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The botanical legacy of 1802: South Australian plants collected by Robert Brown and Peter Good on Matthew Flinders' *Investigator* and by the French scientists on Baudin's *Géographe* and *Naturaliste*

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Abstract

First collections of botanical material from South Australia were by the scientists on board the British and French vessels involved in mapping the South Australian coastline in 1802. A background to the collecting of plants and seeds and the illustrating of these plants is given, collecting localities are identified and the scientific outcomes of both voyages are discussed. A comprehensive list of plants collected in South Australia by the British and based on still extant herbarium collections is presented for the first time. A list of plants collected by the French is less comprehensive but their time collecting in South Australia was much more limited and predominantly confined to Kangaroo Island.

The first known plant collections from South Australian shores, for which herbarium specimens and botanical illustrations still exist, were made in 1802 by the scientific party on board Matthew Flinders' ship, the *Investigator*. Some months later, in early 1803, collections were also made by the French naturalists on board the *Géographe*, under the command of Nicolas Baudin. What was collected, where was it collected and where are the specimens now? Some two hundred years after the event it seems quite remarkable that such information about the British specimens has not been available until now and that the French collections are still largely undocumented.

The coming of the bicentenary of the voyage of Matthew Flinders prompted the completion of a number of projects concerning Robert Brown and Ferdinand Bauer. These were the publication of Brown's diary (Vallance et al. 2001), a monumental project which took some 15 years and involved a number of people, the production of a list of all of Ferdinand Bauer's Australian paintings (Mabberley & Moore 1999) and the databasing of the Brown specimens held in the Natural History Museum in London. Peter Good's diary had already been reproduced (Edwards 1981) and, with Matthew Flinders' account of the voyage (Flinders 1814), there are now three personal accounts of the British voyage which may be compared for detail of the South Australian experience.

Important, too, at that time were the production of a work on the part the French played in making Australian plants known in Europe (Jill, Duchess of Hamilton 1999), the availablity of an English translation of Baudin's diary (Cornell 1974) and a marked increase in the knowledge of the French expedition and its outcomes (Horner 1987; Bonnemains 2002).

South Australians had more to celebrate. They marked the chance meeting of the French and British voyages of discovery at Encounter Bay, South Australia, in 1802 by commemorating both expeditions in a myriad of community, organisational and institutional activities coordinated under the umbrella name *Encounter 2002*[1] (W.R. Barker 2002). Particularly important to the development of this paper was an exhibition *The Botanical Legacy of 1802* at the State Herbarium of South Australia, which was the only one devoted to the scientific aspects of the two expeditions (Symon 2002).

Background

By 1800 the outline of the Australian coast was mostly known apart from the southern area between the Nuyts Archipelago, near Ceduna, South Australia, and the east coast; this area was either depicted as a blank or, more commonly, by a fanciful depiction of a coastline which included Tasmania as part of the mainland (Clancy 1995). The southern coastline had been visited in 1627 by the Dutchman, Pieter Nuyts, in his ship the *'t Gulden Seepaert*[2]. Having been carried too far south by

[1] Relevant websites are: the National Library of Australia and partners (2002) documenting these celebrations under *Encounter 2002*; Art Gallery of South Australia (2002) where the exhibition *The Encounter, 1802* on the art resulting from the voyages is archived; and State Library of South Australia (2002) with links to numerous web resources as well as community activities.

[2] "Golden Seahorse" (Klaassen 2006).

the winds of the Southern Ocean after rounding the Cape of Good Hope, Nuyts made land in the neighbourhood of Cape Leeuwin in Western Australia. From here, he sailed along the southern coast for more than 1500 kilometres, this region gaining the name Nuyts Land. He eventually reached the islands of St Francis and St Peter, in what is now known as Nuyts Archipelago. This discovery seems to have been largely ignored by the Dutch in their maps of the time, but the southern coast-line as far as these islands was depicted in a French map of 1663 by Melchissedec Thevenot; the name of Nuyts, his ship, and the date are included on the map (Clancy 1995).

It was not until the visits of Matthew Flinders in H.M.S. *Investigator* and Nicolas Baudin in the *Géographe* with her sister ship *Naturaliste* at the beginning of the 19th century that the rest of the South Australian coast line was to be officially mapped. That mapping resulted in the historical event that all South Australians are familiar with, the encounter of the two parties in Encounter Bay on 8–9 April 1802.

But the exercise of sending the ships to Australia was not just for mapping. As can be seen from the instructions issued to the two captains, the purpose of the voyage was just as much for investigation of the natural products of this unexplored land.

For the British sailing in the *Investigator*:

> During the course of the survey, you are to use the tender under your command as much as possible; moving the *Investigator* onward from one harbour to another as they shall be discovered, in order that the naturalists may have time to range about and collect the produce of the earth, and the painters allowed time to finish as many of their works as they possibly can on the spot where they may have been begun …
>
> *British Admiralty instructions to Matthew Flinders*
> (Flinders 1814)

and for the French in *Géographe* and *Naturaliste*:

> All these countries, more or less new to us, present a vast field for geographical operations and for research of all kinds which can combine to perfect the natural sciences and increase the mass of human knowledge.
>
> In order to carry out the government's design, Citizen Baudin will employ assiduously, and with all the zeal of which he has given proof, the scientists, engineers, artists and means placed at his disposal, as much to determine precisely the geographical position of the principal points along the coasts that he will visit and to chart them exactly, as to study the inhabitants, animals and natural products of the countries in which he will land. With regard to the products, he will give his attention to the collecting of those which appear capable of being preserved and he will apply himself principally to the procuring of the useful animals and plants which, unknown in our climate, could be introduced here.
>
> *Comte de Fleurieu of the Institut National to Citizen Baudin*
> (reproduced in Cornell 1974)

Even the names of their ships reflected the desired outcomes from these voyages.

The scientific complement of the French ships

On board the French ships, Baudin, who had much experience in the collecting of plants, both in the Americas and in the East Indies (see below), had requested eight scientific staff. Instead he was to end up with twenty two – three botanists, five zoologists, two mineralogists, three artists, five gardeners, two astronomers and two geographers. Perhaps fortunately, after taking five and a half months to reach Îsle de France (Mauritius) from Paris, nine of the scientists left the expedition. Amongst those departing were the three official artists (see below) and the botanists Andre Michaux[3] and Jacques Delisse on board the *Naturaliste*. Leschenault de la Tour, the botanist on board the *Géographe* with Baudin, remained. Also remaining were three gardeners (see below), together with Péron the zoologist and Lesueur and Petit, the unofficial artists of the voyage.

Leschenault de la Tour (1773–1826)

Leschenault de la Tour, the surviving botanist, accompanied the Baudin expedition for the whole of its Australian sojourn, only to be left ill in Timor in 1803 on the return journey to France. Leschenault spent some time on the *Naturaliste* and some on the *Géographe,* having initially embarked with Baudin on the *Géographe.* He apparently transferred to the *Naturaliste* on their first visit to Timor, but was back on the *Géographe* with Baudin after their sojourn in Port Jackson. While in Port Jackson in 1802, he spent a day botanising with Robert Brown and Peter Good (Vallance et al. 2001). He was the same age as Robert Brown who was impressed with his powers of observation. Baudin, on the other hand, was less impressed, apparently considering his friend, the gardener, Riedlé, to be a "better Botanist than the Gentleman at the head of this Department" (Vallance et al. 2001, p. 179). With his earlier experiences in plant collection in the Americas, Baudin would almost certainly have been more comfortable with the gardener's approach to collecting than that of the trained scientist in Leschenault.

