing the fish into shoal waters, and spearing them, or as they lie basking on the surface. During ealms, they walk over the mud and sand-banks. in search of flat fish, which are easily detected while lying at the bottom. At night, too, they light torches of grass-tree, and thus see the fish at the bottom, apparently asleep, when they very rapidly spear them. By these methods, vast quantities are taken, but it can only be done in dead calms. Another common method is to sit on a rock, motionless, and oceasionally throw into the water pieces of limpet, or other shell-fish, keeping the spear under water until the bait is seized by a fish, when they are almost certain of striking it.

Nind (1831, p. 34)

The fresh-water swamps abound with a species of cray-fish, ealled *challows*, very like those found in rivulets in England. The procuring of these is the employment of the women. In the summer months when the water is partly dried up, they find them in holes in the ground, a foot or more deep, the entrance being small, but sufficiently wide within for the arm to be thrust to the bottom; they are very abundant, . . . The natives roast them in the ashes, and eat them in large quantities.

Nind (1831, p. 36)

At the dry seasons of the year large districts are abandoned for want of water.

AUTUMN

Grey (1841, vol. 2, p. 287) [see *SPRING*]

Moore (1884b, p. 12) [see *SPRING*]

Nind (1831, p. 32) [sce *SUMMER*]

Nind, (1831, p. 33)

In the autumn, when the smaller species of fish approach the shores in large shoals, they surround them, and keep them in shallow water upon the flats until the tide falls and leaves them, when they are easily speared, and very few escape.

Nind (1831, p. 36)

The greatest assemblages, however, are in the autumn (pourner), when fish are to be procured in the greatest abundance. Towards the end of autumn, also, they kill kangaroos, by surrounding them.

WINTER

Anon. [Collie] (1834, p. 315)

... on the 24th of May, after some rain had fallen, and in the commencement of Mokkar, (winter, or the rainy season,) ... they took their departure from the coast and even to a boy proceeded inland for the purpose of spearing kangaroo—the season for that species of hunting commencing at that time.

Anon. [Collie] (1834, p. 331)

During the winter (Mokkar of the Natives) scarcely any of them came into the Settlement. They appeared for some reasons already adduced to obtain their food more easily in the interior; and I may also mention that the floods at that season of the year, and more particularly when the waters of the rivers retire in the spring, afford great opportunities of procuring fish by means of wares.

Bradshaw (1857, p. 98)

In the winter months they often meet in large parties with their dogs for hunting the kangaroo and emus. When the bush is soft from the heavy rains a number will surround a herd of kangaroos and then close on them when they spear them with ease on account of their being unable to run.

Browne (1856, p. 534)

On the approach of winter the tribes draw off from the coast into the interior of the country, where, encamped in the depth of the forest, they lie sheltered from the severe storms with which the Australian shores are then visited. The fact of the kangaroo, their principal source of sustenance also seeking the shelter of the interior at this season, has, of course, great influence in attracting them from the coast.

Grey (1841, vol. 2, p. 287) [see *SPRING*]

Moore (1884b, p. 12) [see *SPRING*]

Moore (1884b, p. 74)

Warran,—One of the Dioscoreae. A species of yam, the root of which grows generally to about the thickness of a man's thumb; and to the depth of sometimes of four to six feet in loamy soils. It is sought chiefly at the commencement of the rains, when it is ripe, and when the earth is most easily dug; and it forms the principal article of food for the natives at that season.

Neill (1845, p. 426)

"The flat-nosed mullet" of the natives. . . . In Wilson's Inlet, about forty miles west of King George's Sound, it abounds in the winter months; and the different tribes, from all parts of the coast, assemble there, by invitation of the proprietors of the ground, (the *Murrymin*,) who make great feasts on the occasion.

Nind (1831, p. 30)

The emu is speared chiefly in the winter, at which time they lay their eggs. When a nest is found, the hunters conceal themselves behind a bush near it, and endeavour to secure the male bird first. The female they are pretty certain of, unless she has been disturbed, when she will forsake the nest. Emus, however, are not very often procured by the natives, but, with the kangaroo, are highly esteemed as articles of food.

Paterson (1896, p. 289)

Sometimes very large catches [of fish] were made this way [in fish traps], particularly at the beginning of the winter, when, with the increased rains, the fish returned from the spawning places up stream. At this time the blacks would watch day and night for the fish to come, relieving each other.

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APPENDIX 1

List of animal foods arranged in alphabetical order of Aboriginal names; references to quotations and scientific names are also given. The latter were provided by Drs W. D. L. Ride and G. M. Storr, and Mr R. J. McKay, of the Western Australian Museum.

ballawara Moore (1884b, p. 4)

"A small squirrel-like opossum."

Moore (1884b, p. 4) banggap

"The Walloby, a small species of kangaroo."

bardi Moore (1884b, p. 5) Bardistus cibarius The edible grub found in trees. . . . The Bardi of the Xanthorea [sic]

are small, and found together in great numbers."

Chauncy (1878, p. 248)

"... the larvae of a species of cerambyx called bardi.... They are about an inch long, and sometimes fifty or a hundred are found boring their way through one grass-tree."

bardick Neill (1845, p. 416) Brachvanis curta

[Snake.] "Dirty olive green over the whole back; belly dirty white; ... The natives state that the bite produces great swelling of the part

for a day or two, and goes off."

Hassell (1936, p. 688) Hepialidae bardie

"A large white grub found in roots and under the bark of many trees." It was greatly prized and eaten raw or roasted. The taste resembles

pounded almonds and cream."

Hammond (1933, p. 30) Bardistus cibarius

"The 'bardie' grub—a fat white grub found in blackboys or wattle trees—was either eaten raw or cooked. . . . The grubs from the blackboy and wattle were the best. The grubs from the banksia were always

woody."

bibilyer Moore (1884b, p. 8) Eupodotis australis

> "A bustard; colonially, the wild turkey. A fine large bird, frequently weighing twelve to fifteen pounds, and extending full six feet from tip

to tip of the wing. It is excellent for eating."

burdi Moore (1884b, p. 16) Bettongia lesueur

"Macropus: a species of small kangaroo, having the habits of a

rabbit.'

Hassell (1936, p. 690) Varanus gouldii carta

> "The iguana (Gould's Monitor). The eggs were highly prized for food. They are about the size of pidgeon eggs and have a tough outer skin but no shell. When roasted in wood ashes they taste like a rich custard, for the yolk and white seem mixed together. They were

restricted to the old men and women."

chondelar Neill (1845, p. 425) Phyllichthys punctata?

