

Aboriginal healing practices and Australian bush medicine

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Abstract

Colonists who arrived in Australia from 1788 used the bush to alleviate shortages of basic supplies, such as building materials, foods and medicines. They experimented with types of material that they considered similar to European sources. On the frontier, explorers and settlers gained knowledge of the bush through observing Aboriginal hunter-gatherers. Europeans incorporated into their own 'bush medicine' a few remedies derived from an extensive Aboriginal pharmacopeia. Differences between European and Aboriginal notions of health, as well as colonial perceptions of 'primitive' Aboriginal culture, prevented a larger scale transfer of Indigenous healing knowledge to the settlers. Since British settlement there has been a blending of Indigenous and Western European health traditions within the Aboriginal community.

Introduction

This article explores the links between Indigenous healing practices and colonial medicine in Australia. Due to the predominance of plants as sources of remedies for Aboriginal people and European settlers, it is chiefly an ethnobotanical study. The article is a continuation of the author's cultural geography research that investigates the early transference of environmental knowledge between Indigenous hunter-gatherers and British colonists (1994: chapter 5; 1996; 2003a: chapter 13; 2003b; 2007a: part 4; 2007b; 2008).

The flora is a fundamental part of the landscape with which human culture develops a complex set of relationships. In Aboriginal Australia, plants physically provided people with the means for making food, medicine, narcotics, stimulants,

adornment, ceremonial objects, clothing, shelter, tools, and for creating artwork. Symbolically, plants feature heavily in Aboriginal myths and religious beliefs. Australia's flora is unique and highly diverse, qualities which are also present in the Aboriginal pharmacopeia. Pharmacologists have found that many of the Australian plants used in Indigenous remedies have a chemical basis (Barr et al 1988; Clarke 2003c; 2008: chapter 10; Henshall et al 1980; Kyriazis 1995; Levitt 1981: chapter 9; Rose 1987; Watson 1994; Webb 1960).

Indigenous Health Systems

At the most basic level, people in the world recognise three main categories for the causes of illness: natural, human and supernatural (Clarke 2007a: 96-7; Clements 1932). In many societies the origin of disease is perceived as a mixture of human and supernatural agencies. For the latter, sickness is blamed on such things as sorcery, breaches of religious sanctions and social rules of behaviour, intrusions of spirits and disease-objects, or loss of soul. In Aboriginal Australia, the swift and inexplicable onset of serious illness was generally attributed to supernatural reasons. Before European settlement, the isolated and dispersed nature of Aboriginal populations would have meant that there were fewer fatal diseases than in comparison with pre-industrial agricultural societies, which were characterised as sedentary and living in high densities in close proximity to livestock (Cleland 1953: 399; Crosby 2004: 285; Diamond 1998: 87, 92, 164, 195-214, 330, 355, 357).

Notions of health and sickness are shaped by entrenched cultural beliefs and traditions. For instance, contemporary Western Europeans will consider a headache to be the result of stress, high blood pressure or in the worst case a brain tumour. Traditional Aboriginal notions of feeling sick are quite different, with such head pain often explained in terms of sorcery or perhaps from a malevolent spirit having entered the head (Cawte 1974, 1996; Clarke 2007a: 96-105; Maher 1999; Reid 1979, 1982, 1983; Wiminydji & Peile 1978). Determination of the cause of an ailment leads to establishing how it is to be treated. In the Western Desert, healers deal with headaches by blowing their breath across the patient's head to remove a foreign spirit or *mamu*, followed by neck massage and the manipulation of 'strings' believed to control the blood flow to the brain (Ngaanyatjarra et al 2003: 15).

Aboriginal people believe that the protection of an individual's spirit is fundamental to their health. In the Macdonnell Ranges of Central Australia, Arrernte woman Veronica Perrurle Dobson explained that:

The healer cures the sick person by getting the sick person's spirit and placing it back into their body, making them well again. A child loses their spirit when someone frightens them when they are sleeping. It's the same for an adult, especially older people (Dobson 2007: 11).

Aboriginal people in the southern Western Desert have similar beliefs concerning the spirit. They also claim that disease can be something physical, like a piece of wood lodged in a person's body (Ngaanyatjarra et al 2003: 20). They assert that

such an illness can be removed by a healer's sucking, and then its essence disposed by throwing it away in the wind.

