

Hidden leaves: Australian Botanical, Taxonomic and Economic Botany Resources in the British Library's India Office Records and Library

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Abstract

This paper examines the British Library's India Office Records (the archives of the East India Company and the India Office) and other resources relating to Australia and India in the nineteenth and early twentieth centuries. The paper looks at the little-researched connections between Australia and India in relation to the history of botany and botanic gardens; economic botany (including trade); plant taxonomy; horticulture; and agriculture and forestry. Resources for the study of botany and economic botany can be found outside botanical institutions. Collections that are identified with a particular discipline or geographic region, such as the India Office Records, often include material reflecting a much broader coverage of subjects and areas, than usually supposed.

The India Office Records and Library is not an obvious source for the study of Australian history and botany. In 1983 the British Library became the custodian of the India Office Records (the official records and archives of the East India Company and the India Office) and its Library. The records relate to India, Pakistan and Bangladesh (until 1947), to Burma (until 1936) and to British settlements in Southeast Asia (until 1867). Material relating to Australia's contacts with British India is dispersed throughout the collection.

Moir's (1988) *A general guide to the India Office Records* provides an introduction to the Records, and notes there are "occasional [Australian] connections with East India Company/India Office ... chiefly in relation to trade, convicts and emigration" (Moir, 1988, 282). Axelson and Nair (2010) in *Science and the changing environment in India, 1780-1920: a guide to sources in the India Office Records* contains occasional references to

Australia. The trade in Australian horses, known as 'Whalers', to India has been the subject of research (Yarwood, 1989), but the India Office Records have not been extensively used in relation to Australian studies.

The relationship between Australia and India in the nineteenth century has only recently started to be explored in depth. Broadbent's *India, China, Australia: trade and society, 1788-1850* highlights the contacts with, and dependency on, Calcutta (using Australian sources) in the early years of European settlement of Australia. (Broadbent, 2003, 87) The India Office Records and other material in the British Library could shed further light on the Calcutta-Sydney relationship in particular, and on India and Australia in general.

Further research into these Australian-Indian contacts could provide evidence of the importance of these intra-colonial connections, particularly trade; the dependence of early Australian settlements on India; the (ir)relevance of Britain in these intra-colonial contacts; and the concept of British empire loyalties (rather than loyalty to Britain) such as promoted through international and colonial exhibitions; the extent to which the Australian colonial palate was augmented by Indian spices, chutneys and pickles; the extent to which Australian flora has impacted on India, and Indian flora on Australia.

From 1800 there were growing family, business, military, missionary and judicial connections between Calcutta and Sydney (Broadbent, 2003, 75), and exotic, to European eyes, Australian plants are likely to have made unusual gifts to family and business contacts in Calcutta. In the early years of the nineteenth century gifts of Australian plants were made to the Calcutta Botanic Garden. Mrs Blaxland, the wife of the NSW landowner and merchant John Blaxland, and daughter of the Calcutta merchant, Jean Louis de Marquett, donated a swamp lily (probably *Ottelia ovalifolia*) to the Calcutta Botanic Garden in 1812. (Roxburgh & Carey, 1814, 23). Other Australian plants presented to the Calcutta Garden included *Metrosideros linearis*, Colonel Paterson, 1800; *Glycine bimaculata*, Mr Bowie, 1801; *Casuarina distyla*, Dr Wallich, 1811; *Casuarina torusola*, Captain Murray, 1811; *Zamia sp.*, Dr.

