

Traditional Foods – The Aboriginal Diet

A walk through the bush lands of Australia may leave the impression that there is not much food available, especially so during droughts where any visible plant looks withered or dead. However for more than 40,000 years, Aborigines have inhabited Australia with survival methods that reveal their proficient environmental knowledge. Living harmoniously with nature, they studied the seasons and the life cycles of flora and fauna. The sensitivity Aborigines had towards their land ensured the sustained provision of food and their society's nutritional health.

The Development of the Aboriginal Diet

Diets and food habits varied from one region of Australia to another, or even one neighbouring tribe to another. In the coastal areas, fish and shellfish were major dietary components whereas in the desert zones, seeds and grasses were staples. Nonetheless, the entire continent shared the worldview that every significant event or life process leaves its imprint in the earth in the form of a Dreaming.¹ Each tribe inherited its own Dreaming, and the Dreaming governed every aspect of their lives, including tribal land, totem animals, hunting, food gathering, sharing and distribution.

Tribal Land and Dreaming Tracks

Rather than wandering constantly in search of food in a harsh, barren land, tribes were bound to specific areas that they owned according to ancestral law or Dreaming.² “The areas were larger in inland and desert areas as food sources were more widespread and scattered than in coastal areas, where food was more abundant and concentrated.”³ When the tribe exhausted the food supply in one area, they moved on to another. Campsites were revisited; thus far from being haphazard, tribal movement followed a well-defined pattern.

Dreaming tracks, or songlines guided nomadic movement within the designated area. Often, they coincided with the chains of waterholes, especially important in the arid zone of Central Australia where rainfall is fickle. In these places, food foraging was wedded with the need for water. Through daily singing and dancing of songlines, children were made to memorise the sequence of locations in the Dreaming tracks, and thus the chain of waterholes.²

Songlines also corresponded with fertility cycles of plants and animals. Most fruits, nuts, and even insects were seasonal. Being close observers of nature, Aborigines knew exactly when plant foods were available, and when certain animals were fattest. “For example, kangaroos were fat when the fern leaf wattle was in flower; possums when the apple tree was in bloom.”⁴ This knowledge further guided their movements along the songlines.

Regeneration of Native Flora and Fauna

Through their movement, the tribes rested the land and helped regenerate the plants and animals in an area. Aborigines also abstained from hunting and gathering around sacred sites. Such places served as havens. After droughts, they helped to restock depleted areas, ensuring a faster recovery of the Aboriginal ecosystem.⁵ Additionally, Aborigines believed they were linked to plants and animals as totemic relatives.

They were forbidden to kill or eat their specific totems, though the same plants or animals may be considered legitimate food by another tribe.² This practice also prevented species extinction.

Aborigines also increased animal populations by creating sanctuaries. They pushed oak trunks into rivers to attract toredo grubs, and ringbarked candlenut trees to make the trunks rot and attract grubs.⁴ They also formed channels in rivers with boulders and stones to provide a constant supply of fish. Small fish were released to grow and reproduce.³

Aborigines also practiced fire-stick farming. Fire fertilizes the land with ash. Many Aboriginal food plants also required burning to achieve maximum production. The rejuvenated plants consequently attracted animals back to that area.²

The Aborigine's religious life was interconnected with their relationship with the land. Efforts to sustain plants and animals often involved performing increase ceremonies at sacred sites at auspicious times. Additionally, the women danced and chanted to increase food harvest, and more practically, replanted portions of root vegetables in the ground to "impregnate the earth and ensure future fertility".³

Hunting and Food Gathering

Traditional Aborigines grew no crops, and let the bush supplied all their needs. Food harvesting was carried out by clearly defined gender roles. Women were gatherers, men were hunters. The men were responsible for hunting birds and large animals. The ability to bring home game reflected a man's prestige. In some tribes, spearing a kangaroo is a rite of passage into manhood.^{2,6} In addition to extraordinary skill, hunting often spanned days, and required both endurance and strength. To ensure success during hunting, the men performed various rituals to placate totem animals. When they were victorious, the meat was prized and praised by the tribe.