In Aboriginal Australia illness is sometimes associated with particular winds. Arrernte people consider that the northwest wind, *aretharre*, is the 'bad one' (Dobson 2007: 23-4). It blows in early spring and people who suffer from its dust are treated with a healing song. It is a tradition of the Ngarinman people living in the Victoria River area in the Northern Territory that serious colds originate from a place associated with the Bad Cold Dreaming (Rose 1987: 9). Aboriginal people widely believe that the disruption of the power surrounding religious places or sites will cause serious illness to their spirit (see Memmott 1982 regarding the Wellesley Islanders).

In desert Aboriginal communities it is reasoned that people suffering from hunger and thirst will have a hot heart, which can be made cooler by drinking water. Aboriginal man Wiminydji and Father Tony Peile of the Balgo Hills Mission in Western Australia claimed that the 'notion of being cold is the essential concept of Aboriginal health and well-being. This concept is very different to Western ideas where with physiological foundation, a balance – not too warm and not too cold – is considered healthy' (Wiminydji & Peile 1978: 506). Gugadja people at the Mission are reported to say *Ngala baldja-riwa dulbu-dju-ra yalda-djura*, meaning 'Eat and become full, it makes the heart cold' (Wiminydji & Peile 1978: 506-7). The consumption of animal blood is widely believed in desert communities to help in 'cooling' the body (Tonkinson 1982: 226). Related to this belief, red ochre, which is typically associated with the 'blood' of spirit Ancestors (Clarke 1989: 1-

2; 2003a: 93; Sagona 1994), is combined with fat and applied to the body for a 'cooling' effect. When the heart and spirit are considered 'hot', it is thought that this condition will affect other parts of the body, particularly the head.

Desert dwellers often express the health condition of individuals in terms of hotness and coldness. Aboriginal people in the northern deserts consider that the roots of young 'wild curry' kurrajong (*Brachychiton multicaulis*) trees are a 'cool food', because eating them makes you feel refreshed (Wightman, Dixon et al 1992: 10-11). In northern Australia the treatment for headaches caused by hunger, thirst or sickness, is to wrap the head with snakevine (*Tinospora smilacina*) stem (Laramba Community Women 2003: 34; Levitt 1981: 55, 101; Nyinkka Nyunyu 2003; Wiminydji & Peile 1978: 509). This woody climber has a milky latex sap with a cooling property utilised to treat various ailments (Barr et al 1988: 204-7; Lassak & McCarthy 1983: 42-3; Reid 1977: 6, 112-13; Webb 1969: 142-3). In spite of the differences between Indigenous and modern Western European explanations of healing mechanisms, we know that many Aboriginal plant remedies, such as from the snakevine (Image 1), have proven abilities to cure patients when properly used.

Aboriginal people consume tonics to maintain their general health and body function. To invigorate themselves, Aboriginal people in southern South Australia described taking 'blood medicine' that could be made from thistle (*Sonchus* species) stems or pale flax-lily (*Dianella longifolia*) roots (Clarke 1986a: 9-10; 1986b, 43, 45; 1987: 6, 9; 2003b: 89, 91; 2003c: 31). Tonics are taken to maintain good health rather than as a

remedy for an existing ailment, so they are strictly speaking not medicines.



Image 1 - Snakevine, which has a milky latex sap with a cooling property utilised to treat various ailments, such as headaches caused by hunger, thirst or sickness. Photo: P.A. Clarke, Wauchope, Northern Territory, 2007.

Aboriginal healers

Aboriginal societies place great faith in their own healers, who they believe have special powers derived from their spiritual Ancestors to cure the sick. In many varieties of Aboriginal English the healers are referred to as 'doctors' and 'medicine men' (Arthur 1996: 21-2; Berndt 1947; Beveridge 1884: 68-70; Elkin 1977; Tindale 1974: 36; Tonkinson 1994). They are also called 'clever men' or 'powered men', although these terms include other spiritually powerful people such as rain-makers and sorcerers. Healers are considered to have the ability to 'see' into the body of their patients. They deal with emotional problems as well as physical ones. An Aboriginal healer's closest equivalent in contemporary Western European medicine would be a professional who is both a general practitioner and a psychiatrist. There are many different Aboriginal language terms for healers across Australia, such as *ngangkari* in the contemporary Western Desert (Elkin 1977: 107; Goddard 1992: 82; Ngaanyatjarra et al 2003; Schulze 1891: 235), *marrnggitj* in present day northeast Arnhem Land (Cawte 1996: 18, 137; Elkin 1977: 117-20; Reid 1983) and *garraaji* around Sydney at the time of European settlement (Tench 1996: 196-7).