C. Campbell, 1801. (Roxburgh & Cary, 1814, 36, 55, 66 and 71)

Thirty years later, the number of plants introduced to the Calcutta Garden had increased considerably. Voigt's (1845) *Hortus Suburbanus Calcuttensis* contains c.750 pages compared to Roxburgh and Carey's (1814) catalogue of c.100 pages, and includes Australian plants such as *Araucaria excelsa* [= *Araucaria heterophylla*] [Norfolk Island Pine]; *Araucaria Cunninghamii* [Hoop Pine; Moreton Bay Pine]; *Cupressus australis*; *Gyrocarpus americanus*; *Grevillea robusta*; *Salicornia indica*; *Rhagodia linifolia*; *Xyris pauciflora* and *Xyris denticulata*. (Voigt, 1845, pp. 306, 311, 322, 557, 558 and 731). Voigt makes no mention of *Eucalyptus* species, but by the 1870s there was a trade in *Eucalyptus* seeds from Australia. (House of Commons papers, 1871, 291) and by the early twentieth century *Eucalyptus* had become so established in India that Brandis in his work *Indian trees* cited 17 *Eucalyptus* species. (Brandis, 1906, 326-328) He also cites *Grevillea robusta* (Brandis, 1906, 544) that had become established as a shade tree in tea and coffee growing areas of India. A report in 1911 listed 34 species of *Eucalyptus* suitable for India, noting "there are Eucalypts which are suited to every kind of climate from the ocean to the snow lines of the Himalayas. (Booth-Tucker, 1911, 2) *Casuarina equisetifolia* became an important fuel wood in the Madras Presidency. (Commonwealth Forestry Bureau, 1928, 260)

Eucalyptus moluccana, Roxb. was first named and described by William Roxburgh in *Flora Indica* (Roxburgh, 1832, 498) and was "apparently described from a cultivated tree in the Calcutta Garden, ... said to be a native of the Molucca Islands ... the name wrongly attributed as the species does not occur naturally in Indonesia." (Boland, 2006, 460)

Throughout the nineteenth and early twentieth centuries an ever-more complex network of exchange of plants, seeds and information developed between Australia and India via botanic gardens, forest and agricultural departments, horticultural and agricultural societies, acclimatisation societies and commercial nurseries. The Calcutta Botanic Garden sent seeds to

botanic gardens and private individuals throughout Australia (Royal Botanic Garden, Calcutta, 1890-1891, appendix iv) and received seeds from Australia. (Royal Botanic Garden, Calcutta, 1890-1891, appendix iii) Herbarium specimens were sent by von Mueller from Melbourne University in 1892. (Royal Botanic Garden, Calcutta, 1892-1893, appendix v)

Acclimatisation societies promoted "the introduction, acclimatisation, and domestication of all innoxious animals, birds, fishes, insects, and vegetables, whether useful or ornamental..." (Acclimatisation Society of Victoria, 1864, 20) The Acclimatisation Society of Victoria was founded in 1861; the South Australian and the Queensland societies in 1862. Societies were also formed in the 1860s in the Victorian towns of Ballarat, Beechworth and Portland. (Lever, 1992)

Ferdinand von Mueller's work *Select extra-tropical plants readily eligible for industrial culture or naturalisation* went through many editions, including an Indian edition published in 1880. (Von Mueller, 1880) Von Mueller had contemplated publishing a companion volume on tropical plants, to encourage their growth in Australia, (Von Mueller, 1880, vi) but this was never produced.

Eucalyptus seeds and other Australian seeds "could be exchanged for Himalayan seeds, particularly deodar and other conifers, from Dr F. Muller, Government botanist, Melbourne; or from Melbourne and Sydney seedsmen." (House of Commons, 1871, 291)

International and colonial exhibitions were seen as a major means of promoting colonial raw materials, produce and manufactures and securing new trade. (Hoffenberg, 2004, 4) Commenting on the Indian presence at the Melbourne International Exhibition of 1880-1881 the report to the Indian Government noted that "in addition to tea, jute and rice trades, there appears to be a growing demand in Australia for Indian coffee, spices, oils and cotton goods. Australia on her side can offer copper, horses, hops, wool, fruit, dairy produce and flour, and possibly ghí [ghee]" (Ingliss, 1882, 2). "There would seem to be an opening for a large trade in sleepers for railways,

piles for jetties and harbour works". (Ingliss, 1882, 23) ... "Fresh and dried fruit might form another article of export to India." (Ingliss, 1882, 24) ... "Tasmanian hops are already famous, being quoted at prices as high as the best Kentish." (Ingliss, 1882, 25) ... "The hop-growers of Victoria and Tasmania were unaware of the establishment of large breweries along the Himalayan ranges for the supply of beer to British troops and residents in India, and that Britain and Germany are now competing for the supply of hops which there seems reason to believe can be sent of better quality from the colonies." (Ingliss, 1882, 55)