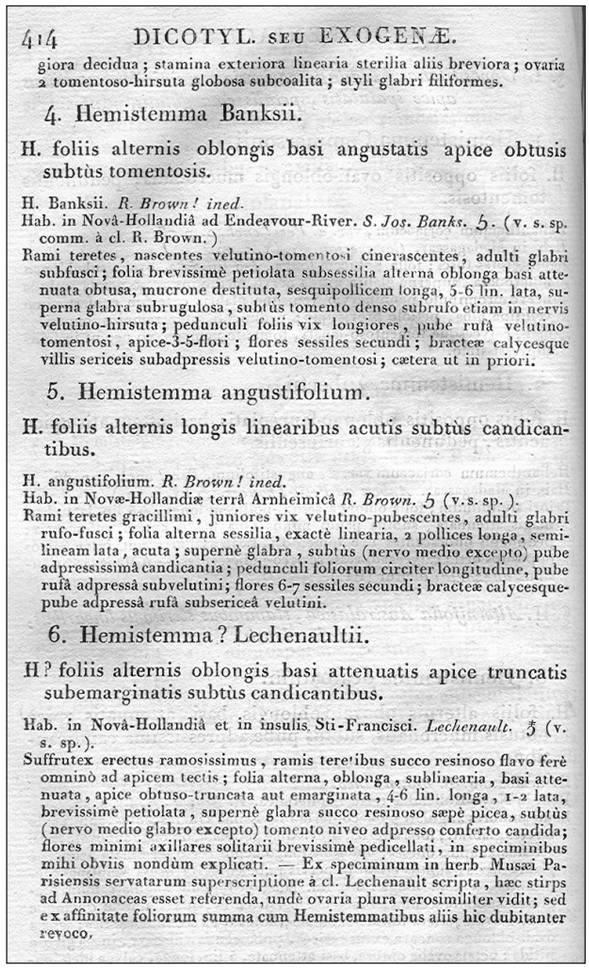
[3] Andre Michaux (1746–1803), republican, was an experienced French botanist and explorer who had been in Iran from 1782–85 and as the Kings Botanist in the fledgling United States of America from 1785–1796. His work in America has long been recognised by American botanists. There is a web site (www.michaux.org/) devoted to his contributions to botany, a book about him (Taylor & Norman 2002) and an international symposium, named in his honour, was held in the Daniel Stowe Botanic Gardens, Belmont, North Carolina in May 2002. He was obviously more than qualified to accompany the Baudin expedition as a botanist and, no doubt recognising the already obvious problems with the expedition, left it at Mauritius to undertake a flora of Madagascar. According to Baudin (see Brown 2000, p. 90), Michaux left the expedition because he was "unwilling to surrender to the government the collections he would have made on the voyage". There would undoubtedly be an element of truth in this, since Michaux had been sending plants back to France, in his own name, for many years. He died in Madagascar in 1803.

Despite Baudin's comments, Leschenault appears to have been an assiduous collector. There were numerous herbarium specimens returned to France, seventy large cases, according to one report (Cooper 1952), although it is difficult to put a number on these since, unlike Brown's, they have never been worked upon as a whole.

On his return to France in 1807, after spending time in Java and America, Leschenault, unlike Brown, did not embark on an account of the collections he had made, although he did produce an account of the vegetation (which included a description of Kangaroo Island vegetation). This account was published in Péron's account of the voyage (Péron & Freycinet 1807–16). Leschenault continued his travels as a naturalist, spending 1816 to 1822 in British India and then 1823 to 1824 in South America.

Robert Brown named the genus *Lechenaultia* after him. The ommission of the 's' has caused confusion ever since, but Brown was not the only one to spell his name in this way. The Swiss botanist de Candolle, who started the first world flora while based in Paris in the 1820s, also ommitted the 's' when naming *Hemistema lechenaultii* DC. (now *Beyeria lechenaultii* (DC.)Baill.: Euphorbiaceae; de Candolle 1817) and *Cassia lechenaultiana* DC. (Caesalpiniaceae; de Candolle 1824).

The type of *Hemistema lechenaultii* DC. is a Leschenault collection from St Peter Island in the Nuyts Archipelago (protologue reproduced in Fig. 1).



414 DICOTYL. seu EXOGENÆ.

giora decidua; stamina exteriora linearia sterilia aliis breviora; ovaria 2 tomentoso-hirsuta globosa subcoalita; styli glabri filiformes.

4. Hemistemma Banksii.

H. foliis alternis oblongis basi angustatis apice obtusis subtùs tomentosis.

H. Banksii. *R. Brown! ined.*
Hab. in Novâ-Hollandiâ ad Endeavour-River. *S. Jos. Banks.* ♄. (v. s. sp. comm. à cl. R. Brown.)
Rami teretes, nascentes velutino-tomentosi cinerascentes, adulti glabri subfusci; folia brevissimè petiolata subsessilia alterna oblonga basi attenuata obtusa, mucrone destituta, sesquipollicem longa, 5-6 lin. lata, superna glabra subrugulosa, subtùs tomento denso subrufo etiam in nervis velutino-hirsuta; pedunculi foliis vix longiores, pube rufâ velutino-tomentosi, apice 3-5-flori; flores sessiles secundi; bracteæ calycesque villis sericeis subadpressis velutino-tomentosi; cætera ut in priori.

5. Hemistemma angustifolium.

H. foliis alternis longis linearibus acutis subtùs candicantibus.

H. angustifolium. *R. Brown! ined.*
Hab. in Novæ-Hollandiæ terrâ Arnheimicâ *R. Brown.* ♄ (v.s. sp.).
Rami teretes gracillimi, juniores vix velutino-pubescentes, adulti glabri rufo-fusci; folia alterna sessilia, exactè linearia, 2 pollices longa, semilineam lata, acuta; supernè glabra, subtùs (nervo medio excepto) pube adpressissimâ candicantia; pedunculi foliorum circiter longitudine, pube rufâ adpressâ subvelutini; flores 6-7 sessiles secundi; bracteæ calycesque pube adpressâ rufâ subsericeâ velutini.

6. Hemistemma? Lechenaultii.

H? foliis alternis oblongis basi attenuatis apice truncatis subemarginatis subtùs candicantibus.

Hab. in Novâ-Hollandiâ et in insulis Sti-Francisci. *Lechenault.* ♄ (v. s. sp.).
Suffrutex erectus ramosissimus, ramis teretibus succo resinoso flavo ferè omninò ad apicem tectis; folia alterna, oblonga, sublinearia, basi attenuata, apice obtuso-truncata aut emarginata, 4-6 lin. longa, 1-2 lata, brevissimè petiolata, supernè glabra succo resinoso sæpè picea, subtùs (nervo medio glabro excepto) tomento niveo adpresso conferto candida; flores minimi axillares solitarii brevissimè pedicellati, in speciminibus mihi obviis nondùm explicati. — Ex speciminum in herb. Musæi Parisiensis servatarum superscriptione à cl. Lechenault scripta, hæc stirps ad Annonaceas esset referenda, undè ovaria plura verosimiliter vidit; sed ex affinitate foliorum summa cum Hemistemmatibus aliis hic dubitanter revoco.

Fig. 1. Protologue (in Latin) for *Hemistemma lechenaultii* DC. (now *Beyeria lechenaultii* (DC.)Baill.) in de Candolle (1817). The plant was collected by Leschenault from St Peters Island in the Nuyts Archipelago rather than St Francis Island as indicated (see Appendix 1). Note the spelling as "Lechenault" in the text.

Baudin as a collector of plants

The scientific credentials of Nicolas Baudin are often overlooked. He was born in 1756 on the island Saint Martin de Ré (the quay of the town now bears his name), off the coast of France near the town of La Rochelle. Having initially worked with the French East India Company, he later joined the French Navy, this time coinciding with the American Revolution. Having been relieved of his command as an *officier bleu*[4] by a group of *officiers rouges* (of the aristocrats), he resigned from the Navy. From 1787 to 1794, following his role in transporting Franz Boos (Gunn & Codd 1981) and his natural history collections from the Cape of Good Hope to Austria for the Emperor's garden at Schönbrunn, Baudin undertook at least three natural history voyages for the Austrian Government (Brown 2000). He made expeditions to the Indian Ocean and the Pacific Ocean collecting plants and animals, primarily for the Schönbrunn Palace gardens; all of these voyages ended in shipwreck and this may explain his later reluctance to land on the Australian coastline in any but already well-documented areas. On the last of these voyages in 1792–93 he again set off for the Indian Ocean in the third ship designated as *Jardinière* and was off the coast of New Holland in May 1793 when consecutive hurricanes forced him to turn back (Brown l.c.). He put into Bombay, visited the Persian Gulf and the Red Sea, before returning to the Cape of Good Hope where he was shipwrecked in Table Bay. The collections on board were somehow relocated to Trinidad and, having now become unpopular with the Austrians, Baudin made his way back to France in 1795. Here he sought the support of scientists at the Muséum d'Histoire Naturelle, Antoine-Laurent Jussieu in particular, to retrieve the abandoned collections in Trinidad for France. The scientists were able to persuade the government to finance Baudin's return to the West Indies and he sailed again from France in 1796. Refused permission by the British authorities to access the collections he had left in Trinidad he spent twelve months making new collections from the Virgin Islands and Puerto Rico in the Caribbean. He returned with these to France in 1798, arriving just in time to have them precede the parade of Italian trophies acquired by Napoleon (Brown l.c., Sanderson 2001).

