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Joseph Banks and the continuing influence of European colonisation on Australian herbal practice

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The practice of Western herbal medicine in Australia is characterised by a dependence on botanically exotic species rather than those which are native and indigenous to this country. Medicinal herbs were among the plants chosen by botanist Sir Joseph Banks to be transported from England for cultivation in the new Australian colony in 1788. While there are some records of the use of local medicinal plants by early settlers, evidence of this information originating from Indigenous Australians is absent and today very few native or indigenous plants are found in the materia medica used by Western herbalists in Australia. It is argued that the plants herbalists use reflect a connection with Western culture rather than a connection with the Australian landscape or indigenous culture.

Practitioners of Western herbal medicine in Australia rely on plant species which are almost exclusively alien or exotic. The materia medica requirements for courses approved by the National Herbalists Association of Australia (Hammer 2009) (i.e. the individual medicinal plants herbalists study during their training) reveal very few plants which are native or indigenous to Australia. While the herbs studied are not exclusively of European origin and include many from North America, India and China, plants native and indigenous to Australia are conspicuous by their absence. This is despite the efforts of a small number of enthusiastic proponents (Cowper 1990) for native and indigenous medicinal plants to be incorporated into herbalists' materia medica.

In this article I trace the introduction into Australia of medicinal plants native to Europe and I discuss the role of Sir Joseph Banks in this process. While there is some documentation of early exploration into the medicinal uses of local plants, I suggest that there is little evidence of a systematic transfer of knowledge between European settlers and Indigenous Australians. As a result practitioners of Western herbal medicine in Australia rarely employ native or indigenous Australian plants in their clinical practice, although some wildcrafting of European medicinal 'weeds' does occur.

Bringing the plants

After a sea voyage of eight months, the arrival of the eleven ships of the First Fleet at Sydney Cove on 26 January 1788 with less than 1400 people on board marks the beginning of European settlement in Australia (Gillen 1989). The initial population were convicts and their jailers; they were not free settlers and they had not chosen to emigrate. In establishing the colony the British Government was taking a risk not only in attempting to found a settlement so far away from England but also by populating it with convicts, very few of whom had agricultural experience or skills (Frost 1993). How was the new colony to survive? How were these settlers to

feed, clothe and house themselves and care for their daily needs, including their healthcare?

Botanist Sir Joseph Banks (after whom both Bankstown in Sydney and the genus *Banksia* are named) was given the task of selecting appropriate seeds and cuttings to accompany the first settlers. Malouf (1998) describes this task as 'the equipping of an ark load of plants ... the makings of a very practical little Garden of Eden'. The lists of species brought to Australia with the First Fleet includes a number of medicinal plants such as sage, chamomile, hyssop, fennel, garlic, thyme and borage (Frost 1993). Herbal medicines were widely used in Britain at this time and Banks himself was not ignorant of herbal medicine; 'herb women' had taught him botany when he was a schoolboy at Eton and he paid them sixpence for every herb specimen they brought him (Arber 1938).

Banks not only chose the initial plants for the new colony but he also determined which would be sent on supply ships from England to Australia in the ensuing years. The survival of cuttings during these long voyages was of considerable concern. Banks' experience as a botanist on board ships (he had accompanied Cook to the South Pacific 1768-1771 and he also travelled to Newfoundland, Labrador and Iceland) allowed him to provide detailed advice for the care of plants at sea. Frost's (1993) collection of Banks' correspondence includes directions from Banks to John Smith, the gardener on board the *Guardian*, an ill-fated supply ship sent from London to Sydney in 1789. These letters provide a fascinating account of the difficulties of keeping the plants alive during long sea voyages and the strenuous efforts taken to ensure their survival.