Hunting though important, did not provide a predictable food supply. Studies estimate that women collected 90% of Aboriginal diets in the form of plant foods, insects, small animals and eggs. Each morning, the women collectively decided what foods to gather for that day. With their children, they then headed for areas that guaranteed a reliable food supply. "The atmosphere was generally relaxed, the task considered a pleasure to perform."³ Usually the women only gathered enough food for their immediate needs. Other than during droughts, food was not stored.

Food Sharing and Distribution

While plants and insects were casually shared, game, especially large animals, was distributed according to tribal laws. After cooking the animal, the men gathered to cut the meat ceremonially. Women waited quietly for their male relatives to distribute the meat to them.⁷ The butchering of an animal was never just about distributing the meat; sharing food always served to strengthen social relationships and tribal reciprocity.³

Kin obligations established stringent cultural practices. Meat sections were distributed to the hunter's relatives in strict accordance to their relationship with him. "Curiously, the finest cut went by right to the hunter's mother-in-law, with whom he had a rigid avoidance relationship."³ Often, the hunter got very little or even nothing. He must in turn rely on a relative's success to receive a better cut.

While ritualistic distribution of meat reinforced intra-tribal relations, ceremonies coupled with seasonal insect or plant feasts assembled neighbouring communities. In the Australian Alps where millions of Bogong moths gathered each summer, communities from hundreds of miles away gathered to feast upon the tasty morsels.⁶ In the same way, harvests of bunya pines in the Bunya mountains attracted different tribes to feast on the nuts. These gatherings promoted cultural and ceremonial exchanges. Different communities imparted songs and dances, and thus spread rituals and songlines over the continent.

Taboos

Apart from customs and rituals, ancestral laws also dictated taboos related to food provision. Some involved the abstinence from certain meats at different life stages, for example, “during the initiation of young boys, at a girl’s first menstruation or during pregnancy, childbirth and lactation.”² In the case of the Tiwi on Bathurst Island, the immediate relatives of a deceased are considered taboo and may not touch food until after certain mortuary ceremonies. During this period, they were hand-fed by others.²

There are also taboos governing tribal land. According to ancestral laws, it was taboo to hunt or even pass through neighbouring land without permission. As mentioned earlier, strict rules also forbade hunting around sacred sites, and naturally, a tribe’s totemic relatives were never hunted or gathered.³

Taboos also existed for practical reasons. In the desert there was a great taboo on spilling water. In general, taboos were strictly adhered to, as Aborigines believed that breaking them would result in dire consequences.²

As seen, the development of the Aboriginal diet intertwined with their religious, social and environmental outlook. Adherence to ancestral laws established their food habits. In harvesting food, Aborigines primarily followed their inherited songlines rather than a particular herd or seasonal growth. Their fidelity to a mythic dimension demonstrates their faith in the sanctity of the songlines and the rhythms of nature.¹ This has ensured the consistency of their food resources for thousands of years, and continues to do so.

Food Components of the Aboriginal Diet

Aborigines consumed a remarkable variety of natural bush foods. “It has been estimated that any one tribe had at its disposal from 150 to 500 different kinds of food in its tribal territory.”³ Over the continent, the number of different foods, including plants, animals, insects, birds and seafood was around 10,000 species. While desert foods were more restricted in variety, Aborigines in these areas exhibited the same vigour and good health as their counterparts in coastal areas.⁴

Depending on the location and season, Aboriginal diet was 70-80% vegetarian. This figure may have dropped to 50% along the coastal areas where fish and shellfish were abundant. In the arid zones, even in the best conditions, animal food rarely constituted more than 30% of the diet, a substantial part of which consisted of fruits, nuts and seeds, roots and tubers, flowers and leaves.³

Seeds and Nuts

Seeds are the most nutritious plant foods available. Within each seed is a store of food in the form of starches, protein, fat, vitamins and minerals. They are so sustaining, they often form the staple diet of most cultures.⁸

The seeds eaten by coastal Aborigines—cycads (*Cycas* spp.), coconut (*Cocos nucifera*), matchbox beans (*Entada phaseoloides*), mangroves and the like—tend to be large. Due to their size, these seeds are not easily dispersed and thus attract rats. Often they contain poisons to deter the rats from stealing the food for their seedlings. Through experience, Aborigines have become adept at recognising the poisonous species of seeds. To make them edible, they developed lengthy preparation methods involving pounding, soaking, sifting and baking to remove the toxins.^{6, 8} Small seeds were mostly non-poisonous, but the coastal Aborigines rarely ate them.