[4] An officer not of noble birth and, until 1791, having no prospect of higher rank, see Brosse 1983.

Accompanying Baudin on this voyage had been the gardener Anselme Riedlé and the zoologist (or taxidermist) René Mauge, both of whom were on the subsequent voyage to New Holland. Tensions between Baudin and the young scientist Leschenault and, before he departed at Mauritius, the experienced Michaux, may well have arisen because of differing attitudes being brought to the collection of plants.

Where did the French collect plants in South Australia?

Despite the extensive surveying of the southern coastline by the French, in South Australia at least, it is clear from Baudin's account that landfall by the *Géographe* was made at only two localities where it was known to be safe. Kangaroo Island, in the Penneshaw region for three weeks in January 1803, and St Peter Island (confused with St Francis Island in the Péron narrative and on botanical collections) during 7–11 February, 1803 (Cornell 1974) were the only landfalls where collection was possible.

This lack of landings by the French captain contributed to the frustrations of the scientists on board, but may be more understandable in view of the number of shipwrecks Baudin had already been involved with in his earlier exploits.

Where are the specimens now?

The majority of specimens collected remain in the Muséum d'Histoire Naturelle (P)[5]. It would seem that they were initially given into the care of the botanist Labillardière, presumably to continue his best-selling account of the flora of the antipodes (Labillardière 1800, 1804–6). A subsequent account was not forthcoming and it was not until the Swiss botanist, Augustin Pyramus de Candolle, then based in Paris, undertook his world flora (de Candolle 1824–73) that the collections of the Baudin voyage were used as a basis for publication by a botanist. While the major part of the original collections are still mostly to be found in the Muséum d'Histoire Naturelle in Paris, the departure for Geneva by de Candolle also means that many of the specimens are duplicated in the de Candolle herbarium now housed in the herbarium of the Conservatoire et Jardin botaniques de la Ville (G) in Geneva. There seems to have been a mass transfer of Baudin expedition collections to the de Candolle herbarium in 1821. Many collections attributed to Leschenault by de Candolle in the first two volumes of the *Prodromus* (1824, 1825) or in his *Regni vegetabilis systema naturale* of 1817 (see Fig. 1) no longer bear such information. For example the types of specimens in the de Candolle Herbarium, clearly attributed by de Candolle to Leschenault (*Pittosporum phylliraeoide* DC., *Billardiera parviflora* DC. and *B. variifolia* DC., *Comesperma flavum* DC. and *C. nudiusculum* DC.) in the protologue, bear only the annotation "Herb. Mus.Paris 1821", with no mention of Leschenault as collector.

There can be little doubt that many of the New Holland specimens in Geneva attributed to 'Herb. Mus. Paris 1821' are Baudin (or Leschenault) collections – but the history of the botanical collections of the expedition on their arrival in France still needs to be established. The disappearance of Leschenault's name from later volumes of de Candolle's *Prodromus* may have something to do with the dispersal of Paris collections, either by sale or exchange, or it may be that Augustin Pyramus de Candolle was aware of just which specimens could be allocated to Leschenault because of their friendship, but this information was subsequently lost with completion of the project by his son, Alphonse Louis Pierre Pyramus de Candolle.

Other collections from the Baudin expedition were later transferred from the Paris Herbarium to the herbarium of the Institute of Botany in Montpellier (MPU), probably through the auspices of the botanist J. Cambessèdes (Peter A. Schäfer pers. comm., Jan. 2001); the extent and identity of such collections are not known. There was also transfer of some specimes to British botanists, probably by exchange, or by the buying of specimens. A number can be found in the herbaria of the Natural History Museum (BM) and the Royal Botanic Gardens, Kew (K); some of these were acquired by the purchase of private herbaria, such as that of the Frenchman Jacques Étienne Gay whose comprehensive herbarium was purchased for Kew by J.D. Hooker (Huxley 1918). At the beginning of the 1800s specimens did not belong to institutions, but rather to individuals and there was much exchange of such specimens – only rich entrepreneurs could afford to participate and the private herbaria of such people as Joseph Banks, William Hooker and de Candolle eventually formed the basis of the herbaria we know today in the BM, K and G respectively (R.M. Barker 2005).

While the herbarium specimens collected by the Baudin expedition were not obviously studied immediately on their return to France, a decided contrast with the British herbarium specimens, we will see later that a number of the French horticultural collections were the basis for the descriptions of new species from Australia.

What did the French collect in South Australia?

An attempt has been made to document the plants collected from South Australia by the French, but this is an ongoing project. A list can be found as Appendix 1, but it is by no means complete.

The scientific complement on the *Investigator*

On board *Investigator* was the young naturalist Robert Brown, supported by the gardener Peter Good and the miner, John Allen. Also included in the men of science were the natural history artist, Ferdinand Bauer,

[5] Herbarium acronyms or abbreviations are cited in accordance with *Index Herbariorum* (Holmgren & Holmgren 2006).

the landscape artist, William Westall and the astronomer, John Crosley, making a grand total of six scientific staff. Brown, Bauer, Westall and Crosley all had a personal servant, bringing the total complement to ten, although Crosley was to leave the ship at Cape Town since he suffered badly from sea-sickness. Having participated in the whole of the southern traverse and the subsequent circumnavigation of Australia, Peter Good died from dysentery after the arrival of the condemned *Investigator* back in Sydney in June 1803. Brown and Bauer remained in Australia, both extending their collecting and illustrating activities to other parts of the colony, until their return to Britain in 1805, as luck would have it and with some trepidation for the collections, in the patched-up *Investigator*.

On their return, grand plans for a flora incorporating the coloured plates of Bauer came to nothing when Joseph Banks declined to fund such a publication. Brown eventually published the first part of the flora of Australia (Brown 1810b) at his own expense and without illustrations. With time the significance of this work was recognised, but initial sales were so dismal that Brown withdrew his *Prodromus* from sale and the second part of this work was never published. A very full account of Robert Brown's history subsequent to his visit to Australia was published by Mabberley in 1985, under the title *Jupiter Botanicus*, a reference to the esteem with which he was regarded by the botanical and scientific community, much of it because of his work on the Australian flora. As with Brown, Bauer (see below) published, at his own expense, only a very small representative sample of the paintings he had completed (Bauer 1811–16). Disappointed with their sale, he returned to his native Vienna.

Matthew Flinders accompanied his narrative of the voyage with a botanical appendix by Brown (Brown 1814) and 10 black and white line drawings of plants by Bauer.

It is not my intention to provide backgrounds for Brown, Bauer and Good since these are more than adequately covered by several readily available publications e.g. the already mentioned Mabberley (1985) for Robert Brown's life history, Vallance *et al.* (2001) for Robert Brown's diary, Stearn (1960) for an itroduction to Brown's *Prodromus*, Edwards (1981) for Peter Good's diary and a background to him and Norst (1989), Mabberley (1999, 2002), Mabberley & Moore (1999) and Lack & Ibánez (1997) for a comprehensive background to Ferdinand Bauer and his art work.

Robert Brown's plant collections

We know much of the results of the scientific work of the *Investigator* voyage. An estimate of the number of plant collections made by Brown from each Australian state and still represented in the Natural History Museum in London is given in Table 1. From that it can be seen that some 300 collections were made in South Australia while the mapping of the coastline was carried out between 28 January and 18 April 1802.

Table 1. Estimate of Robert Brown's collections from each Australian state. Totals estimated from the Robert Brown specimen database maintained by the Western Australian Herbarium and the Natural History Museum, London.

State	No. of collections
Western Australia	729
South Australia	301
Victoria	88
Tasmania	734
New South Wales	1445
Queensland	869
Northern Territory	622
Total	**4788**

Where were these collections made?