The correspondence details the orders given by Banks to the ship's captain regarding the resources and assistance to be made available to Smith. The plants would need adequate rainwater and protection from the elements, and they should also be protected from dogs

and other livestock. Goats and monkeys were prohibited from being on board due to the danger they posed to plants (Banks in Frost 1993). Detailed instructions were given to Smith himself in regard to the requirements of the plants at sea. Smith was expected to be ever vigilant, sleeping in the same area as the plants in case for example windows had to be closed during the night, and attending to the plants on an hourly basis if need be. Protection of the plants from salt spray was a priority. Banks wrote to Smith: 'The chief enemy to the health of plants in sea voyages is the salt spray which seldom fails to rise in the air whenever the wind is high enough to turn over the tops of the waves into what seamen call white caps and to fall in the form of dew on every thing it meets with. When this has wetted the leaves of a plant the salt it contains crystallises upon them as they dry and unless it is speedily wash'd off with fresh water the plant infallibly perishes' (Banks in Frost 1993).

Banks told Smith the way to determine whether plants have been subjected to salt spray was 'by their tasting salt when the tongue is applied to them' (Banks in Frost 1993). Banks expected progress reports on the condition of the plants during their voyage. Smith's report to Banks on the state of the plants on the *Guardian* when it reached Cape Town on 7 December 1789 reveals that sage, hyssop, marjoram, pennyroyal and tansy were dead, chamomile was decidedly unhealthy, but horseradish, balm and mint were all in good health (Smith in Frost 1993).

Herbal use in the early days of the colony

If the plants survived the long sea voyage the next challenge was their cultivation in Australia. The medicinal herbs on the First Fleet were used to establish a herb garden to supply the newly established Sydney General Hospital. This garden was completed by 1 March 1788 (NHAA 1990), a scant six weeks after the ships had landed. Over the ensuing decades some medicinal plants were cultivated in the colony and others were imported. An unsourced document within the National Herbalists Association of Australia (NHAA) archives lists the herbs and spices which were cultivated or imported in the first twenty years of settlement. They included cinnamon, cloves, lavender and sage which were listed specifically 'for use in the General Hospital' as well as chamomile, garlic, hyssop, marigold and thyme, which were not marked for hospital use (*Herbs for use in General Hospital 1788-1810*. Archives NHAA).

Reference to the herbal requirements of Sydney General Hospital indicates that herbal medicine was an accepted part of health care at that time. This is consistent with Martyr's (2002) view that in the late 18th century, medicine in Britain was pluralist with no system dominant and with a range of practitioners offering diverse approaches to healthcare.

In the Britain left behind by these early Australian settlers, herbal medicine had been a tool for self care and families and communities utilised herbs found in

fields and hedgerows (Oakley 1992). However such self sufficiency was not easily translated to Australia. The Australian flora was very different from that of Europe, with little overlap of species or genus, and medicinal plants familiar to the early settlers were available only via cultivation or importation, they were not found in the Australian bush.

Utilisation of indigenous knowledge of plants

During the early years of European settlement, some botanical exploration of the medicinal uses of the Australian flora took place. Among the first British medical practitioners there were a few enthusiastic naturalists including Dennis Consideen, who experimented with native flora for medicinal purposes during his stay between 1788-1794 (MacPhersson 1927). The native plants for which Consideen documented medicinal actions include myrtle (possibly *Eugenia australis*) and yellow gum (possibly *Xanthorrhoea hastilis*) for dysentery, and native sarsaparilla (*Smilax glycyphylla*) as an antiscorbutic. MacPhersson (1927) further suggests that native sarsaparilla was not only therapeutic but it was considered more pleasant than Jamaican or Central American sarsaparilla and he states that prior to 1927 it had been a common article of trade among Sydney herbalists.

While the medical practices of aboriginal communities in Australia involve the use of plants (Australia 1988, Covacevich 1988, Lassak 1992), there is no documentation of European utilisation of this knowledge in early botanical texts. For example Consideen claimed to be the first to discover the plants he discusses; his methods of discovery are unknown and if these did involve indigenous informants, this is not acknowledged (MacPhersson 1927).