> [Fish.] "Very common in all the shallow bays in the summer time, ... The natives detect it when its body is buried in the sand, by the glistening of its eyes, and spear it. When fishing with the torch, in the night time, the natives feel for this fish with their naked feet. Specimen

caught August, 1841."

chundela see chondelar. comal Nind (1831, p. 32) Trichosurus vulpecula [A species of possum] "living chiefly in lofty and thick woods, ... [It] is of a larger size [than the ring-tail], and much lighter in colour, with a brownish bushy tail: it is also fatter; the fur is longer, of a whitish colour, . . .

cooljaik Bunbury (1930, p. 73) Cygnus atratus "... black swans... during the breeding season they succeed in taking a good many swans (Cooljaik), both old and young, as well as eggs (Nooro)."

cumbeak see ianont.

dalgyte Grey (1841, vol. 2, p. 291) Macrotis lagotis ... an animal about the size of a weasel, burrow in the earth; these the natives surprise when they are feeding, or dig them from their burrows.'

djilyur Moore (1884b, p. 21) "A small field-mouse, eaten by the natives."

docat

dolgyt Moore (1884b, p. 23) Macrotis lagotis "A marsupial animal allied to the kangaroo, except that it has no incisors or cutting teeth, and that the opening to the pouch is from below instead of from above. This seems to be a provision of nature suited to the habits of the animal, for the creature burrows in the ground, and it would be difficult for the young ones to seek shelter suddenly in the parent's pouch if it were otherwise formed, and which they can readily do now, though she should have entered her burrow; and, also, when she burrows, the earth would be thrown into the pouch, if the opening were in the usual position."

dubyt Moore (1884b, p. 24) Demansia affinis "A very venomous yellow-bellied snake, from five to six feet long, much dreaded but eaten by the natives."

dyinda Moore (1884b, p. 26) "A species of opossum. Portions of the fur of this animal are worn by the aborigines among the hair as an ornament."

garlgyte Moore (1884b, p. 28) Potorous gilberti "Hypsiprymnus Gilbertii. A species of kangaroo."

goya Moore (1884b, p. 33) A species of frog that burrows in the sand, and is eaten by the natives. It is in season in the months of April and May."

guijak Moore (1884b, p. 30) Cygnus atratus "Black swan. This bird may be readily taken when moulting, and soon becomes tame."

gumal Moore (1884b, p. 31) Trichosurus vulpecula "Phalangista vulpina. Large grey opossum."

gurhra Moore (1884b, p. 33) Macropus irma "Macropus caeruleus. The brush kangaroo. A very fleet, active animal of about twenty pounds' weight, having fur of a silver grey

colour, with a white stripe on each side of its face." guya see goya.

ianont Neill (1845, p. 427) Haletta semifascia us [Fish.] "Inhabits weedy places in deep water, and along sandy bays. Sometimes taken by the natives on the edge of banks. Specimen eaught March 18, 1841."

kangaronga Moore (1884b, p. 40) "Female kangaroo."

karbarda Moore (1884b, p. 37)

"A species of snake, cream-coloured with dark spots. It is considered

deadly, and is much dreaded by the natives;

kerrygura

Neill (1845, p. 415)

[Lizard.] "Considered by the natives as harmless; the seales of the back are very minute; the tail when broken is sometimes terminated by three horny blunt ends; tongue divided and rounded."

knamler Neill (1845, p. 425)

[Fish.] "Frequents shores with sandy beaches, and forms a principal article of food to the native youths, who are continually practising throwing their spears at this fish.

Speeimen eaught April 12, 1841."

kordong Neill (1845, pp. 419, 20)

Australuzza novaehollandiae or Sphyraenella obtusata

"The 'Common Baraeeota' is found off the whole eoast of New Holland, but the *Kordong* seems to be peculiar to Western Australia. It eomes into the shallow bays in summer; and being a sluggish fish, is easily speared by the natives, who esteem it to be excellent food. It will lay for a minute looking with indifference at its enemy, while he poises the fatal and unerring spear. Specimen eaught December 1841."

Moore (1884b, p. 45) "The male kangaroo."

kubit

Moore (1884b, p. 45)

"Phalangista vulpina; large grey opossum. This animal forms a great resource for food to the natives, who elimb the tallest trees in search of them, and take them from the hollow branches."

kundi Moore (1884b, p. 45) ? Isoodon obesulus "A species of marsupial rat. Colonially, Bandicoot. It is something like a guinea-pig, and is very good eating."

kwakar Moore (1884b, p. 46) Setonix brachyurus "A small species of kangaroo."

madawick

Neill (1845, p. 425)

[Fish.] "Very eommon in shallow sandy bays, and forming the staple food of the natives, who assemble in fine ealm days, and drive shoals of this fish into weirs that they have constructed of shrubs and branches of trees.

Speeimen eaught May 12, 1841."

mardo Moore (1884b, p. 50)

"A species of rat or mouse eaten by the natives."

Antechinus flavipes

marel Moore (1884b, p. 51)
"A species of unio, or fresh water muscle [sie]. Not eaten by the natives, because supposed by them to be poisonous. It has been eaten by the settlers with impunity."

Hammond (1933, p. 29)

"A white seale which formed on the leaves of the blue gum tree was ealled 'Mee-nah'. It was not very plentiful but the natives used to eat it and also the insect that was found underneath the seale."

memon (1) Neill (1845, p. 424) Scorpis aequipinnis [Fish.] "It is a gross feeder and poor eating. Very common on rocky shores. Being a bold voracious fish, it is easily speared, . . . Specimen caught June 15, 1841."

Neill (1845, p. 424) Kyphosus sydneyanus memon (2) [Fish.] "Is a gross feeder, and its flesh has a strong disagreeable smell, but is much relished by the Aborigines. Specimen caught May 3, 1841."

Neill (1845, p. 426) Mugil cephalus merrong [Fish.] "In Wilson's Inlet, about forty miles west of King George's Sound, it abounds in the winter months; ... In the summer it retires to the ocean. Specimen caught September, 1841."

Moore (1884b, p. 53) mimanga "A whale. Both sperm and black whales abound on the coast. Sometimes a dead whale is thrown on the shore, and affords luxurious living to the natives."