In contrast, in the arid areas where there is less food, small seeds of grasses, pigweed and nardoo spores were vital staples. More than 30 varieties of wattle (*Acacia* spp.) seeds were also consumed. While minute in size, these seeds were available in large amounts. “They are also extremely nutritious, easily outscoring wheat and wholemeal rice in protein and minerals.”⁶ In fact, they are so nourishing that as an example of Australia’s unique contribution to international food security, the seeds of Australian acacias have been providing the people of Nigeria with a form of sustenance since the 1990s. Through this project between the Australian Aborigines, the Commonwealth Scientific & Industrial Research Organisation (CSIRO) and Nigerian researchers, wattle seeds are shown to extend Nigerian grain supplies by as much as 25%, and thus serve as a key food source during famines.⁹

Seeds with hard shells containing oil are referred to as nuts. Other than the world-renowned macadamia nut (*Macadamia*), Aborigines also relished other native species of nuts. These included monkey nuts (*Sterculia quadrifida*), candlenuts (*Aleurites moluccana*), quandong (*Santalum lanceolatum*), kurrajongs (*Brachychiton paradoxum*) and bunya nuts (*Araucaria bidwillii*). Research has shown that these nuts are not only tasty, but also very nutritious. Some, like the monkey nut and quandong, are even being considered for commercial cultivation.

Tubers and Roots

Wild tubers and roots were another Aboriginal staple. Since most fruits and seeds were seasonal, tubers and roots, being available even during the worst droughts, were integral to their diet.¹⁰ Being storage organs, they contain good amounts of sugar, starch and water. Tuberos plants include lilies, ground orchids, vines, and freshwater plants like spike rush (*Eleocharis dulcis*), bulrushes (*Typha* spp.) and nalgoo (*Cyperus bulbosus*). Aborigines often ate smaller pea-sized tubers like the nalgoo and murnong (*Microseris scapigera*) as these were easily gathered in large amounts from shallow soils. Big tubers were often deeply buried and thus less used.^{6, 8}

Fruits

“Fruits are the glamour foods of the Australian bush. No other foods are more tasty and refreshing, nor more alluring to the eye.”⁶ Aborigines ate hundreds of varieties of fruits, some of which were even staples, though most were seasonal. Fruits were highly prized, adding “taste, sugar and excitement to an

otherwise fairly bland diet.”² In the desert regions, wild tomatoes (*Solanum* spp.) were especially important. After ripening, these produced sweet “raisins” that were easily available even during droughts. Some Aborigines ground these raisins, rolled them into balls and stored them for up to two years. The rock fig (*Ficus platypoda*) was another desert treasure. They were also eaten raw or stored as balls. So important were they that Aborigines performed rituals to increase supplies. Along the coastal regions, the muntari (*Kunzea pomifera*) took centre stage. These tasty fruits were so valuable they could be traded for axe heads.⁶

Honey and Nectar

Honey and nectar were highly sought-after—to the extent that more energy is used in obtaining the food than that supplied by it.¹⁰ Most honey was collected from beehives or from the abdomen of the honey ant. The ability to track wild bees to their hives required remarkable skills and keen eyesight. Collected honey must be shared according to tribal law. In the Kimberley, honey is socially important. Prospective son-in-laws presented honey to their future wives’ parents, while visiting tribes also exchanged gifts of honey.²

The scarcity of sugary food in the bush also placed a high premium on the nectar of native flowers like banksias (*Banksia* spp.), grevilleas (*Gravillea* spp.), eucalypts (*Eucalyptus* spp.), hakeas (*Hakea* spp.), grasstrees (*Xanthorrhoea* spp.), and waratahs (*Telopea speciosissima*). Aborigines suck the nectar straight from these flowers or soaked them in water to make sweet drinks.⁶