The Calcutta Tea Syndicate promoted Indian tea, so that Australian imports increased from 86,000 lbs in 1879-80 to nearly 808,000 lbs in 1880-81. (Ingliss, 1882, 53) and it was predicted that in three or four years it could increase to five million pounds a year ... particularly as "the Australian colonies ... take about twenty million pounds of tea from China, and of the poorest kind. ... Class for class, Indian teas are greatly superior to all but the really fine classes of China tea, and they are, moreover, entirely free from all suspicion of adulteration." (Ingliss, 1882, 53) Imperial loyalties were a reason for the shift from China to Indian teas, but the growth of the dairy industry and the availability of fresh milk in Australia, together with the end of transportation meant an end to a demand for cheap Chinese green teas. (Diamond, 1999, 28)

International exhibitions were a major showcase for Australian and Indian products and raw materials, and played a prominent role in promoting trade. Exhibitions included the Sydney International (1879); the Melbourne International (1880-81); the Calcutta International (1883-84); the Melbourne Centennial (1888) and the Empire of India (1895) exhibitions. (Hoffenberg, 2001, 279-280)

The Calcutta International Exhibition, 1883-84, had numerous exhibitors from Australia. In his opening address the Viceroy of India stated "I believe there is a great future before the trade of India and Australia." (Calcutta International Exhibition, 1885, 15) At this exhibition New South Wales exhibited more than 100 species of

timbers; gums and resins; wheat flour; ghee; wines including from companies such as Lindeman and Wyndham. From South Australia came olive oil; dried fruits; pickles and jams; timber; and wines (from Seppelt, Penfold and Thomas Hardy). From Victoria - wines; more than 60 species of timber; medicines (particularly Eucalyptus based); cheese "Victorian Stilton, made with vegetable rennet to suit the native Indian market." (Calcutta International Exhibition, 1885, 180) Hops grown at Coranderk Aboriginal station (near Healesville, Victoria) were exhibited. (International Exhibition, 1885, 185)

Horticulturalists, gardeners and commercial nurseries, played a major role in distributing seeds and plants between Australia and India. Firminger in *A Manual of Gardening for Bengal and Upper India* mentions that *Grevillea robusta* had become established in gardens around Calcutta and that a specimen of *Grevillea buxifolia* was growing in the Calcutta Botanic Garden. (Firminger, 1869, 440) Sixty years later, in the 7th edition of Firminger, *Grevillea robusta* is "extensively planted in southern India as a shade tree for coffee." (Firminger & Burns, 1930, 382)

Firminger and Burns (1930) also note that several *Araucaria* species including the Norfolk Island Pine and the Hoop Pine are established in India and that "large numbers of young plants are imported from Australia." (Firminger & Burns, 1930, 238) Various Australian acacias are "found in south Indian hill stations." (Firminger & Burns, 1930, 585) Other Australian plants from cycads (Firminger & Burns, 1930, 281) to stag-horn ferns (Firminger & Burns, 1930, 264) were familiar to Indian horticulture.

Australian newspapers are a rich source of notices, news reports and advertisements about plants, including those imported from India. A notice under the heading "Ornamental plants" in the *Sydney Morning Herald* of 26 April 1851 states "that John MacMahon can supply plants growing in pots of the undermentioned rare and beautiful varieties, almost all being of very recent introduction" (SMH, 1851, p. 8)... the list included Indian plants such as Pride of India (*Lagerstroemia speciosa*) and the Himalayan or Indian deodar (*Cedrus deodara*).