Phaps chalcoptera

mirrong see merrong. moorhait Nind (1831, p. 49) "Bronze Pigeon."

muddier see memon (2).

nuji

munnaar Nind (1831, pp. 30, 31) Varanus gouldii "... appears to resemble an iguana found at Sydney; it is long, and generally very lean and lank. At one season, however, it is fat, and very good eating. It makes a hole in the nest of a species of ant, which is a mound of earth four or five feet high, the inner parts consisting of cells constructed of a gummy substance mixed with carth, and is very hard; yet the munnaar burrows from the top nearly to the bottom. and there deposits its eggs, which are the size of a large pigeon's egg, covered with a thick pellicle as tough as parchment. The cggs are about ten or twelve in number, and adhere together. The ants soon repair the hole made by the munnaar, and the warmth of the nest is sufficient to hatch the eggs."

norn Neill (1845, p. 417) Notechis scutatus "This is the most fatal of the New Holland snakes; the animal bitten (or norne) seldom recovers. The Aborigines have a great dread of this reptile; they however eat of it if they kill it themselves, but there is a superstition

amongst them about snakes, which prevents their eating them if killed by a European." Nind (1831, p. 31)

"The norne and the docat are much alike, of very dark colour, six and seven feet in length, and their bite generally fatal."

Moore (1884b, p. 62) "A large species of mouse eaten by the natives."

Nind (1831, p. 32) Pseudocheirus peregrinus nworra "... the common ring-tail [possum] ... frequently found in swamps and the low brush which surrounds them."

Neill (1845, p. 428) pining Gonorhynchus grevi [Fish.] "When the skin was removed the flesh was very fat, resembling that of an eel, had an unpleasant smell, and could not be eaten. The natives also were averse to eating it, and only one man acknowledged to have seen it before.

Specimen caught April 7, 1841."

quoint Anon. [Collie] (1834, p. 339) ? Perameles "...bandicoots (perameles nasutus and ecaudatus)..."

rabeduck

Ncill (1845, p. 430)

[Fish.] "Inhabits deep water in rocky places, and is very common.

It is esteemed for food by the Aborigines: . . .

Specimen caught May 12, 1841."

Kehark

Neill (1845, p. 420)

[Fish.] "Grows to a great size; as I am informed by the natives, that they often spear individuals weighing sixty or seventy pounds. This fish enters the fresh-water periodically, . . . to spawn, . . . Specimen caught August 30, 1941."

tdunjar Moore (1884b, p. 69)
"A species of frog eaten by the natives."

tookyte see tornock.

Neill (1845, p. 422)

[Fish.] "They are sluggish, and easily speared by the Aborigines, whose chief food it constitutes at certain seasons. The specimen was speared in my presence by Wallup, on the 8th of June, 1841. The Toorjenong grows to a large size, exceeding twenty pounds in weight. It is a gross feeder, and its flesh is hard and dry, but the head and sides are much prized by the natives, . . . "

tornock

Neill (1845, p. 415)

[Snake.] "The women of King George's Sound declare the bite of the Torn-ock mortal: but the men laugh at that, and maintain that three days 'couple', (sleep) will restore the patients.

This is a favourite food of the natives of King George's Sound."

torkite Neill (1845, p. 416) Rhinoplocephalus bicolor "Not at all dreaded by the natives; venomous, but not deadly, the bite merely producing a bad ulcer for a day or two."

tuk Moore (1884b, p. 70)
"A species of frog eaten by the natives (thus named from the noise it makes)."

wackul Nind (1831, p. 31)

"The wackul is the common diamond snake of New South Wales, and is not venomous."

wait Nind (1831, pp. 30, 49) Dromaius novaehollandiae "The emu is speared chiefly in the winter, at which time they lay their eggs. . . . Emus, however, are not very often procured by the natives, but, with the kangaroo, are highly esteemed as articles of food."

wakel

Neill (1845, p. 417)

"This snake is considered by the natives a great delicacy, and by their account resembles mutton in flavour, being also remarkably fat. . . . easily caught by the women, who seize them behind the head and wring their necks."

walyo

Moore (1884b, p. 72)

"The Kangaroo-rat. An animal nearly as large as a wild rabbit, tolerably abundant, and very good eating. The natives take them by driving a spear in the nest, . . . which is formed of leaves upon the ground."

wandie
Nind (1831, p. 31)
"The . . . lizard, called wandie, is of a very dark colour, has a long round tail. It is generally found among rocks, and conceals itself under

them; it also inhabits hollow trees or holes in the ground; and is a very lively animal, and quick in its motions."

wango Moore (1884b, p. 72)

"... a species of snake particularly liked as food by the aborigines."

wappi Moore (1884b, p. 73)

"A small species of fish, found in the pools of rivers in summer, and taken by pushing boughs through the water from one end of the pool

to the other."

waumilyar Moore (1884b, p. 75) Hemiptera

"Colonially called Manna. A white sweetish substance, found on and under certain trees and plants, supposed to be some insect secretion. It is much prized by the natives. . . . When the native women find a quantity of it collected about an ant-hill, they fling the furry side of their cloak upon it, to which it adheres. They then carry off the cloak and secure their prize, the ants have dropped off the fur in the mean-

time."

waunugur see pining.

werr Ncill (1845, p. 416) Denisonia coronata

[Snake.] "Doubtful if poisonous; little dreaded by the natives."

widji Moore (1884b, p. 76) Dromaius novaehollandiae

"An emu. . . . A full-grown one, when erect, stands seven feet high. The natives erecp on them and spear them. The flesh is very good for

eating in the proper season, tasting something like veal."

william Neill (1845, p. 415)

Lialis burtonis

lunger [Lizard.] "Tongue not forked, broad, and rounded off at the point.
Not poisonous or at all dreaded by the natives; finely striped down the

back, and spotted with deep brown equal marks; has a lappel [sic] on

each side of the vent."

woail Anon. [Collie] (1834, p. 4) Bettongia penicillata

"... kangaroo rats (wo-ail) ..."

wodta Moore (1884b, p. 78) Phaps chalcoptera

"Columba. The Bronze-winged pigeon. Most delicate eating. It

abounds in summer, when the acacia seeds are ripe."

woile Moore (1884b, p. 78) Bettongia penicillata

"A small species of kangaroo."

womela Drummond (1843c) Hemiptera

"They also collect a saccharine substance resembling manna, which

they call 'womela' from the leaves of the York Gum.'

worogut see ianont.

wulgang Moore (1884b, p. 78)

"A grub found in the Xanthorea [sic] or Grass tree, distinguished from the Bardi by being much larger, and found only one or two in a tree,

whereas the Bardi are found by the hundreds."

wurak Moore (1884b, p. 79) ? Lagorchestes hirsutus

"Macropus elegans; a species of kangaroo."