At the time of collection the map of the coastline produced by Flinders in his account of the voyage (Flinders 1814) clearly did not exist and nor were there any place names, with the exception perhaps of the immediately named Memory Cove and Kangaroo Island. Instead Brown annotated his specimens with numbers relating to their collecting locality; these numbers are still to be found on his collections and it is only relatively recently that their exact locations have been established (Stearn 1960; Vallance 1990); more generalised localities were documented by Burbidge (1956). Examples of labels from Brown's British Museum collections from the South coast can be seen on his British Museum collections (e.g. Fig. 3 and 4) of *Hakea leucoptera* from Inlet XII (Mt Brown) and *Sida corrugata* from Inlet 14 (top of St Vincent's Gulf).

Each of the twelve collecting localities in South Australia with their attribution on Flinders' map is given in Table 2 and shown in Figure 2. The time spent at each locality and the number of herbarium collections, seed collections and the number of Bauer paintings that were later completed from drawings at the site, are also given. Comparison can also be made with the number of collections made from King George Sound (Albany) where the time spent was much longer, the flora much more diverse, the season more favourable and there was a known water supply.

Individual specimens collected at each site are treated in the lists given in Appendix 1, together with the list of Good's seed collections for each of the localities.

Brown's collections: where are they now?

Brown's main herbarium is in the Natural History Museum (BM) in London. His specimens are easily recognisable by the blue "R.Brown, Iter Australiense 1802–5" labels (see Fig. 3) and most were assigned numbers by J.J. Bennett, who inherited the specimens on Brown's death. Major sets can also be found in Kew, Edinburgh, Leningrad (2000 specimens), Paris (1000

Table 2. Collections from South Australia by the scientists on board the *Investigator*. The date and amount of time at each anchorage is given together with the number of extant plant collections by Brown, Bauer drawings he is known to have worked up subsequently into paintings completed in his time, and number of seed collections by Good. Collections in Western Australia and Victoria are given for comparison.

Locality	Time spent	Number of plant collections	Seed collections	Completed Bauer drawings
Western Australia				
Dec. 1801 – Jan. 1802				
• King George Sound	24 days	500	c. 175	c. 49
• Bay I, Lucky Bay, E of Esperance	4 days	100	c. 70	9
• Bay II, Middle Island, Recherche Archipelago	2 days	c. 30	none listed	4
South Australia				
• Bay III, Fowlers Bay, 29 Jan. 1802	5 am – 1 pm	23 (9 Types),	12	2
• Bay IV, St Francis Island, 2–4 & 8–9 Feb. 1802	2 days	18 (9 Types)	9	2
• Bay V, St Peter Island, 7 Feb. 1802	6 am –1 pm	6 (3 Types)	3	1
• Anchorage VI, Waldegrave Island, 11 Feb. 1802	9 am – 1 pm	21 observed, 1 known collection, but 10-12 algae noted	none	-
• Anchorage VII, Flinders Island, 13 Feb. 1802	8 am - ?	4	2	-
• Anchorage VIII, Thistle Island, 21 Feb. 1802	6 am – 12.30 pm	15	4	
• Bay IX, Memory Cove, 22–24 Feb. 1802	3 days	35 (13 Types)	29	1
• Bay X, Port Lincoln, 25 Feb. – 5 Mar. 1802	8 days	88	37	1
• Anchorage XI, Kirkby Island, 7 Mar. 1802	8 am –12 noon	2 (1 Type)	2	-
• Inlet XII, Mt Brown, 10–11 Mar. 1802	2 days	60	33	3
• Anchorage XIII, Kangaroo Island, 21–23 Mar. & 1–7 Apr.	4-5 days	35 (9 Types)	14	-
• Inlet XIV, Top of St Vincent's Gulf, 30 Mar. 1802	1 day	10	none	-
Victoria				
• King Island, 23–24 Apr. 1802	1 day	c. 30	14	-
• Port Phillip, 27 April–2 May 1802	c. 3 days	c. 88	40	1

specimens), Dublin (1000 specimens) and Canberra (1000 specimens). Herbaria in Melbourne and Sydney hold some numbers of Brown duplicates and there are also some in Brisbane and Hobart. Adelaide, Darwin and Perth herbaria are all poorly endowed with Brown material.

There are only about a dozen Brown duplicates mounted on normal herbarium sheets in the State Herbarium of South Australia, all of these acquired relatively recently by donation from the Natural History Museum (BM) in London. However there is also an interesting small book containing a collection of 19 Brown orchid duplicates which were given to the South Australian orchid specialist R.S. Rogers in 1915 by the British botanist, A.B. Rendle. Accompanying these specimens are tracings, with added colour, of three of Bauer's original paintings of orchids.

Ferdinand Bauer's herbarium specimens

Ferdinand Bauer also collected herbarium specimens. Whether he collected specimens only of those plants which he had drawn is not known since there has been no analysis of those which survive and even if there was, there is presently no listing of the Bauer field drawings for South Australia as there is for Western Australia (Pignatti-Wikus et al. 2000a, b). Some of his collections are included in the Brown herbarium (see Moore in Vallance et al. 2001, p. 19). However, many[6] are also

[6] In an early register of the contents of Bauer's herbarium in W the number of plant specimens was given as 3339 and

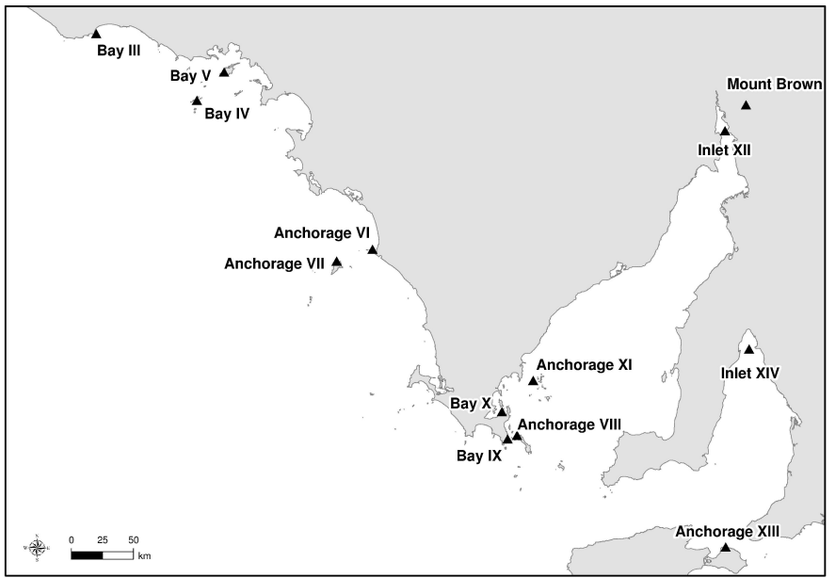


Fig. 2. Plant collecting localities of Robert Brown and Peter Good along the South Australian coast-line; names are given as they appear on the labels of the plant specimens. Modern day equivalents are Bay III, Fowlers Bay; Bay IV, St Francis Island; Bay V, St Peters Island; Anchorage VI, Waldegrave Island; Anchorage VII, Thistle Island; Bay IX, Memory Cove; Bay X, Port Lincoln; Anchorage XI, Kirkby Island; Inlet XII, head of Spencer Gulf and Mt Brown; Anchorage XIII, Kangaroo Island; Inlet XIV, head of St Vincents Gulf. Lists of plants and seeds collected at each of the localities are given in Appendix 2.

to be found in the Naturhistorisches Museum in Vienna (W).

With his failure to sell his illustrations of Australian plants, Bauer left England in 1814 to return to his native Vienna, taking with him his field drawings and botanical collections. As part of the revision of *Hakea* for *Flora of Australia* specimens were borrowed from the Naturhistorisches Museum in Vienna and amongst these specimens were Bauer herbarium collections of *Hakea prostrata* R.Br. (Fig. 5) and *H. linearis* R.Br from Western Australia. Whether there are also field drawings of these species in Vienna has yet to be established, but it seems unlikely. Brown makes no mention in his manuscript of Bauer having illustrated these particular species, whereas he does indicate Bauer illustrations for a number of other species; Proteaceae was one of the families in which specimens were largely destroyed by fire in 1945.