In Aboriginal Australia the healer's job is to diagnose problems, advise on remedies, suggest and perform ritualised healing procedures, explore the impact of community social and cultural issues upon the illness, and to reassure their patients that they can be cured. Most recognised healers are men, although people of both genders have a wide general knowledge of efficacious healing plants. While the healers

focus upon treating sick individuals, women specialise in performing ceremonies that promote the general health and wellbeing of their whole family. In pre-European times all adults in the community would have known about basic medicines, although healers were considered to have special access to spiritual powers and assistance.

The healer's set of special skills was considered fundamental for treatment in cases where sickness was blamed upon supernatural things, such as sorcery, contact with spirits and the breaking of taboos. When illness is diagnosed as being caused by foreign objects entering the body, the healers will treat the patient with singing, massage and sucking to 'remove' the offending article, which may be revealed as a fragment of wood, bone, shell, stone and since European colonisation even wire or glass (Berndt 1982; Berndt 1947: 351-5; Berndt & Berndt 1993: chapter 12; Eyre 1845: 2: 359-60; Hardy 1969: 16-17; Roth 1897: chapter 11; Tonkinson 1982: 234-5). Healers may 'insert' special objects into the patient to affect a cure. In Aboriginal English certain places or areas that make people ill are referred to as 'sickness country' (Arthur 1996: 129-30). 'Devil devil business' is often the stated cause for the most serious and otherwise unexplained illnesses (Cawte 1996: 17).

Healers draw upon the ancestral powers of their kinship network when treating the seriously ill. In 1846 Dresden missionary Heinrich A.E. Meyer at Encounter Bay in South Australia claimed that Ramindjeri people had 'doctors' who appealed to the object, animal or plant that was their totemic 'friend' or spirit familiar (Meyer 1846 [1879: 197]). One such

person used a snake and others an ant or seaweed. In the case of seaweed, Meyer recorded the term *parraitye-orn*, which was translated by him to mean 'sea-weed man' or 'doctor'. This person was said to be he who:

... pretends to cure diseases by chewing a small piece of a red-coloured species of sea-weed, which he gives to the patient, bidding him to conceal it about his person. As soon as the seaweed becomes dry it is supposed the disease will have evaporated with the moisture (Meyer 1843: 90).

In the Lower Murray region of South Australia, a healer would invoke the power of the 'war-god' Ancestor Ngurunderi to cure warriors of their spear and club wounds (Clarke 1995: 146; Taplin 1859-79: 20 October 1859: 26).

In the southern Kimberley and northern Western Desert, a traditional 'doctor' receives his power from dreams or by obtaining magical charms, *maban*, from other recognised living 'doctors' (Akerman 1979: 23-4). Some *maban* are considered invisible, while others are small trinkets like shells and tektites or 'emu eyes' (Baker 1959: 188-90). Aboriginal people believe that they enter the patient's body to do their work. In the southern Western Desert, healers use charms called *mapanpa*, which may be comprised of pieces of wood, stone, bone and other objects (Ngaanyatjarra et al 2003: 11, 15, 34-5, 47, 55, 78). Each healer will have their own set of such 'sacred tools'.

There are many ways in which Aboriginal people become healers (Cawte 1974: 30, 41-2, 44, 63-4; Elkin 1977: chapter

3-4; Eyre 1845: 2: 359-60; Gason 1879: 78-9; Howitt 1904: 404-13; Roth 1897: 152-3; Spencer & Gillen 1899: chapter 16; 1927:2: chapter 15). It generally comes through special training, commencing when still a youth, into the methodology and rituals related to discerning causes of illness, and involves spiritual revelation. The role of healer is rarely passed down directly from father to son, with future healers instead chosen for their developing social skills and an aptitude for learning.