Moore (1884b, p. 79) wurgyl

"A frog. When this species of frog has the embryo within it in the state of the young roe of a fish, it forms a favourite food of the natives, and marks a particular scason. They are found in great abundance in the swamp and shallow lakes.'

Moore (1884b, p. 81) vangor

Macropus fuliginosus

"The kangaroo species in general."

Moore (1884b, p. 82) vinbi

"A species of Unio, or fresh-water muscle [sic]. The natives will not eat it, though the settlers have used it with impunity." [See marel.]

Nind (1831, p. 31) youern

Tiliqua rugosa

"The ... short-tailed youern, has a large head, and an enormous mouth, which, when attacked, it immediately opens, and exhibits a purplish coloured tongue; its body is covered with large scales of a grey colour, but having traverse patches of brown. It is very sluggish, and does not burrow in holes, but conceals itself in the long grass. They are frequently found in pairs. The female, when pregnant, has two large eggs in her, but I have never seen them deposited. According to the natives she buries them in the sand very near the surface, and they are hatched by the warmth of the sun. These youerns are frequently found in ants' nests, constructed of straw or leaves, with minute portions of sand."

youangur Moore (1884b, p. 83)

'A species of frog eaten by the natives."

APPENDIX 2

LIST OF ANIMALS USED FOR FOOD

| | C-''C | | | | | A bonining Lugare |
|----------|-----------------------|----------|---------|---------|---------|-------------------|
| MAMMALS | Scientific name | | | | | Aboriginal name |
| | Antechinus flavipes | | | | | mardo |
| | Bettongia lesueur | | | | | burdi |
| | Bettongia penicillata | | | | | walyo |
| | 0 1 | | | | | woail |
| | | | | | | woile |
| | Isoodon obesulus | | | | | kundi |
| | Lagorchestes hirsutu | S | | | •••• | wurak |
| | Macropus fuliginosu | | | | | yangor |
| | Macropus irma | | | | | gurhra |
| | Macrotis lagotis | | | | | dalgyte |
| | · · | | | | | dolgyte |
| | Perameles sp. | | | | | quoint |
| | Potorous gilberti | | | | | garlgyte |
| | Pseudocheirus peregi | rinus | | | | nworra |
| | Setonix brachyurus | | | | | kwakar |
| | Trichosurus vulpecul | а | | | | comal |
| | * | | | | | gumal |
| | | | | | | kumal |
| DIDDC | | | | | | |
| BIRDS | Cygnus atratus | | | | | cooljaik |
| | Cygnus ununs | •••• | • • • • | • • • • | **** | guijak |
| | Dromaius novaehollo | ndiae | | | | wait |
| | Diomaius novuenone | типис | | | • • • • | widji |
| | Eupodotis australis | | | | | bibilyer |
| | Pliaps chalcoptera | •••• | | • • • • | | moorhait |
| | T maps charcopiera | • • • • | • • • • | | • • • • | wodta |
| | | | | | | would |
| REPTILES | | | | | | |
| | Brachyapis curta | • • • • | • • • • | • • • • | | bardick |
| | Demansia affinis | • • • • | • • • • | • • • • | | dubyt |
| | | | | | | karbarda |
| | | | | | | tornock |
| | Denisonia coronata | | | • • • • | | werr |
| | Egernia kingii | | •••• | •••• | | wandie |
| | Lialis burtonis | | | • • • • | | kerrygura |
| | | | | | | william lunger |
| | Notechis scutatus | | •••• | | | norn |
| | n .1 11 | | | | | norne |
| | Python spilotus | • • • • | • • • • | | | wackul |
| | D1. 1 1 1 1. | , | | | | wakel |
| | Rhinoplocephalus bic | olor | • • • • | | • • • • | torkite |
| | Tiliqua rugosa | | • • • • | | | youern |
| | Varanus gouldii | • • • • | | | | carta |
| | | | | | | munnaar |
| FISH | | | | | | |
| | Aldrichetta forsteri | | •••• | | | knamler |
| | Australuzza novaehoi | llandiae | | | • • • • | kordong |
| | Caranx georgianus | | •••• | **** | | madawick |
| | Gonorhynchus greyi | | | •••• | •••• | pining |
| | - Indinginoning greyi | | | | | Pilling |

| | Scientific na | Aboriginal name | | | |
|---------|---------------------------|-----------------|------|------|-------------------------------|
| | Haletta semifasciatus | •••• | •••• | •••• | ianont worogut |
| | Kyphosus sydneyanus | | | | memon (2) |
| | Mugil cephalus | | | **** | merrong |
| | Nelusetta ayraud (?) | | | | tabeduck |
| | Phyllichthys punctata (?) | | •••• | | chondelar chundela |
| | Psilocranium nigricans | | | | toorjenong |
| | Sciaena antarctica | | | | tchark |
| | Scorpis aequipinnis | | | | memon (1) |
| | Sphyraenella obtusata | •••• | •••• | | kordong |
| INSECTS | | | | | |
| | Bardistus cibarius | •••• | **** | •••• | bardi bardie |
| | Hemiptera | **** | **** | *** | meenah waumilyar womela |
| | Hepialidae | | **** | | bardie |

APPENDIX 3

List of plant foods arranged in alphabetical order of Aboriginal names; references to quotations and scientific names are also given. The latter were provided by Mr Paul Wilson of the Western Australian State Herbarium and Dr G. M. Storr of the Western Australian Museum.

A. Area from which information given in the list was collected

Anon. [Collie]: Albany
Bell: Mingenew

Drummond: Perth—Toodyay area

Gilbert : Perth

Grey : Perth—South-West area

Hammond : Perth—Pinjarra Hassell : Jerramungup

Irwin : Perth

Moore : Perth (some from Albany)

Nind : Albany Parker : Dongara Roth : Bunbury

B. List of plant foods

adtjikoh

Hammond (1933, p. 23)

"The 'Warryn' or 'Adtjokoh' was a white root which grew best amongst the loose stones and rocks of the Darling Ranges, generally in a very damp place. These roots were known to grow up to three fect in length and had a diameter of from half an inch to two inches."

baio Stokes (1846, vol. 2, p. 132) Macrozamia riedlei "Red fruit, nut, called baio ripe in March, is considered a delicacy by

the natives."