Queensland in particular turned to India for ornamental shrubs and trees, and the Queensland Acclimatisation Society introduced a range of Indian flowering trees and shrubs. (Beautiful trees and shrubs, *The Brisbane Courier*, 28 March 1924, 4) A report on the meeting of the Queensland Acclimatisation Society in February 1887 mentioned a wardian case of mango grafts and another of cycads were received from India. (Queensland Acclimatisation Society, *The Queenslander*, 3 February, 1877, 18-19). The Queensland climate was ideal for the cultivation of tropical fruit and India was seen as a source of tropical fruit stock, such as mangoes, to develop new industries in Queensland. (*The Brisbane Courier*, 1 April, 1855, 5) Better flavoured varieties of mango were imported from India - Mango *dodol* from Calcutta Botanic Garden in 1858; 'Strawberry' mango and 'Alphonse' from Bombay in 1861. Varieties were also imported from Java. (The mango of Queensland, *The Brisbane Courier*, 12 March 1870, 7) The main cultivar now grown in Queensland is the 'Kensington', believed to be a spontaneous hybrid between Indian and South East Asian cultivars. (Johnson, 2000, 87)

In its early years, the Swan River settlement imported a large amount of produce from Calcutta. The shipping inventory of the *Strathisla* from Calcutta, is typical: "Forty cases pearl sago, 8 bags black pepper, 16 ditto white, ... 25 bags nutmegs, 1 box mace and nutmegs, 2,160 bundles ratans, 793 boxes Manilla segars, 20 boxes cassia, 2 boxes joss-stick, 1 box arrowroot, ... 33 cases castor oil, 25 bags almonds, 100 bags saltpetre, 800 bags Patna rice, ... 3 boxes curry powder, ... 200 bags ginger, 8 ditto senna, 1,521 bags and 40 hogsheads. sugar, 1 chest tea..." (*The Perth Gazette and Western Australian Journal*, 8 April 1837, 4) The *Strathisla* regularly plied the India-Australia route. In 1839 it discharged a cargo from Calcutta in Sydney, including "93 bags of sago, 7 bags white pepper, 28 bags black pepper, 2,106 bags sugar, 245 bags coffee, 6 cases China preserved fruits, 3 x 10 catty [1 kati= c. 600g] boxes Pekoe tea, 3 x 10 catty boxes gunpowder tea, ... 12 boxes Indian chutney, 7 boxes India preserved fruits and pickles, 200 bags Patna rice." (*The Sydney Monitor and Commercial Advertiser*, 15 May 1839, 2). What is interesting from these

shipping records is how the early colonial diet was enlivened by curry powders, spices, chutneys, pickles and coffee as well as tea.

Although the Royal Botanic Gardens at Kew played an important role in disseminating botanical information and plant specimens, (Brockway, 1979, 7) its role as the centre of a British botanical empire, regulating the flow of botanical information, plants and seeds between colonial satellites needs to be reviewed. (Endersby, 2000, 326). The direct connections between India and Australian colonies and states, not just in the field of economic botany, but in all aspects, has been little investigated.

The British Library's India Office Records and Library, holds an important, if little-known, resource on Australia's interaction with India. This paper has highlighted some of those botanical and economic botany contacts. Factors such as empire loyalty and the promotion of products through international exhibitions in India and Australia, changed Australian tastes. Indian tea replaced Chinese tea as the Australian beverage of choice in the 1880s. The colonial Australian palate was enriched by Indian spices, pickles and chutneys.

This paper has just given a taste of the material held in the India Office Records and Library, that combined with resources in Australia – not least newspapers – that shows the connections between India and Australia in botany, forestry, agriculture, horticulture and trade were particularly strong in the nineteenth century, and that further research could further illustrate that the early European settlement of Australia was strongly connected, influenced and dependent upon connections with India.

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