The gardeners and the living plant collections

Probably one of the most immediate and visible impacts in Europe of the Flinders and Baudin voyages would have been as a result of the efforts of their ships' gardeners: their booty was dispersed to gardens in Britain and France, and from there to other colonies and European countries. Many of the plants they collected were botanical curiosities and as well as being displayed in gardens in Kew and Paris were illustrated in the fashionable botanical periodicals of the day. But the gardeners who made these collections mostly did not fare well and certainly carried out their work under trying conditions and without those few comforts that the scientific gentlemen on board were allowed.

The French gardeners

There were five gardeners attached to the French ships when they departed France. Two of these, Cagnet and Merlot, went no further than Île de France (Mauritius). As we have already seen, Anselme Riedlé of the Jardin des Plantes in Paris had accompanied Baudin on his earlier plant collecting expedition. He was involved in significant plant collecting along the Western Australian coast line in the early parts of the voyage but succumbed to dysentery in Koepang, Timor, on 21st October 1801. Baudin, himself sick with malaria, ensured that his friend was buried alongside Bligh's gardener on the *Bounty*, David Nelson (Brown 2000). The genus *Riedlea* (= *Melochia*) and *Macrozamia riedlei* from south-west WA are named after him. His manuscript diary is listed as being in the library of the Muséum d'Histoire Naturelle (Riedlé unpubl.).

The assistant gardener, Antoine Sautier, about whom little is known, also succumbed to dysentery some days after Riedlé, and was buried at sea. *Sautiera* (Acanthaceae) was named after him (van Steenis-Kruseman 1950).

Only one of the assistant gardeners, Antoine Guichenot, survived the journey to return to Paris in March 1804, with seed collections and a great number of tubs of living plants. Guichenot apparently (van Steenis-Kruseman 1950) revisited Australia and the Pacific on Freycinet's voyage in the *L'Uranie* from 1817–1820[7], but little else is known about him. The genus *Guichenotia* of south-west Western Australia, was named in his honour by the French botanist Jacques Étienne Gay (Gay 1821).

the number of illustrations as 1876 (Pignatti-Wikus et al. 2000). A significant portion of the herbarium (gymnosperms, monocotyledons (except for orchids, grasses and Juncaceae partly) and families of dicotyledons (Proteaceae, Amaranthaceae, Chenopodiaceae) up to Ranunculaceae in the Engler system) and associated illustrations, were destroyed by fire in 1945.

[7] There are no gardeners listed at all amongst the participants of this voyage in Brosse (1983), but the six-volume account of the voyage by the leader Freycinet has not been checked. Freycinet, who had been on the *Géographe* with Baudin, decided that civilians would not be involved in the voyage; naval surgeons, who were also competent naturalists, dealt with the natural history collecting.

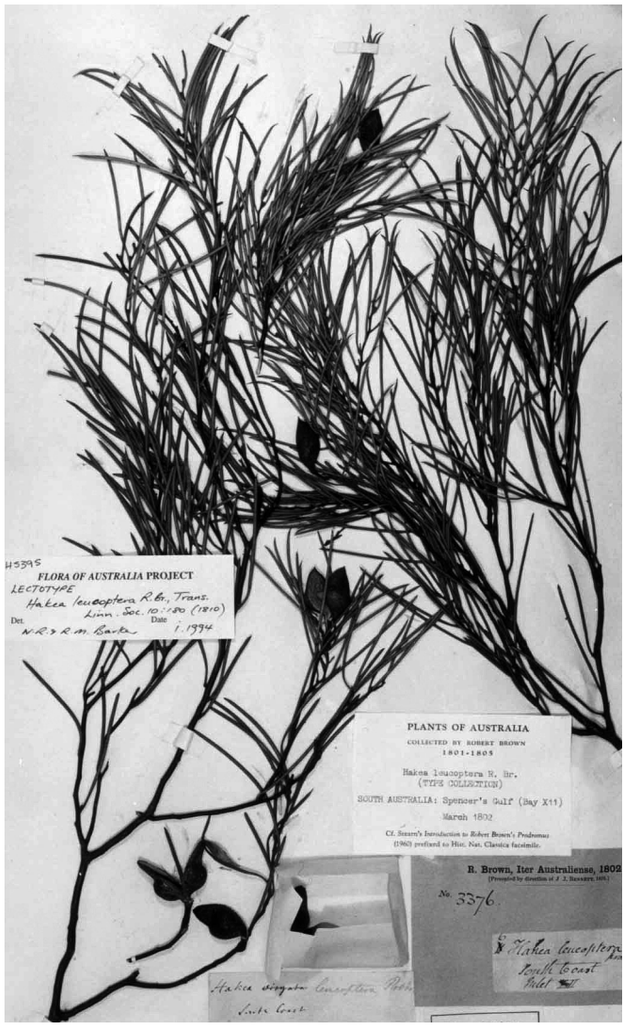


Fig. 3. Specimen of *Hakea leucoptera* R.Br. collected by Robert Brown from Inlet XII (Mt Brown). The specimen is housed in the Natural History Museum, London. These are the specimens that should be consulted for specific information about the collecting locality. The printed label with "R. Brown, Iter Australiense, 1802-5" on the top is blue, making the Brown collections easily identifiable. The number 3376 was assigned to the specimen by J.J. Bennett and the handwritten label fixed to this one was written by Robert Brown. This is the label indicating where the specimen was collected as it is annotated as Inlet XII. The typed label headed "Plants of Australia" was produced at the time of Stearn's introduction to the facsimile edition of Brown's *Prodromus* (1960). Duplicates of Brown's collections distributed to other herbaria usually have only the information shown on the other handwritten label to the left of the Bennett label. In this case it is merely labelled as *Hakea virgata* from the South Coast.

The British gardener

There was only a single gardener on board the British ship. Peter Good had trained at Kew Gardens and before his time in *Investigator* had been employed to bring plants back from India for Kew Gardens. As much as is known about him is recounted in the introduction to his diary (Edwards 1981). Good died on the return to Port Jackson and some of his collections were undoubtedly absorbed into the collections of Brown, since he is attributed with little in the way of collections from the northern traverse of Australia.

Fig. 4. Natural History Museum (BM) specimen of *Sida corrugata* Lindl. collected by Robert Brown from Inlet XIV (top of St Vincent's Gulf). The specimen has been annotated by Brown as 'Sida prostrata'.

Instructions to gardeners – a contrast

Gardeners were answerable to the botanist or naturalist on board and they were not treated as gentlemen, but rather were expected to mess with the warrant officers (gunners, carpenters, boatswains) and be accommodated similarly.

French instructions

French Instructions to the gardeners were similar to those given to the British gardeners. Reproduced below are the instructions given to Bruny d'Entrecasteaux on his 1791–93 expedition in search of La Pérouse, for the gardener Félix Delahaye; Delahaye later became gardener at Malmaison, the residence of Napoleon and Josephine. The same person was responsible for the instructions to Baudin and so it is unlikely that his instructions would have varied from those given below. One notable difference between the French and British instructions is the French vision that the plants were to be spread around the world, unlike the usual instructions from Joseph Banks where the plants were always to be destined for Kew and on no account were to be given to anyone else.