Aboriginal healers observe specific taboos believed to maintain their powers. In northeast Arnhem Land some healers cannot submerge themselves in saltwater (Warner 1958: 200). In many regions, particularly Central Australia and parts of the Kimberley, healers avoid such things as bites from large ants, excessive eating of fat and the drinking of any hot beverages, through their fear of losing power (Elkin 1977: 8-9, 113, 123; Spencer & Gillen 1904: 480-1). It was a recorded custom in a part of western New South Wales that 'medicine men' could never eat their individual totemic animal or plant (Elkin 1977: 91). Across southeastern Australia after European settlement, 'clever men' were said to lose their healing and psychic abilities, such as knowing in advance who was about to arrive, through drinking too much alcohol (Elkin 1977: 93; Howitt 1904: 409).

Aboriginal herbal remedies

Plants feature prominently in Aboriginal remedies chiefly used to relieve symptoms such as fever, congestion, headache, skin sores, tired or swollen aching limbs and digestive problems (Barr et al 1988: 22-5; Clarke 2007: chapter 8; Rose 1987: 7-

11; Watson 1994). Treatment can involve drinks, washes, massages and aromatherapies. The drinks are made by heating water with plant additives, and in Aboriginal English are commonly referred to as 'tea'. Since European colonisation, washes are prepared by boiling plants, with the cooled liquid applied externally to the body. Some plants are heated, then rubbed or massaged into swollen parts of the patient's body. The aroma of plants is generally transferred to the patient through contact with steam and smoke.

The Aboriginal pharmacopeia is vast; far too large for a detailed description in this article (examples of regional studies are Clarke 1987; Henshall et al 1980; Kyriazis 1995; Levitt 1981; Roth 1903). The diversity of herbal remedies served Aboriginal people well. As hunter-gatherers they had to seasonally move through different habitat zones in the landscape, which meant that it was necessary for them to possess knowledge of a broad range of remedies. It was also important for Aboriginal people to know the seasonality of each plant species, some of which may not be as effective or even available at certain times of the year.

European Bush Medicine

The first British colonists came to Australia from an industrialised nation, bringing with them knowledge of newly developed Western medicines and their own folk remedies (Hagger 1979; Pearn & O'Carrigan 1983). Hard pressed settlers in remote regions were forced to rely upon the local bush for many essential things, such as 'bush medicines', as supplies from Europe were scant and infrequent. Western

European understandings of the causes of poor health shaped the settlers' immediate response to the Australian environment. The British persisted in using flannel underwear in spite of hot summers, because it was believed to prevent colds and rheumatism (Hagger 1979: 46-7).

British colonists of the late eighteenth and early nineteenth centuries did not consider that hunter-gatherer societies possessed highly-developed systems for managing their health and wellbeing. While some Europeans were in awe of the capacity of Aboriginal people to naturally recover from serious physical injuries, particularly spear wounds (Jorgenson 1991: 93, 122), most relegated the practices of recognised Aboriginal healers to the arena of trickery, magic and sorcery (Clarke 2007b: 150-4). In 1788 Sydney colonist Captain Watkin Tench described a 'superstitious ceremony' whereby a *caradyee*, or 'doctor of renown', treated a sick man by acting as if he had sucked out a river pebble from his breast (Tench 1996: 196-7). In western Victoria, colonist James Dawson had a more sympathetic view of healers. He claimed in 1881 that 'Every tribe has its doctor, in whose skill great confidence is reposed; and not without reason, for he generally prescribes sensible remedies. When these fail, he has recourse to supernatural means and artifices of various kinds' (Dawson 1881: 56).

Adoption of Aboriginal remedies

The historical records are incomplete on the origin of most colonial healing practices. Few settlers would acknowledge that Aboriginal knowledge was the source of their remedies.

Colonist and author Dame Mary Gilmore stated in her reminiscences of growing up in rural New South Wales that:

... the white forgets the uncounted ways in which he [was] ... unintelligent (and still would be unintelligent) but for what the blacks taught. As parallels to the treatment of snake-bite by sucking, take the use of eucalyptus, the application of weak wattle tan-water for burns and blisters, of clean mud as poultices, of native gums in dysentery, the eucalyptus beds and steam pits for colds and rheumatism, and ask was it a black or a white intelligence that was first to find and apply these (Gilmore 1935: 232).