Ward & Fountain (1907, p. 211)

"There is one palm (Zamia media—native, gherge), the nut of which, called bay-i-o by the blacks, is much sought after by them, as they are very fond of it."

Moore (1884b, p. 3) Xanthorrhoea preissii "The flower-stem yields a gum used for food."

bhon Drummond (1842b) Haemodorum spicatum

"The Bhon is the root of Hacmodorum Spicatum."

biara

Moorc (1884b, p. 7)

The Banksia tree, with long narrow leaves; colonially, honeysuckle, from the hairy, long, cone-shaped flowers, producing abundance of honcy, which the natives are fond of regaling upon, either by sucking or

soaking the flowers in water."

bohn Moore (1884b, p. 12)

"Bohn, or Bohrn. A small red root of the Haemadorum Spicatum.
This root in flavour somewhat resembles a very mild onion. It is found at all periods of the year in sandy soils, and forms a principal article of food among the natives. They eat it either raw or roasted."

boon Hammond (1933, p. 29) ? Drosera "'Boon' was the name of the red bulb which grew in sandy country."

boyoo Hammond (1933, p. 28) Macrozamia riedlei "The 'Boyoo' was the fruit of the zamia palms, and grew in the centre of the palm in clusters that looked much like a large pineapple."

brigo Moore (1884b, p. 14)

"An edible root resembling the Bohrn."

budjan Moore (1884b, p. 14) Dryandra fraseri

"Dryandra Fraseri (a shrub). The flower abounds in honey, and is

much sought after by the natives."

butogo Moore (1884b, p. 16)

"A species of edible fungus."

butyak Moore (1884b, p. 16) Dryandra fraseri

"Dryandra Fraseri. The flowers are thistle-shaped, and abound with honey; they are sucked by the natives like the Man-gyt or Banksia

flowers."

bwyego Moore (1884b, p. 17)

"A species of fungus eaten by the natives."

byyu Grey (1841, vol. 2, p. 295) Macrozania riedlei "This name is applied to the pulp of the nut of a species of palm;

which, in its natural state, acts as a most violent emetic and cath-

artie; ..."

Moore (1884b, p. 17)

"The fruit of the Zamia tree."

eara Drummond (1842b)

"... round white roots called ... Cara, by the natives, which they

sometimes cat."

ehokern Nind (1831, p. 35)

Prasophyllum sp.

Prasophyllum sp.

"Before the young root [of the tuboc] comes to maturity it is called

chokern."

choket Nind (1831, p. 35)

"The choket is the small bulbous root of a rush; it is very fibrous, and

only edible at one season."

ehuek Hassell (1936, p. 689) Exocarpos sparteus or E. odoratus

"Wild cherry. This is a graceful tree something like a weeping willow in habit, with pale green and narrow leaves. The fruit grows all along the stems between the leaves and is like a small red currant. Green seeds, about the size of grape seeds, grow on the outside near the ends. They have a sharp bitter flavour. The fruit is sub-acid like a currant.

It was collected by spreading cloaks under the trees and shaking them."

eonna

Drummond (1839a MS. date)

"The White Gum . . . has large tuberous roots, sometimes 3-4 inches in diameter or more, the natives eat this root, which they eall Conna, it is very juiey; the juice having a sweetish taste with a slight flavour of

celery, the root seems to contain very little starch . . . "

djakat Moore (1884b, p. 20)

"A small root eaten by the natives; in season in the months of Sep-

tember and October."

djanbar Moore (1884b, p. 20)

"The same as Madja; an edible root; a coarse kind of Bohn."

djettah Hammond (1933, p. 29)

"' Djettah' was a white bulb that grew in and around water holes."

djubak Moore 1184b, p. 22) ? Prasophyllum fumbria

"An orchis, the root of which is the size and shape of a new potato, and is eaten by the natives. It is in blossom in the month of Oetober. The flower is a pretty white blossom, seented like the heliotrope."

djunbar Moore (1884b, p. 22)

"A sort of gum caten by the natives."

doatta Drummond (1839a MS. date) Eucalyptus loxophleba "The Eucalyptus found on the sandy loam, is called by the settlers York Gum, by the natives Doatta; they use the bark of the root as

food in the dry season chewing it along with the gum of the Manna."

Moore (1884b, p. 23) dolgar

"An edible gum of the Hakea."

dtalvil Moore (1844b, p. 24)

"A small species of fungus eaten by the natives."

Moore (1884b, p. 24) Exocarpos odoratus dtulya "Exocarpus cupressiformis. This with the By-yu and the Kolbogo, and a few other things deserving no better name than berries, of no particularly good flavour, are all that have yet been found in the country

in the way of fruit."

Moore (1884b, p. 23) dulgar

"The gum of the Hakea. Eaten by the natives."

Xvlomelum occidentale dumbung Moore (1884b, p. 25) "Xylomela occipentalis; the native pear-tree. It bears a hard solid woody substance which has a most tantalising outward resemblance to a

good fruit."

Irwin (1835, p. 23) eringo ?Platysace sp. "The principal root they use is the eringo, or wild parsnip, which grows

to a depth of three or four feet in loam and other strong soils."

galyang Moore (1884b, p. 27) Acacia microbotrva "The gum of the Gal-yang, or wattle tree, eaten by the natives. It is soluble in water, and is one of the best gums in the country for all

> common purposes." Moore (1884b, p. 28)

"A root found at York, eaten by the natives, and resembling a potato

in shape."

ganno

Drummond (1843 MS. date) Eucalyptus loxoplileba goatta "The natives use the bark of the Goatta as food, chewing it until they

separate the saccharine matter which the root contains when they spit out the residue, which is generally to be seen in quantities near their

bivouacs."

Moore (1884b, p. 32) gurago

"A root caten by the natives."

Moore (1884b, p. 34) gwardyn

"A root eaten by the natives; it somewhat resembles the Bohn, but is

tougher and more stringy."

jetta Moore (1884b, p. 36) Typha sp.

"The root of a species of rush, eaten by the natives, in season in June." It somewhat resembles a grain of Indian corn, both in appearance and

taste."

jitetgoran Moore (1884b, p. 37)

" A root eaten by the natives."

jitta Drummond (1842b)

"Round white roots called Jitta . . . by the natives, which they some-

times eat."

Moore (1884b, p. 36)

"The bulbous root of an orchis, eaten by the natives, about the size

of a hazel-nut."

Hammond (1933, p. 29) ioobuck

"'Joo-buck' was a white bulb with a long stalk. Some of the bulbs

were as large as a tennis ball, and they were very nice to eat."