> The gardener is not to be included among the naturalists. His duties will be to sow European seeds that offer a chance to prosper in the lands that you will land, and to indicate as best he can to the natives of the country, the way to cultivate and reproduce them. He must pay particular attention to those products that can contribute to the subsistence of man. The culture of useful plants or shrubs which will be deemed to transport easily to our climate, must be entrusted to his care;

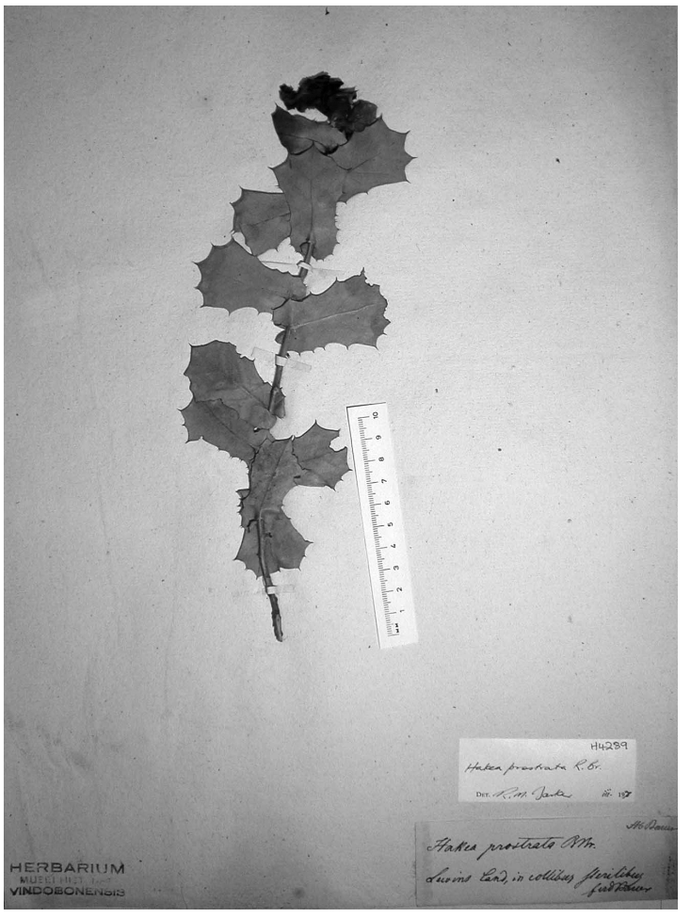


Fig. 5. *Hakea prostata* R.Br. Collection in Naturhistorisches Museum of Vienna by Ferdinand Bauer from Lewin's Land, Western Australia. Lewin's Land is an early Dutch name for the south-western corner of Western Australia, first discovered in 1622.

> and our colonies would be rendered an important service, if the breadfruit tree could be procured for them, as well as other nutritious products which are specific to the Great Ocean. You would leave them at Île-de-France [Mauritius], where they could be cultivated and reproduced, so as to be later transported to our islands in America.
>
> The gardener must as well assist with all his zeal the efforts of the naturalists; although his functions will necessarily be subordinate to them, whose considerable learning has trained them to appreciate the utility of each and every product.
>
> *Letter from M. de Fleurieu, Minister of Marine, to Bruny D'Entrecasteaux for his 1791–3 expedition*
> (Duyker & Duyker 2001, p. 296)

British instructions

Joseph Banks' standard instructions to gardeners accompanying expeditions included the following:

> … as it is deemd Proper that the new Plants discovered in your voyage Should first appear in the Royal Botanic Gardens at Kew you are not on any Pretence to Furnish any Person with any Part of your Collections of Seeds Bulbs or Succulent Plants
>
> *Joseph Banks' instructions to assistant Gardener Lockhart prior to his departure on the ill-fated 1816 Tuckey expedition of discovery of the Congo*
> (Carter 1988, p. 502)

> You are not … to allow any Person whatever to Receive or under any Pretence to Obtain from you any part of the seeds or any of the Plants or bulbs Collected by you while you continue in your Present Employ Should any new Plant sent…by you to Kew appear in any other Garden, an Enquiry will be immediately set on Foot to Find out in what way…it was procured & if it Proves to have been obtained from you in any Circuitous manner whatever your having Parted with… it will be deemed a breach of the Fidelity you owe to your Employers
>
> *Joseph Banks to Allan Cunningham*
> (Gilbert 1986, p. 28)

That these kind of instructions were universal is shown by Peter Good's objection to Banks before setting sail:

> So that it appears to me that every article of our industry and collections shall become the immediate property of Mr Brown except only so much as may be selected by the Lords of the Admiralty and also the Seeds and living plants which I understand to be wholly intended for His Majestys collections, and will entirely deprive the Miner and me from being able to present the Lords of the Admiralty with the most trifling Article or deriving any benefit from that article of indulgence. I earnestly wish an explanation of the subject, as also to know whether I will be permitted the honor of being recorded as the introducer of such plants and seeds as I shall be able to collect to introduce.
>
> *Letter from Peter Good to Joseph Banks, 6 May 1801*
> (reproduced in Edwards 1981).

French horticultural collections

Where did the living specimens and the seeds end up? Because of the great interest shown by the Empress Josephine in the collections of Australian plants and animals, many of them ended up at Malmaison, then just outside of Paris, as well as the Jardin des Plantes. Indeed there was some rivalry between the two gardens with the Minister of the Interior ordering that plants be made available to Empress Josephine for Malmaison (see Jill, Duchess of Hamilton 1999 for some of the correspondence concerning the allocation of the collections). A botanist, Étienne Pierre Ventenat, and an "official painter", Pierre-Joseph Redouté (see below), had been appointed to the staff of the Empress. Between 1803 and 1805 Ventenat published an account of forty-six Australian plants growing at Malmaison: amongst these were *Josephinia imperatricis* Vent., *Apium prostratum* Labill. ex Vent. and *Hibiscus heterophyllus* Vent., all described from plants grown from seed attributed to Captain Hamelin of the *Naturaliste*. Hamelin had returned to France in July 1803, some eight months before the *Géographe* returned. The descriptions of these plants were accompanied by Redouté's illustrations. Redouté's monograph of the Liliaceae

(Redouté 1802–16) also included four collections made by Baudin's party, amongst them *Anigozanthos flavidus* DC. collected by Baudin, Guichenot and Riedlé from Albany in 1801. There is no obvious connection with any South Australian plant collections in either of these publications.

After Ventenat's death in 1808, Aimé Bonpland was appointed in his place and he too was responsible for the publication of the names of some of the Australian plants by then growing in the grounds of Malmaison. Two of these, of particular interest to us because they almost certainly came from seed from Kangaroo Island, were *Eucalyptus diversifolia* Bonpl. and *Acacia paradoxa* DC., collected by the French during their visit to the island in January 1803 (see Appendix 1). Other plants resulting from South Australian collections by Baudin's party may well have become established in Malmaison or the Jardin des Plantes but they were either not documented or have yet to be revealed. *Acacia dodonaeifolia* (Pers.)Balb., first described by Persoon in 1806 as *Mimosa dodonaeifolia* from material cultivated in the Paris Botanic Gardens, *Acacia anceps* DC., collected from St Peter Island, and *Acacia leiophylla* Benth., described from a collection by William Baxter from Kangaroo Island, are all possibilities as introductions by the French from South Australia.

In describing *Eucalyptus diversifolia* for the first time, Bonpland (1814) further noted that seed of Australian species in Malmaison had been sent to Toulon Botanic Garden on the Côte d'Azur, where they were thriving. In a similar fashion, de Candolle described *Acacia paradoxa* in 1813 from cultivated material from the Montpellier Gardens (presumably Le Jardin des Plantes, one of the first Botanic Gardens established in Europe). Some years later a number of Australian species of eucalypts and acacias were to invade this area, as well as Corsica and Algeria, South Africa and St Helena, a problem that continues to this day in some of these places. *Flora Europaea* (Flora Europaea undated) presently lists 14 species of *Eucalyptus* and 10 species of Australian *Acacia* as naturalised in Europe; whether any of these were initially introduced as a result of the Baudin voyages has not been ascertained but a number of *Acacia* species had already been established on St Helena by 1805 (Anon. 1805). In contrast to their invasiveness in other parts of the world, there is apparently now not a single eucalypt to be seen in the grounds of Malmaison (Zacharin 1978).