She stated that a whole industry in making medicines owed its existence to Aboriginal practices:

It is true there is a eucalyptus extract industry now; but the knowledge that led to that was originally derived from the natives, who used eucalyptus leaves in steaming, and for wounds. For rheumatism steam pits were made, heated by fires, raked out, lined with leaves and then possum-rugs laid over the top. Another use of the leaves was as a strapping for wounds that needed closing in order to heal. These uses came to the pioneers from the blacks (Gilmore 1935: 226).

Although Europeans came to use some of the same healing remedies as Indigenous people, it is not known how many of them came about through the direct acquisition of Aboriginal knowledge.

Colonists experimented with plants that appeared similar to European species they were familiar with, although the resemblance was often superficial (Campbell 1932: 77-80; Clarke 2008: chapter 2; Cribb & Cribb 1981: chapter 3). The

native lilac or false sarsaparilla (*Hardenbergia violacea*) was used as a tea-based medicine due to the similarity of its leaves to true sarsaparilla, although its effectiveness is doubtful. Botanist Frederick M. Bailey remarked that the 'roots of this beautiful purple flowered twiner are used by 'bushmen' as a substitute for the true sarsaparilla, which is obtained from a widely different plant. I cannot vouch for any medicinal properties' (Bailey 1880: 8). Europeans targeted wild aromatic plants to make herbal teas. Fragrant oils and drinks were made out of the native pennyroyal (*Mentha satureioides*) and other Australian mint species (Bailey 1880: 19; Cribb & Cribb 1981: 78-9; Lassak & McCarthy 1983: 15, 19, 77, 88, 175; Low 1989: 177).

The discovery of new sources of medicine potentially had economic benefits for the fledging colony. Surgeon Dennis Consideen in New South Wales wrote to English botanist Joseph Banks in 1788 and stated that:

... this country produces five or six species of wild myrtle [species of *Melaleuca*, *Kunzea* and *Leptospermum*], some of which I have sent you dried. An infusion of the leaves of one sort is a mild and safe astringent for the dysentery (D. Consideen cited Campbell 1932: 80).

A bitter taste was a strong indication for a plant having a potential use as a tonic or for the treatment of indigestion. In early New South Wales, a type of 'acid berry', identified as the sour currant-bush (*Leptomeria acida*), was used to treat sick convicts who had arrived from England suffering scurvy (Cobcroft 1983: 18, 27, 29-30, 32; Campbell 1932: 83; Powell 1990: 94).

The influence of Indigenous plant use practices is apparent in the origin of a few colonial remedies. In the early nineteenth century, Aboriginal women living with European sealers in the southern region from Kangaroo Island to Bass Strait used their plant-based remedies and medical charms to treat their families (Clarke 1996: 62; Leigh 1839: 160-1). In these communities, 'teas' made from 'bush ti-tree' (*Leptospermum* & *Melaleuca* species) were used to medicinally 'purify' the blood (*Adelaide Observer* 28 Sept. 1844: 6). In south eastern Australia the settlers used the Aboriginal remedy of applying a poultice made from the old man's beard (*Clematis microphylla*) creeper (Image 2) onto aching joints of the legs and arms (Clarke 1987: 6; Lassak & McCarthy 1983: 56).



Image 2 - Old man's beard creeper, which was used by Aboriginal people and European settlers to relieve joint pain. Photo: P.A. Clarke, Narrung Peninsula, South Australia, 1989.

In deserts, settlers followed the Aboriginal practice of using the succulent stems and leaves of the munyeroo (*Portulaca*

oleracea) creeper as a cooling diuretic medicine to increase the volume of urine (Bindon 1996: 206; Hiddins 2000: 32; 2001: 17; Low 1988: 122). A Central Australian example of bushmen adopting an Aboriginal healing plant was the application of the sap, or 'milk', from the milk-bush (*Sarcostemma australe*) (Image 3) to heal sores (Koch 1898: 114).