Gums and Lerp

Lerp, a sugary substance excreted by sap-sucking insects, is another “dessert” food favoured by Aborigines. Lerp is also beneficial as it is available when other plant foods are scarce.¹⁰ In 1957, anthropologist Norman B. Tindale came across an Aboriginal family who had survived for a week almost solely on lerp.⁶

Sticky edible gum exuded from tree branches and trunks was another delicacy. Those from the ironwood, acacia (*Acacia* spp.) and allocasuarina trees provided carbohydrates and were eaten straight from the trees or melted in water to form a jelly.²

Leaves

“Leaves are the plebeians among (Aboriginal) plant foods.”⁶ Without the means to boil leaves, they were unpalatable. Compared to other plant parts, they were also less nutritious. As such, none of the few species used were important in the Aboriginal diet.

Aboriginal Game

In addition to plant foods, Aborigines also consumed a vast array of meats, much more than modern city Australians. “The Anbarra of Arnhem Land...still eat sixty kinds of fish, thirty different shellfish...various birds, mammals and reptiles. By comparison, the average...Australian eats about six species of fish, three mammals, two birds, (and) one shellfish.”⁶

Aborigines hunted all kinds of land mammals. Kangaroos were staple foods. Smaller marsupials, such as wallabies, kangaroo rats and bandicoots were also hunted. So were wombats, platypuses, dingoes, echidnas, possums and koala bears. Even tiny moles and native rats were valuable food items. Aborigines also ate reptiles such as goannas, lizards, tortoises, snakes, and even crocodiles. Frogs were widely eaten; especially in the desert where water-holding frogs were used as an emergency water source.⁶ The birds hunted by Aborigines were as wide-ranging as the mammals. These included emus, turkeys, swans, herons, cranes, ducks, parrots and cockatoos.³

Along the coastal regions, whales and seals were important; “a beached whale was occasion for great feasting, even when the meat was mouldy and putrid.”⁶ Turtles and dugongs were also hunted. Turtle eggs were “prized for their flavour, nutrition and thirst-quenching qualities.”² Nonetheless, fish was the staple, and was eaten in abundance. There was also great numbers of shellfish; “more than a hundred species were harvested in north Queensland alone.”⁶ Along the entire coastline of Australia lie scattered remains of Aboriginal shellfish feasts; some, such as those at Weipa, measure nearly 10 metres high.²

Finally, insects were essential in the Aboriginal diet. Their favourite was the witchetty grub, a much-valued desert staple for its fat supply. The largest of these is the giant wood moth larvae. Aborigines also ate the adult moths, which are “so greasy with fat that they stain cabinets when pinned up by entomologists.”⁶ As mentioned earlier, the gathering of Begong moths also called for feasting.

Food Preparation Methods of the Aboriginal Diet

Like hunting and gathering, food preparation also encompassed a ritualistic dimension. Traditional laws influenced the ways that animals were cooked. For example, “wallabies and kangaroos were roasted whole, after first being seared in the flames to allow their spirit to escape to join its own species.”³ The conventional cooking techniques are roasting on coals, baking in the ashes and steaming in a ground oven.

Roasting on Hot Coals

In this technique, whole animals that have to be eaten quickly, fish and small turtles are roasted on the open coals of a fire. Through initial fast flame-burning, the animal furs are removed. They are then degutted and further roasted on the coals. This method thoroughly cooks snakes, goannas and lizards. Larger animals like kangaroos are still rare due to their size. Their warmed, partly cooked blood is drunk as a delicacy by the men and rubbed on spears for increased efficacy. Aborigines sometimes combined this method with slow cooking in the coals, producing very juicy and chewy meats, which are supposedly responsible for Aborigines' excellent teeth.²

Baking in the Ashes

Seed and nut breads, tubers and roots are baked in hot ashes. Good wood is essential for this cooking fire as ashes from some woods may cause slight irritations. Aborigines often use acacias as they are harmless and burn quickly. “Some foods, such as witchetty grubs are simply rolled in the hot ashes; some such as...goannas, are placed on the hot ground beneath the ash and covered with more hot ash.”² Still others like yams (*Dioscorea* spp.) and bush bananas (*Marsdenia viridiflora*) are placed in hollows under the ashes and covered with another layer of ash and coals.²