British horticultural collections

Peter Good's seed lists

Peter Good made a list of seed gathered (Fig. 6) for each of the collecting localities in South Australia from Fowlers Bay to Kangaroo Island. These lists can often be matched with Brown's specimens to determine the identity of a particular collection. They are reproduced

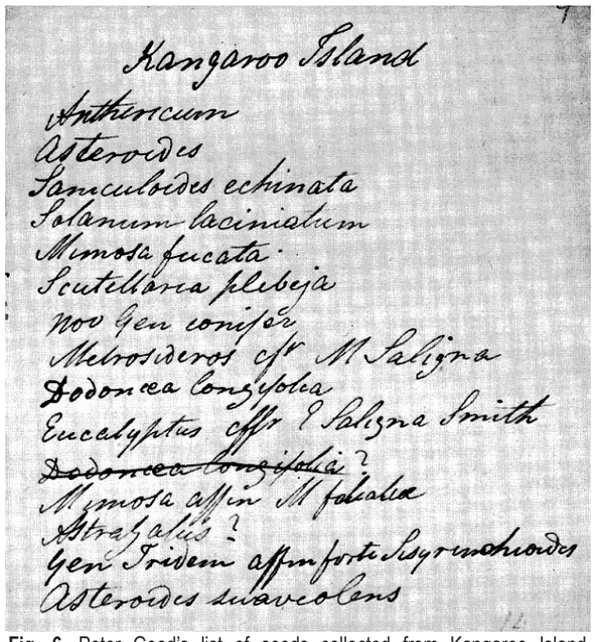

Kangaroo Island
Anthericum
Asteroides
Lanuginoides echinata
Solanum laciniatum
Mimosa fucata
Scutellaria plebeja
Nov Gen conifer
Melrosideros affr M Saligna
Dodonea longifolia
Eucalyptus affr ? Saligna Smith
~~Dodonea longifolia~~ ?
Mimosa affin M falcata
Astragalus ?
Gen Trivem affin forte Isopogonoides
Asteroides suaveolens

Fig. 6. Peter Good's list of seeds collected from Kangaroo Island. Reproduced from the Journal of Peter Good (Edwards 1981).

below, with comments as to the possible identities of the plants mentioned, where this was possible. Good would presumably have consulted with Robert Brown when giving a name to his seed collection and, by matching Brown's manuscript name for a species with those written by Good for the seeds, most of the seed collections can now be identified or at least narrowed as to their identity.

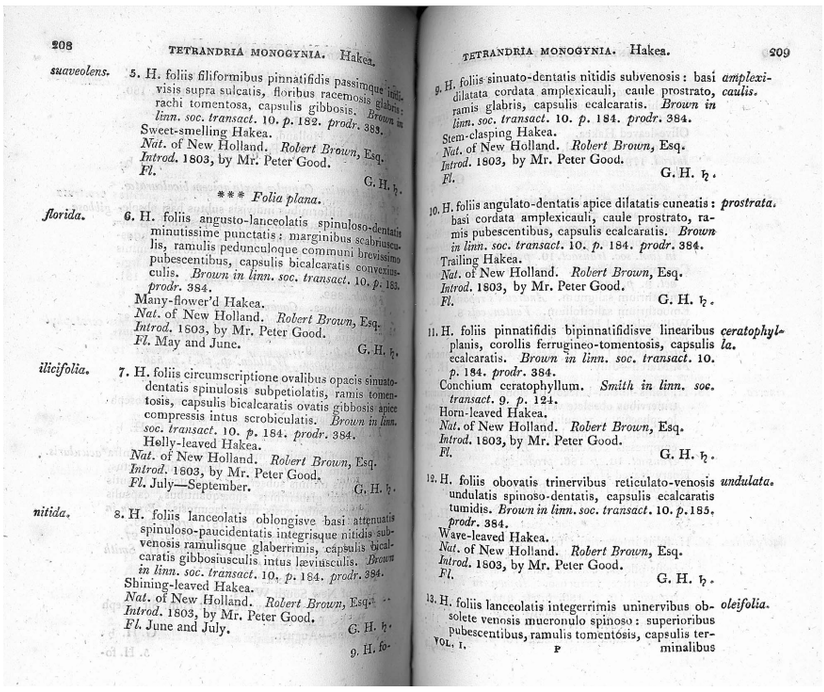
Collections of seed did not necessarily relate to the plants collected by Brown at any one site. Good collected *Apium prostratum* on St Francis Island, but there is no corresponding herbarium collection by Brown from there. He collected "Mimosa spinosissima" (*Acacia paradoxa*) from Flinders Island and Memory Cove but the only extant Brown collection is from Memory Cove. Good's seed list for Anchorage V (St Peter Island) includes *Alyxia buxifolia* R.Br., for which there are no extant Brown collections; all existing Brown collections of this species (*Bennett 2854*) are from Western Australia or Victoria.

Peter Good's living collections and seed collections – what happened to them?

By the time they finished their traverse along the South Australian coast line, Peter Good had collected 145 different seed collections from South Australian shores. He had already gathered nearly 250 seed collections from Western Australia (c. 175 from King George Sound and c. 70 from Lucky Bay). Thus he had a total of nearly four hundred and fifty seeds from the South Coast traverse when he reached Port Jackson.

While in Port Jackson, Good recorded in his diary on the 21 May 1802 (Edwards 1981), that he had gone on board the *Investigator* and brought ashore the seeds

"to separate and send a part by the *Speedy* whaler for England". The *Speedy* left Sydney on 6 June 1802. Brown described it to Banks as a "very small box of seeds" (Brown to Banks, 30 May 1802: Vallance et al. 2001, p. 204), a larger box not being able to be procured in time for the departure of the boat. Mabberley (1985, p. 94) records that it consisted of two hundred and fifty three seed packets, a figure which represents a larger percentage of the four hundred and fifty collections made to that time, than would be expected by Brown's comment. There is no record of the size of the collection in Good's diary (Edwards 1981), but again, according to Edwards (1981), Banks wrote on the 24 April 1803 to inform Brown that the first collection of seed, sent in June 1802, had arrived and been planted at Kew.


208 TETRANDRIA MONOGYNIA. Hakea.

suaveolens. 5. H. foliis filiformibus pinnatifidis passimque inæquivisis supra sulcatis, floribus racemosis glabris: rachi tomentosa, capsulis gibbosis. *Brown in linn. soc. transact.* 10. *p.* 182. *prodr.* 383.
Sweet-smelling Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. G. H. ♄.

*** *Folia plana.*

florida. 6. H. foliis angusto-lanceolatis spinuloso-dentatis minutissime punctatis: marginibus scabriusculis, ramulis pedunculoque communi brevissime pubescentibus, capsulis bicalcaratis conversum-culis. *Brown in linn. soc. transact.* 10. *p.* 183. *prodr.* 384.
Many-flower'd Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. May and June. G. H. ♄.

ilicifolia. 7. H. foliis circumscriptione ovalibus opacis sinuato-dentatis spinulosis subpetiolatis, ramis tomentosis, capsulis bicalcaratis ovatis gibbosis apice compressis intus scrobiculatis. *Brown in linn. soc. transact.* 10. *p.* 184. *prodr.* 384.
Holly-leaved Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. July—September. G. H. ♄.

nitida. 8. H. foliis lanceolatis oblongisve basi attenuatis spinuloso-paucidentatis integrisque nitidis subvenosis ramulisque glaberrimis, capsulis bicalcaratis gibbosiusculis intus lævisculis. *Brown in linn. soc. transact.* 10. *p.* 184. *prodr.* 384.
Shining-leaved Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. June and July. G. H. ♄.

9. H. fo-

TETRANDRIA MONOGYNIA. Hakea. 209

9. H. foliis sinuato-dentatis nitidis subvenosis: basi dilatata cordata amplexicauli, caule prostrato, ramis glabris, capsulis ecalcaratis. *Brown in linn. soc. transact.* 10. *p.* 184. *prodr.* 384. *amplexicaulis.*
Stem-clasping Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. G. H. ♄.

10. H. foliis angulato-dentatis apice dilatatis cuneatis: basi cordata amplexicauli, caule prostrato, ramis pubescentibus, capsulis ecalcaratis. *Brown in linn. soc. transact.* 10. *p.* 184. *prodr.* 384. *prostrata.*
Trailing Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. G. H. ♄.

11. H. foliis pinnatifidis bipinnatifidisve linearibus planis, corollis ferrugineo-tomentosis, capsulis ecalcaratis. *Brown in linn. soc. transact.* 10. *p.* 184. *prodr.* 384. *ceratophylla.*
Conchium ceratophyllum. *Smith in linn. soc. transact.* 9. *p.* 124.
Horn-leaved Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. G. H. ♄.

12. H. foliis obovatis trinervibus reticulato-venosis undulatis spinoso-dentatis, capsulis ecalcaratis tumidis. *Brown in linn. soc. transact.* 10. *p.* 185. *prodr.* 384. *undulata.*
Wave-leaved Hakea.
Nat. of New Holland. *Robert Brown*, Esq.
Introd. 1803, by Mr. Peter Good.
Fl. G. H. ♄.