Moore (1884b, p. 39) kamak

"A small kind of Kuruba, found in the York district."

Caesia sp. Moore (1884b, p. 41) karhrh

"A tuberose root, like several small potatoes. It belongs to the

Orchis tribe."

Platysace maxwellii Bell (pers, comm.) karno

"Roots from this plant are collected throughout the year. Each plant has a number of roots about 18-24 inches below the ground. A digging stick is used to reach the roots, which are brown on the outside and white inside. The younger ones which grow nearer the surface are preferred to the older ones. The roots are eaten either raw or roasted. The raw roots contain moisture and are sometimes eaten to quench thirst."

(Collected by Maggie Bell 19 August 1967.)

Carpobrotus sp. probably C. virescens Moore (1884b, p. 43) kolbogo

"Mesembtyanthemum equilateralis; the Hottentot fig-plant. The inner part of the fruit is eaten by the natives. It has a salt sweetish

taste."

Podocarpus drouyniana Hammond (1933, p. 28) koolah

"... the 'Koolah' was to be found only in the Augusta and Albany districts. In many respects it resembled the stone of the plum. Another peculiarity of this fruit was that it had two small blooms on the end of

it.''

Haemodorum spicatum Bell (pers. comm.) koolung

"A bulb with a hot flavour when eaten raw. Usually roasted before

being eaten."

(Collected by Maggie Bell 19 August 1967.)

Moore (1884b, p. 44) koragong

"A species of fungus growing on the ground, of a sweetish taste, red-(or wurdo)

coloured, and very juicy."

Acacia microbotrya kunart Moore (1884b, p. 45)

"A species of acacia abundant on the banks of estuaries, and in districts having salt lakes. It produces a great quantity of gum in the summer months. From the seeds of this tree the natives to the south obtain, by pounding them, a flour, which they make into dampers, or

unleavened bread."

Moore (1884b, p. 46) kuredjigo

"A root eaten by the natives."

? Baeckea camphorosmae Moore (1884b, p. 46) kurren

"A species of shrub to which medical properties are attributed by the natives of King George's Sound. It is a sensitive plant, and when drying assumes an unnatural pale yellow colour, and emits a smell like most powerful garlic; in this state the natives use it in case of headache,

waving it under the nose of the patient."

? Sollva kuruba Moore (1884b, p. 46)

"The fruit of a creeper eaten by the natives. It is of a long slender, ovate shape, and when roasted in the fire is of a pleasant lemon peel flavour. It is one of the very few things which can be considered as

approaching to an indigenous fruit."

Kwonnat Grey (1841, vol. 2, p. 294)

"Kwon-nat is the kind of gum which most abounds, and is considered the nicest article of food. It is a species of gum-tragacynth. In the summer months the acacias, growing in swampy plains, are literally loaded with this gum, and the natives assemble in numbers to partake of this favourite esculent."

madge Drummond (1842b) Haemodorum paniculatum
"The Madge is the root of Haemodorum paniculatum."

madja Moore (1884b, p. 47) *Haemodorum paniculatum* "Haemodorum paniculatum, an edible root."

majerak Moore (1884b, p. 48) Carpobrotus sp. "The small Hottentot fig. The fruit is eaten by the natives."

manbibi Moore (1884b, p. 49) Carpobrotus sp. "The small Hottentot fig."

mangaitch Roth (1903, p. 49)
"Upon this sandy tract of country, . . . two species of Banksia grew abundantly, one conspicuous by its broad leaf, the other by its narrow leaf. Each species bore cones with pitcher-shaped flowers, which, containing a quantity of honey, were especially visited by the black cockatoos. The natives appreciated the honey also, and, . . . would bite into them and suck the saccharine matter out. At other times they utilized the honey by making a fermented drink of it, . . . The aboriginals called the cones and the fermented liquor produced therefrom by the same name—the mangaitch."

mangite Drummond (1939a MS. date) ? Banksia grandis "One large Banksia the native Mangite . . . the natives, men, women and children live for five to six weeks particularly upon the honey which they suck from the flowers of this fine tree."

mangyt Moore (1884b, p. 50) ? Banksia grandis "The large yellow cone-shaped flowers of the Banksia, containing a quantity of honey, which the natives are fond of sucking. Hence the tree has obtained the name of the honcysuckle tree. One flower contains at the proper season more than a tablespoon of honey."

manna Drummond (1839a MS. date)

"... the Acacia called Manna by the natives, which produces great quantity of gum resembling gum-arabic in the dry season, forming an important article of their food:..."

marang Moore (1884b, p. 50)
"One of the edible roots."

Backhouse (1843, p. 527)

"Among their articles of food, is the long bulb, of *Hemodorum* [sic] teretifolium, which they call Mean; and poor fare, it truly is, occasioning their tongues to crack grieviously; it is prepared for eating by being roasted, and beaten up with the earth, from the inside of the nest of the White Ant, or with a red substance, found on burnt ground."

meen (1) Anon. [Collie] (1834, p. 319) Haemodorum spicatum "... they made an excursion and returned before dark ladened with meen (Haemodorum spicatum) and this constituted their supper, ... they prepared the root by roasting and beating on one stone with the other, ..."

meen (2) Hassell (1936, p. 689)

"Gum from the wattle tree. It forms in soft and sticky lumps gathered by the women and pressed into large, round balls. When wanted for food, lumps were knocked off and ehewed."

meernes Nind (1831, p. 34)
"The meernes, ... are searlet roots, not unlike, in shape and size, tulip-roots."

mein Hassell (1936, p. 689) Haemodorum spicatum "A tall, edible, rush-like plant with a black stem. The roots are bright red in color and like a leek in shape. The juice leaves a red stain. The roots are sweet, juicy and hot."

mene Grey (1841, vol. 2, p. 293)

"... the mene has rather an acid taste, and when eaten alone is said, by the natives, to eause dysentery; they never use it, in the southern districts, without pounding it between two stones, and sprinkling over it a few pinches of an earth which they consider extremely good and nutritious; they then pound the mould and the root together into a paste, and swallow it as a bonne bouche, the noxious qualities of the plant being destroyed by the earth."

menna Moore (1884b, p. 52)

"The gum of one species of acacia, which is sometimes prepared by being first pounded, then mixed with spittle, and made into a ball, and finally, beaten into a flat cake, when it is kept by the natives, as a provision against a time of want."