The arrival of free settlers from the early 1790s seems to have led to some level of self prescription and experimentation with local plants as individuals and families established themselves in increasingly remote locations (Cribb 1983, Maiden 1889/1975, Webb 1948). As mentioned above with regard to Consideen, indigenous informants, if they existed, are once again not acknowledged. Maiden's classic text *Useful Native Plants of Australia* (1889/1975) indicates a continued absence of dialogue and cultural interchange between Europeans and Indigenous Australians. This work which lists 123 substances reputed medicinal, reflects the spirit of the times in stating: 'In fairness to ourselves we must confess ourselves very little indebted to the Australian aboriginal for information as to the medical (or in fact any other) properties of our plants' (Maiden 1889/1975).

Lassak (1992) echoes this view stating that there is little evidence that early Australian settlers learned and adopted aboriginal medicinal knowledge for their own use. Apart from the oils of tea tree (*Melaleuca alternifolia*) and eucalyptus (*Eucalyptus globulus*), indigenous plants have not been widely popularised and commercialised as therapeutic agents.

Consequences for Australian herbalists

The absence of indigenous and native plants on the dispensary shelves of contemporary Australian practitioners means that they are unusual among the international fraternity of herbalists in that they do not use local medicinal plants. An examination of the materia medica used by our closest professional 'cousins', herbalists from North America and Britain, reveals that these practitioners use local species as well as those which are imported and introduced. Wildcrafting of medicinal plants in Australia does occur, but it is limited to areas which have, at some time, been settled and where medicinals have established themselves after having been introduced from other parts of the world. Many of these introduced plants have become weeds, including St John's wort (*Hypericum perforatum*), plantain (*Plantago lanceolata*), white horehound (*Marrubium vulgare*), mullein (*Verbascum thapsus*), chickweed (*Stellaria media*), nettle (*Urtica dioica*), shepherd's purse (*Capsella bursa-pastoris*), dandelion (*Taraxacum officinalis*) and yellow dock (*Rumex crispus*) (Lamp 1983). These medicinal plants are commonly found in uncultivated and waste areas around towns, including those which have been abandoned, for example old goldmining towns (Baker 1989). The presence of these exotics, at times after buildings have been removed or destroyed, inscribes the history of European settlement on the landscape. However given that Australia has only ever been sparsely settled, opportunities to utilise local plants remain relatively rare for Australian herbalists.

No botany or traditional practice is immune to change and all systems of herbal medicine modify their materia medica over time as plants fall in and out of favour, become more easy or difficult to access, or are replaced by introduced species. In recent decades plants (most often in the form of herbal products) introduced into the materia medica of Western herbalists in Australia most commonly include species from China (*Rehmannia glutinosa*, *Schisandra chinensis*), India (*Withania somnifera*, *Crataeva nurvala*) or South America (*Tabebuia avellanedae*, *Uncaria tormentosa*), rather than plants native or indigenous to Australia.

While the use of imported and introduced plants has served Australian herbalists well in the two centuries since European settlement, this is becoming increasingly problematic. In particular the environmental and economic challenges facing us today, especially the need to dramatically reduce our carbon footprint, brings into question herbalists' continued heavy reliance on imported medicinal plants. Such concerns may provide increased impetus for the cultivation of exotic medicinal species within Australia, as well as a reassessment of the medicinal uses of local flora. If so an examination once again of the (albeit scarce) references to local plants in the diaries and accounts of early settlers may offer one avenue for research.

In summary European medicinal plants were brought to Australia by the First Fleet and have been used here since that time. There is scant evidence of transfer of knowledge of medicinal plants between indigenous groups and the European settlers, and there is little utilisation of native Australian medicinal plants by contemporary Australian herbalists. While the materia medica of Australian herbalists is not static, the introduction of 'new' medicinal plant species reflects an interest in a global herbal medicine rather than an increased interest in Australian native plants. Australian herbalists continue to use primarily European medicinal plants, plants of their culture, rather than native and indigenous Australian plants, plants of this land.

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