Steaming in a Ground Oven

After a kill, Aborigines prepared ground ovens closeby by first digging a pit up to 60 centimetres deep. They fill it with firewood, topping that with selected stones. The wood is then ignited, as the fire burns, the red-hot stones, together with ash and coals fall into the pit. They quickly proceed to sweep out the ash and coals, followed by placing the leave or bark-wrapped bundles of food on the hot coals. Next they cover the pit with more paperbark and earth to seal in the moisture. Escaping steam is quickly sealed off with soil. The size of the animal or vegetables can affect the size of the pit, cooking time, and even the number of stones used. As such, this cooking techniques requires judgement, experience, pyrotechnic skills and strength. If done successfully, this steaming technique is the preferred method for cooking meat.²

Health Benefits Associated with the Aboriginal Diet

Reports from early explorers described Aborigines as having muscular limbs, erect postures, good features and excellent teeth. They were capable of undergoing considerable fatigue and deprivations in their wanderings, and also displayed great agility and acute vision. An early Australian settler, Philip Chancy, wrote about an Aborigine who stood as a target while professional bowlers threw cricket balls with force at him. While he was only ten yards away from them, he was able to dodge all the balls for at least 30 minutes.⁴

Up until colonisation, the Aboriginal diet consisting almost entirely of fresh, natural whole foods seemed like the answer to a healthy lifestyle. Aborigines ate many plant foods raw, and often straight after picking.¹¹ In eating these foods, they received both nutrients and energetic vitality. Additionally, Aborigines hunted and ate wild animals, which were not subjected to artificial growth mechanisms like hormone-injections, nor do they suffer from diseases found in domestic animals.³

Nutritionally, bush foods are generally similar to those that we commonly eat, while some native species are even more nutritious than the kitchen equivalents. In terms of macronutrients, Aborigines ate complex carbohydrates in the form of seeds, nuts and fruits. These provided a good source of energy, as the carbohydrates take longer to digest. Unsurprisingly, disorders related to carbohydrate metabolism were practically unknown to them.

Aboriginal fat sources often contained a low proportion of saturated fats and a high proportion of polyunsaturated and monounsaturated fats. An example is kangaroo meat, which like all game meat tends to be lean, and therefore lowers cholesterol intake. The beneficial fats further protect them against cardiovascular and coronary heart diseases. Research has shown that when diabetic Aborigines returned to a traditional diet where kangaroo meat played a vital role, some metabolic abnormalities were corrected, and overall conditions dramatically improved. Other fat sources like the witchetty grubs are also rich in monounsaturated fats and do not contain any cholesterol.³

In general, insects are also richer in protein and minerals than most other animal foods. Apart from insects, Aborigines received good amounts of proteins from other wild game, nuts, yams, and seeds. As mentioned, wattle seeds contain up to 26% protein while wholemeal wheat only contained 11.5%.

Quandongs, pigweeds (*Portulaca oleracea*), and kurrajongs are also rich supplies, containing 25%, 20% and 18% protein respectively.⁶

In addition to the macronutrients, bush foods were also excellent providers of micronutrients like vitamins and minerals. The most celebrated example is the Kakadu plum (*Terminalia ferdinandiana*), which “achieved world fame when a sample tested at the Sydney University was found to contain world record amounts of vitamin C”⁸—a hundred times that of oranges. Other studies have shown that the rock fig (*Ficus platypoda*) contains up to 4000 milligrams of calcium per hundred grams. In comparison, milk only contains 5% of this amount.⁶ Nutrition tests carried out by the Commonwealth Department of Defence Support has also revealed that candlenuts contain more than 4200 micrograms of thiamine per hundred grams—an amount far in excess of any commercial food.

Other than the foods’ nutritional value, other factors related to food provision have contributed to Aboriginal health. The act of hunting and gathering kept Aborigines active for hours—aiding digestive function, enhancing muscular flexibility, and boosting energy. Food preparation is another contributing factor. There was little food processing and storage, no overcooking, and vitamins and minerals were not lost in cooking water. Traditionally, aborigines also did not utilise sugar and salt in their cooking, and were seldom exposed to food additives like preservatives, artificial colourings and flavourings. They are hence less susceptible to the allergies and modern diseases associated with the consumption of these items. Food distribution was also important since it often served as occasions for strengthening social ties and promoting cultural exchanges. As a whole, it can thus be seen that the Aboriginal diet not only benefited its people physically, but also ensured their emotional, social and cultural health.