Moore (1884b, p. 53)
"An edible root. A large species of Bohn."

mnkar Drummond (1843e) ? Eucalyptus calophylla "The trunk of the red gum produces a remarkable saceharine substance which they eall mnkar and esteemed much as food."

moneat Nind (1831, p. 35)
"When the different species of Banksia first come into bloom, they collect from the flowers a considerable quantity of honey, of which the natives are particularly fond, and gather large quantities of the flowers (moneat) to suck."

mord Anon. [Collie] (1834, p. 339)
"... fungus ... species of boletus ... grows out of the ground, of a greyish colour, and globular form."

mungah Hassell (1936, p. 689)

"A tall tree with deep orange-coloured blossoms. The natives dug up the suckers, which are numerous, peeled off the pale yellow outer bark, and ate the moist brittle center which tastes like sugar candy."

mungat Anon. [Collie] (1834, p. 319)

"... they brought us a liquid they had long talked about, which they eall mungat... the neetareous fluid of the flowers of the banksia,..."

munghite

Bunbury (1930, p. 80)

Banksia sp.

"... Munghites as they eall the flower of the Banksia, from which they extract by suction a delicious juice resembling a mixture of honey and dew."

mungite

Hassell (1936, p. 689)

A species of banishia (?) which shows on the coast and near creeks...

The flowers are about four inches long and are composed of slender stems. The podless ones have the longest blossoms. At the base of the flowers there are quantities of honey, which can easily be sucked out."

murrumburru Parker (pers. comm.)

"Small green berries eaten by the Aborigines."

(Collected by Nellic Parker 20 August 1967.)

mutta (1) Bell (pers. comm.)

"A red bulb which when eaten raw has a hot taste. It is usually roasted before being eaten."

(Collected by Maggie Bell 19 August 1967.)

mutta (2) Parker (pers. comm.) Haemodorum simulans "Small red bulb which has a hot taste. Eaten either raw or roasted." (Collected by Nellie Parker 20 August 1967.)

naank Nind (1831, p. 35)
"... the old one [root of the tuboc] is called naank."

Prasophyllum sp.

namman Moore (1884b, p. 59) ? Sollya sp. "A sort of fruit growing on a low shrub like the Kamak."

mangergun Moore (1884b, p. 59) "An cdible root."

mgonyang Moore (1884b, p. 66)
"The honey or nectar of flowers; sugar. The flower of the Budjan. It abounds in honey. Also a saccharine juice, which exudes plentifully from the red-gum tree in the warm season."

ngulya Moore (1884b, p. 67)
"An edible root of a reddish colour, something like Bohn in flavour, but tougher and more stringy."

ngumbit Moore (1884b, p. 67)

"The flower of the red-gum tree, which, steeped in water, affords a honcy-sweet beverage, much relished by the natives."

nguto Moore (1884b, p. 67) "An edible root."

Parker (pers. comm.)

"The nectar from the spikes of a Banksia. On a wet day the nectar is sucked straight from the spikes, at other times the spikes are soaked in water for a few minutes and then the water is drunk."

(Collected by Nellie Parker 20 August 1967.)

numar Anon. [Collie] (1834, p. 339)

"... fungus ... species of boletus ... growing out of trees, of a beautiful crimson colour above."

Drummond (1839b MS. date)

"The natives use several species of Boletus as food: two of the principal they call Numar or Woorda, . . . the Numar has the stem at one side, it divides into several lobes and when full grown weighs many pounds, it is seen near the roots of Mahogany trees and seems to be a parasitical."

numbit Drummond (1843e) Eucalyptus calophylla
"They collect the flowers of the red gum which they call 'numbit'
and washing them in their cloaks, drink the water which is sweetened
by the honey they contain."

numbrid Moore (1884b, p. 62) Eucalyptus calophylla "The flower or blossoms of the red-gum tree, from which the natives make a favourite beverage by soaking the flowers in the water."

poilyenum Hassell (1936, p. 689) Santalum spicatum
"A sandal-wood which has a round red seed. The skin of the seed is tough and tastes like alum. The nut has a smooth surface, a brown colour, and is about the size of a large marble. The kernals are oily and have a bitter flavour."

quarandine Drummond (1842b) ** **The Quarandine is the root of Haemodorum Planifolium."

quirting

Hassell (1936, p. 689)

A plant which grows like a flag. It has a broad, light green leaf and a root like a leek. It grows six or eight inches into the ground and is deep salmon in colour. The taste is like a chili or pepper.

quonert Hassell (1936, p. 690)

Acacia saligna, A. acuminata and Eucalyptus cornuta or E. occidentalis.

"A native food consisting of the mixture of seeds from the black wattle

and raspberry jam tree ground into a meal and mixed with yate."

tjungoori

Bell (pers. conm.)

"A creeper with mauve flowers. The vine and the leaves are collected and rolled into a ball. The ashes from the fire are cleared away and the tjungoori placed on the hot ground and covered with ashes where it is left for about 10 minutes. It is then ground producing a green powder. This is eaten with the root of the York Gum."

(Collected by Maggie Bell 19 August 1967.)

tuboc Nind (1831, p. 35)

"The tuboc is of the tribe Orchindae: it is very pleasant eating, when roasted. In the early part of spring it throws up a single stem, hollow, and similar in appearance to that of the onion, but is mucilaginous, and sweetish to the taste."

twotta Moore (1884b, p. 70)

"A Eucalyptus, of which the natives chew the bark of the roots, wrapped about gum, or pounded up with it into a eake. Colonially, the York gum-tree, being the principal timber which characterises that district."

wargae Gilbert in Wagstaffe & Rutherford (1954, p. 496)
"... Natives, for their Season of meeting in great numbers to dig the edible Root ealled by them Wargae is now in full force..."
(October 1842.)