Image 3 - Milk-bush or caustic-vine. In Central Australia, settlers used this Aboriginal healing plant by applying the sap, or 'milk', to sores. Photo: P.A. Clarke, Macdonnell Ranges, Northern Territory, 2007.

Botanical collector Max Koch recorded a bushman's remedy from the arid zone of northern South Australia involving the fruit salad bush (*Pterocaulon sphacelatum*):

Local name, "Horehound." [fruit salad bush]
Aboriginal name, *Yunga-yunga*. The decoction of the leaves of this perennial plant is used by

bushmen for colds. Others flavour their tea by putting a leaf or two in it (Koch 1898: 113).

In spite of the common name of 'horehound', which was taken from a European herb (*Marrubium vulgare*), it is likely that settlers derived their use of this desert plant from Aboriginal people. In Central Australia the fruit salad bush remains a highly favoured medicinal plant used by Aboriginal people in a variety of ways to treat colds, such as inserting the leaves through a hole bored through the nasal septum, wrapped as a pillow, or mixed with animal oil to make massage ointment (Latz 1995: 253-4).

In the tropics, pharmacologist Leonard J. Webb claimed that some Aboriginal 'remedies entered the "medicine chest" of bushmen, drovers, and timber cutters, whilst others became popular with Chinese herbalists' (Webb 1948: 10). A medicinal plant that Europeans reputedly adopted from Aboriginal people in northern Queensland is the sandpaper fig (*Ficus coronata*), with the milky juice from young shoots applied externally for healing wounds (Roth 1903: 39). Early Queensland settlers dried the leaves of sacred basil (*Ocimum tenuiflorum*), which is also found in South East Asia, to make a bush tea, possibly following the Aboriginal practice of drinking a brew made from the plant to treat colds (Lassak & McCarthy 1983: 89-90; Low 1989: 178; Smith & Smith 1999: 9-10). In eastern Queensland, both Aboriginal people and European bushmen who suffered from headaches and colds inhaled crushed leaves of headache vine (*Clematis glycinoides*), which are highly aromatic (Lassak & McCarthy 1983: 55-6).

Pharmacological research

Since the late nineteenth century, chemists and pharmacologists have investigated the medical potential of Indigenous Australian plants. One of the plants that attracted the attention of researchers in the 1880s was the poison corkwood tree (*Duboisia myoporoides*) (Image 4), which inland Aboriginal groups used as a narcotic and a poison (Clarke 2007: 105, 124).



Image 4 - Poison corkwood, the leaves of which were an Aboriginal narcotic and game-poison. The species was intensively studied by pharmacologists from the late 19th century. Photo: P.A. Clarke, Adelaide Botanic Gardens, 2006.

The pharmacological analysis of this species led to the discovery of nicotine alkaloids that became widely used as a mydriatic to control pupil dilation in ophthalmic surgery (Bancroft 1886: 13; Foley 2006). In 1944 the Commonwealth Scientific and Industrial Research Organisation established the

Australian Phytochemical Survey, primarily based in Queensland due to that state's wide variety of ecological zones and associated plant diversity (Webb 1948, 1960, 1977). The project's objectives were enhanced by existing records of Aboriginal plant use and the presence of knowledgeable Indigenous healers.

During the 1980s the Bush Medicine Project, funded through the Northern Territory Department of Health and Community Services, conducted a survey of Indigenous herbal remedies (Barr et al 1988; Smith 1991). The research team was chiefly comprised of pharmacologists and botanists. The Bush Medicine Project undertook extensive fieldwork with Aboriginal communities, although their published listing of medicinal plant species was restricted to those the research team considered to have a chemical basis to their efficacy. Conventional medicine demands quantitative evaluation of the active constituents in the use of plants to develop the standards of preparation and dose.