Disadvantages of the Diet

The Aboriginal diet does have certain disadvantages, though these are more applicable to inexperienced foragers than the Aborigines. For one, some wild plants are very poisonous. An infamous example is the extremely toxic cycad seed. Early explorers often fell prey to it, especially since it does not have a warning smell or taste. At times, it is also difficult to differentiate edible and poisonous plant varieties. This is true of certain bush tomatoes; the situation is especially insidious since the edible and toxic varieties often grew side by side.⁶

Besides plant identification and differentiation skills, the ability to locate the foods is also quintessential if survival depended on it.¹⁰ Certain foods like roots and tubers are particularly tricky to find. In the same way, great skill is required to locate animals in their hideouts, let alone catch and kill them. We have to remember that the rigorous regimes of food provision were taught to the Aborigines from birth. As such, it is almost impossible, if not dangerous, to wander into the bushes armed with just a pocket guide and expect to survive on bush foods.

Conclusion

As seen, the complex web of mythic laws and rituals surrounding food provision placed it very much at the core of spiritual and social life in the Aboriginal society. Far from the mere act of appeasing hunger, it included practices to regenerate the land, honour ancestors and enhance social ties. Unfortunately since colonisation, Aborigines have experienced deep loss on many levels, including control over their food supply and diet. Many of their traditional dietary habits have been replaced by

modern ones, which includes a high intake of tinned meats, white processed flour, milk, sugar and alcohol. This has inadvertently led to health problems like weight gain, diabetes, tuberculosis and alcoholism. Over time, some Aborigines have realised the need to return to their native foods. Groups of Aborigines have returned to the bush in both desert and coastal areas. While they may now hunt with rifles and carry water in buckets, they have ultimately embraced the dietary legacy of their ancestors once more.

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References

1. Lawler R, 1991. *Voices of the First Day: Awakening in the Aboriginal Dreamtime*. Inner Traditions International, Vermont.
2. Isaacs J, 1987. *Bush Food: Aboriginal Food and Herbal Medicine*. Weldons Pty Ltd, McMahons Point, NSW.
3. Stuart-Fox E, 2001. *The Bunya Cookbook: Australian Cuisine*. The Aboriginal and Islander Community, Health Service Brisbane Ltd, Woolloongabba, Queensland.
4. Fallon S, Enig MG, 1999. "Australian Aborigines: Living Off the Fat of the Land". The Weston A. Price Foundation. Available from URL: <http://www.westonaprice.org/traditional_diets/australian_aborigines.html>. Accessed 13 March 2002.
5. Latz PK, 1995. *Bushfires and Bushtucker: Aboriginal Plant Use in Central Australia*. IAD Press, Alice Springs, NT.
6. Low T, 1989. *Bush Tucker: Australia's Wild Food Harvest*. Angus & Robertson Publishers, North Ryde, NSW.
7. Isaacs J, 1996. *A Companion Guide to Bush Food*. Lansdowne Publishing, Smithfield, NSW.
8. Low T, 1991. *Wild Food Plants of Australia*. Angus & Robertson Publishers, Sydney, NSW.
9. CSIRO Australia, 1997. "Aboriginal Tradition and CSIRO Help Beat Hunger". CSIRO Corporate Media Release 97/205. Available from URL: <<http://www.csiro.au/communication/mediarel/mr1997/mr97205.htm>>. Accessed 2 April 2002.
10. Latz P, 1999. *Pocket Bushtucker*. Jukurrpa Books, Alice Springs, NT.
11. Department of Health and Community Services, Northern Territory, 2000. "The Diet of Aboriginal People Before European Contact". *The Public Health Bush Book*. Available from URL: <http://www.nt.gov.au/health/healthdev/health_promotion/bushbook/volume2/chap3/before.html>. Accessed 15 March 2002.