Moore (1884b, p. 74)

"One of the Dioseoreae. A species of yam, the root of which grows generally to about the thickness of a man's thumb; and to the depth of sometimes of four to six feet in loamy soils. It is sought chiefly at the commencement of the rains, when it is ripe, and when the earth is more easily dug; and it forms the principal article of food for the natives at that season. It is found in this part of Australia, from a short distance south of the Murray, nearly as far to the north as Gantheaume Bay. It grows in light rich soil on the low lands, and also among the fragments of basaltic and granite rocks on the hills."

warryn

Hammond (1933, p. 28)

"The 'Warryn' or 'Adtjikoh' was a white root which grew best amongst the loose stones and rocks of the Darling Ranges, generally in a very damp place. These roots were known to grow up to three feet in length and had a diameter of from half an inch to two inches."

willarak Moore (1884b, p. 77)

"Sandalum latifolium, Sandalwood tree. The smoke of it when burning produces nausea in most persons. It bears a nut, having a white

kernel of the size of a musket bullet, from which oil of a pure quality, without taste or smell, may be expressed. This nut, though not disagreeable, is not eaten by the natives."

wolgol Hassell (1936, p. 689)

"A kind of nut called quondong in eastern Australia. The trees are tall and not unlike a cherry tree, while yellowish pale green leaves are shaped like a narrow pear leaf. The berries are red, resembling a large deep-rcd cherry. The thick skin is separated from the stone by only a little flesh. The deeply crinkled stones have a slightly tart flavour. The kernals taste like Brazilian nuts. Stones vary from the size of a small marble to that of two thumbs."

worrain Roth (1903, p. 48)

Roth (1903, p. 48)

"Many kinds of roots and yams were eaten; among the latter the wor-rain, showing thick yellow blossoms, was very common, growing down to a depth of quite 3 feet, and running from the thickness of the finger to that of the wrist."

Bell (pers, comm.)

"The tubers which grew to a considerable depth were dug up by the women with a digging-stick. The tubers were roasted and then pounded."

(Collected by Maggie Bell 19 August 1967.)

wuanga Hassell (1936, p. 690)

Acacia saligna

"The seed of the black wattle is called wuanga."

wurdo Moore (1884b, p. 44)

"A species of fungus growing on the ground, of a sweetish taste, redcoloured, and very juicy."

wyrang

Drummond (1842a) ?Dioscorea hastifolia "The native Yam, called Wyrang, by the natives, the finest esculent vegetable the colony naturally produces is now [4 May 1842] beginning to flower."

yandijut

Drummond (1842c)

"Typha angustifolia. This plant is an important one to the natives, as it furnishes them with, at one season of the year, with a large portion of their food. . . . The plant is abundant in most of our lakes and rivers, but it is only in the autumn months, when the plant is in a state of rest, that it contains much starch in the roots."

yandyett

Moore (1884a, p. 220)

"Got from the natives a piece of bread made of the root of the flag which they call *yandyett*.... They peel the root, roast it and pound it, and bake it. The root is as thick as your finger, and a foot long."

yanjidi

Moore (1884b, p. 81)

"An edible root of a species of flag (Typha angustifolia), growing along fresh-water streams and the banks of pools. It consists of many tender filaments with layers of a farinaceous substance between. . . . This root is in season in April and May, when the broad leaves will have been burned by the summer fires, by which the taste, according to the native ideas, is improved."

yate

Hassell (1936, p. 690) Eucalyptus cornuta or E. occidentalis "The yate is a species of Eucalyptus from which the sap was secured by scrapping pieces of bark stripped from the tree. The sap is a thick, purplish syrup, which is very sweet."

Nind (1831, p. 35) yoke "They describe various kind of roots in the interior that are eaten by them. One species they call yoke, and say that it resembles our potato, being as large and as well tasted; but it has only one tuber to a stem, and is altogether different in its leaf and appearance." Hassell (1936, p. 689) ? Platysace sp. youck "A sort of yam. The size varies from that of a thumb to as large as three-quarters of a pound. The roots may be red, pink or yellowish white according to the color of the ground they are in. The plants are round, small, scrubby bushes about two feet high and have a small sage green leaf. The roots spread over a considerable area and have tubers at their extremities.' Bell (pers. comm.) Prasophyllum sp. "This plant has only one bulb about 9 inches below the ground. Women use a digging-stick to collect it. Usually roasted before being (Collected by Maggie Bell 19 August 1967.) Amyema fitzgeraldii Parker (pers. comm.) "This is a parasite which grows on Acacia acuminata. The berries are eaten by the Aborigines." (Collected by Nellie Parker 20 August 1967.) Parker (pers. comm.) Brachysema aphyllum "The flowers of this shrub contain nectar, which is sucked out by the Aborigines." (Collected by Ncllic Parker 20 August 1967.)

APPENDIX 4

LIST OF PLANTS USED FOR FOOD

| LIST OF PL | ANTS USED FOR FOOD |
|---------------------------------------|---------------------------|
| Scientific name | Aboriginal name |
| Acacia acuminata | 2 |
| Acacia microbotrya | galyang |
| Heucia microbottya | kunart |
| | kwonnat |
| | manna |
| | |
| | meen (2) |
| Acacia saligna | menna |
| | wuanga |
| Amyema fitzgeraldii | 1 |
| Astroloma serratifolium | murrumburru |
| Baeckea camphorosmae or Astartea f | <i>ascicularis</i> kurren |
| Banksia attenuata | biara |
| Banksia grandis | mangite |
| | mangyt |
| | mungat |
| | mungite |
| Banksia sphuerocarpa | nugoo |
| Brachysema aphyllum | 8 |
| Caesia sp. | karhrh |
| Carpobrotus sp. | |
| Carpoorotus sp. | majerak manbidi |
| Camphustus vivas saus | |
| Carpobrotus virescens | kolbogo |
| Dioscorea hastifolia | adtjikoh |
| | warran |
| | warryn |
| | worrain |
| | wyrang |
| Drosera | boon |
| Dryandra fraseri | budjan |
| | butyak |
| Eucalyptus calophylla | mnkar |
| | ngumbit |
| | numbit |
| | numbrid |
| Eucalyptus cornuta or E. occidentalis | yate |
| Eucalyptus loxoplileba | doatta |
| • | goatta |
| | twotta |
| Eycalyptus wandoo | conna |
| Exocarpus sparteus or E. odoratus | chuck |
| | dtulya |
| Haemodorum sp. | mean |
| | mene |
| | quaradine |
| Haemodorum paniculatum | madge |
| | madja |
| | mutta (1) |
| Haemodorum simulans | mutta (2) |
| | , |

Scientific name

Haemodorum spicatum

Macrozamia riedlei

Nuytsia floribunda Platysace maxwellii Platysace sp.

Podocarpus drouyniana Prasophyllum sp.

Prasophyllum fimbria Santalum spicatum

Sollya sp.

Thysantus patersonii Typha sp.

Xanthorrhoea preissii Xylomelum occidentale Aboriginal name

bhon bohn koolung meen (1)mein baio bayio boyoo byyu mungah karno eringo youck koolah chokern naank tuboc djubak poilyenum willarak kuruba namman tjungoori jetta quirting yandijut yandyett yanjidi balga

dumbung