European Impact upon Indigenous Healing Traditions

The Aboriginal community used their traditional remedies, with mixed success, to combat virulent diseases, like measles, tetanus, chicken pox, mumps, smallpox, syphilis, gonorrhoea and influenza, which Europeans had brought into Australia (Clarke 1987: 9; 2003a: 194; Denoon & Mein-Smith 2000: 75-6; Lassak & McCarthy 1983: 14; MacPherson 1925: 593-4; Plomley 1987: 110-11, 162, 678 & Appendix 2; Robinson 1839 [Plomley, 1987: 616-7, 785-7]). The impact of introduced pathogens upon the Aboriginal population was devastating. Rather than directly blaming the colonists, Aboriginal people

initially interpreted the sharp decline of their health within their own worldview, believing the causes to be malevolent winds and sorcerers (Clarke 2003a: chapter 12).

The availability of new technology had a positive impact upon some Aboriginal healing practices. From the eighteenth century, Asian seafarers and European settlers brought to Australia metal pots that enabled Aboriginal people to increase the effectiveness of some remedies by boiling the source plants. Before metal containers were available in the Kimberley, Aboriginal healers used bark containers, or 'bush billies', to hold water when making medicine (Rose 1987: 7). Water contained in clay pits or small rock pools was warmed by the immersion of heated stones (Mathews 1901). After European settlement, glass bottles with leak proof tops provided a means to store medicines (Clarke 2007a: 100). From my field experience, Aboriginal healing techniques, such as the use of steam baths, have declined in favour of 'teas' and washes.

Colonisation brought Aboriginal people into the broader health system dominated by Western medicine. In Aboriginal communities across northern and Central Australia, people still actively seek their own traditional treatment, even when being treated by Western-style practitioners. They do this without any apparent contradiction. In 1973 a psychiatrist with the Northern Territory Medical Service, H.B. (Don) Eastwell, remarked that 'Forty years of Western medicine, twenty of them intensive, have not resulted in the disappearance of the traditional Aboriginal medical practitioner' (Eastwell 1973b: 1011). More recently, psychiatrist John Cawte described his

challenge as a Western medical practitioner in remote Aboriginal communities:

During a lifetime of medical care of Aborigines, I developed the view that sound medicine is not enough. If suffering individuals are to be reached, the doctor should try to grasp the patient's language, religion and basic beliefs. Unless the cultural gulf is narrowed in this way, there will be limited compliance with care (Cawte 1996: 9).

Rather than Europeanising Indigenous health traditions, medical authorities have argued that responsibilities for community health in these remote areas must be shared by both Aboriginal and European practitioners (Devanesen 1985, 2000; Eastwell 1973a, 1978; Maddock & Cawte 1970; Maher 1999; Reid 1978a, 1978b, 1983; Rose 1988; Soong 1983; Tonkinson 1982; Tynan 1979). A widely held view by some medical authorities and Indigenous community members is that the use of 'bush medicines', particularly those derived from local plants, should remain a component of a contemporary health system.

Discussion

In Aboriginal Australia the traditions for maintaining health were based upon cultural beliefs of the causes of sickness and the powers of their remedies. The causes of serious illness were generally attributed to supernatural sources. While Western European scholars see the charms, medicines, tonics, narcotics and stimulants Aboriginal people use as falling into distinct categories of use, for the users the distinctions are either blurred or non-existent. Many of their everyday remedies were derived from plants. The primary role

of Indigenous healers is to mediate religious forces in order to restore health in seriously ill patients. As a 'doctor', their techniques did not always utilise substances that Europeans considered to be medicines.

On the frontier of British colonisation the level of hardship that Europeans experienced would have determined when they utilised bush medicines, some of them based upon Aboriginal remedies. Colonists used bush medicines that were easily collected and required little processing. They were more likely to use a wild plant as a medicine if it had some physical, albeit superficial, resemblance to European species. Perceived similarities were not restricted to physical appearance alone, but also involved characteristics like taste and smell. Aromatic wild plants were particularly attractive as medicines to settlers, who were already primed by their Northern Hemisphere experiences.

Aboriginal healing practices were placed under severe pressure through European colonisation. While the Aboriginal pharmacopeia coped with the treatment of general ailments experienced by a dispersed population of hunter-gatherers, it was less successful when dealing with the introduction of European exotic diseases. The availability of new technologies since European colonisation has brought about a significant modification of Aboriginal healing practices. A level of co-existence has developed between Indigenous and Western health systems in remote Aboriginal communities. Here, the success in maintaining health will continue to be influenced by Indigenous views on the causes of ill health and the ways to cure it.

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