13. H. foliis lanceolatis integerrimis uninervibus obsolete venosis mucronulo spinoso: superioribus pubescentibus, ramulis tomentósis, capsulis terminalibus *oleifolia.*

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Fig. 7. Pages reproduced from Aiton's *Hortus Kewensis* (1810) indicating *Hakea* species introduced to Kew by Peter Good. Hakea species are particularly well represented because of the protection afforded the seed by the fruit.

Aiton's *Hortus Kewensis*

Within the five volumes of the second edition of Aiton's *Hortus Kewensis* (1810–13), a list of the plants then growing in Kew Gardens, Peter Good is credited (Fig. 7) with a hundred and three introductions of Australian plants in 1803. Those plants likely to have originated from Good's South Australia collections are listed in Table 3. Of the 145 seed collections estimated to have been made in South Australia (see Table 2), only about 12 species seem to have been successfully grown at Kew.

Other plants grown successfully at Kew

Aiton's list is clearly not a complete listing of plants introduced by Good. It is meant to be a listing of the person responsible for introducing a plant to Kew for the first time, and there were of course a number of plants, particularly those from the east coast and King George Sound, which would already have been known from other collectors.

However there are some species known to have been grown at Kew that do not appear in Aiton's list. For example, seed of the endemic *Hakea vittata* was collected from Port Lincoln (see Peter Good's listing for Bay X below). That it was subsequently grown at Kew can be seen from Robert Brown's manuscript concerning this species (R.Brown, unpublished, see Fig. 8). Brown's original description of *H. vittata*, made while on board the *Investigator,* indicates that flowers were not seen. The description is only of the leaves, fruits and seeds. In his manuscripts (Fig. 9) there is a subsequent description of the flowers, including the pollen, from material grown at Kew Gardens[8].

In the case of the Proteaceae and Myrtaceae in particular it is quite possible that fruits collected for the herbarium were later used as a source of seed for the gardens. Many of them would not have been open at the time of collection, but would have released their seed during the storage and travel time. These attributes of the fruits would account for the number of *Banksia* and *Hakea* (Fig. 7) species collected by Good, which were to be successfully raised at Kew, whereas the numerous *Grevillea* species with their more fragile fruits were rarely mentioned in Good's lists.

A subsequent collection of seeds from Kangaroo Island

In the protologue of *Sisyrinchium cyaneum* Lindl. (now *Orthrosanthus multiflorus* Sweet) Lindley (1827; see Fig. 10) noted that Brown saw the plant on Kangaroo Island "with no perfect fructification", and that Leschenault subsequently observed it in the same place, but seed material had finally been collected from the island by William Baxter.

[8] This description of the flowers of *H. vittata* was never published since Brown's accounts in the *Transactions of the Linnean Society* (Brown 1810a) and in the *Prodromus* (Brown 1810b) are identical; both state that flowers were not seen. As Brown provided no specific epithet, he may not have known to which species the flowering material belonged.

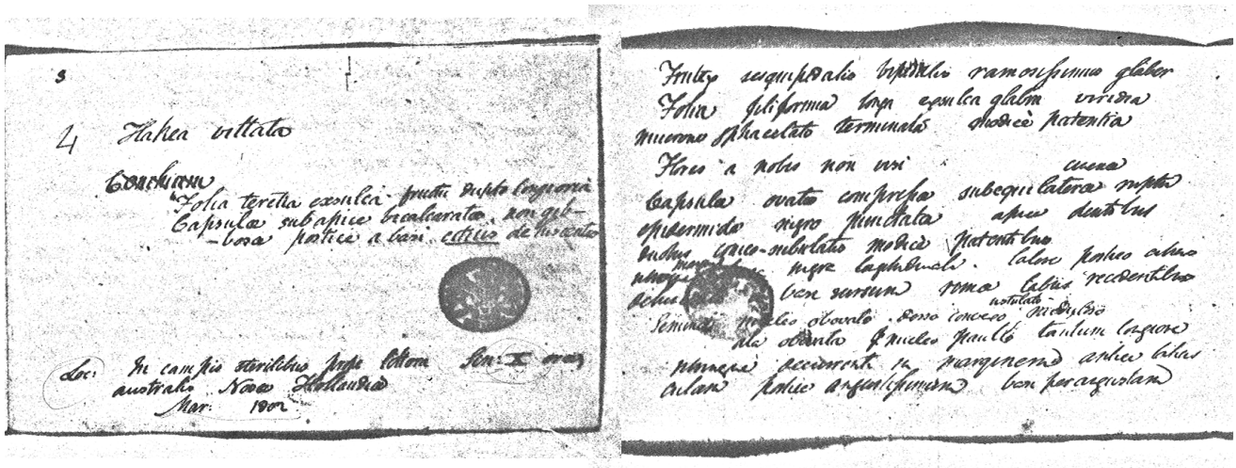


Fig. 8 (top left and right). Robert Brown's manuscript account in Latin (Brown unpubl.) of *Hakea vittata* based on the specimens collected by him from Bay X (Port Lincoln) in March 1802. Flowers were absent (see "Flores non visi" in the manuscript); only fruits were present.

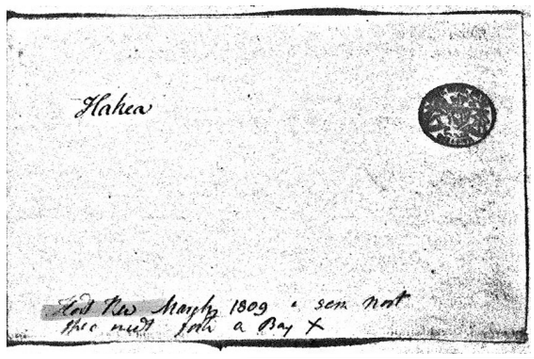
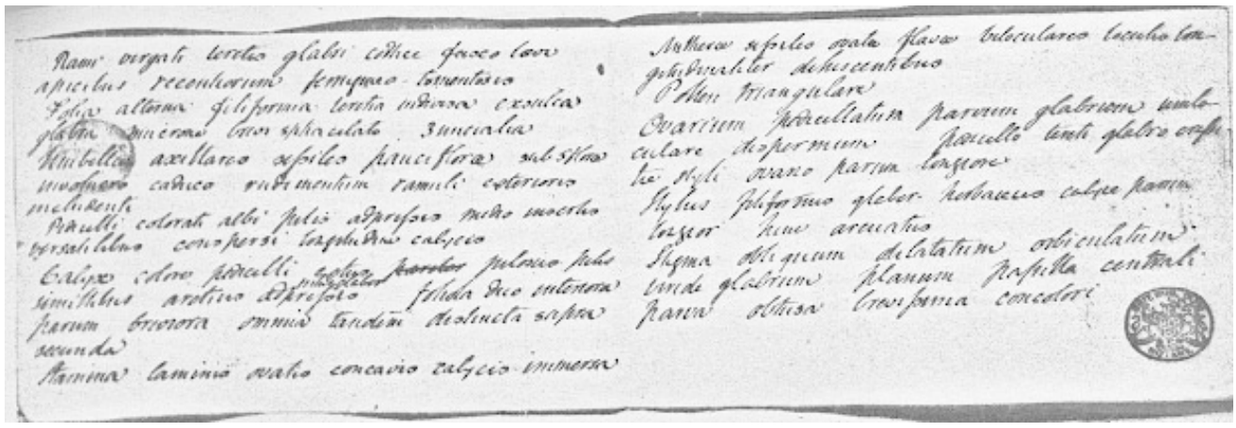


Fig. 9 (right and below). Robert Brown's manuscript account in Latin (Brown unpubl.) of *Hakea vittata* based on a plant grown at Kew ("Hort. Kew March 1809") from the seed collected at Bay X (Port Lincoln). The description contains information about flowers and a description of the pollen.



Baxter was a British seed collector sent out to the colonies by Francis Henchman, a British nurseryman (Miller 1970). Baxter collected on Kangaroo Island, probably in 1822 or 1823, and at this time also presumably collected seeds of *Correa pulchella, Eucalyptus baxteri, Acacia triquetra, Acacia leiophylla* and *Grevillea dilatata* since all of these names are based on Baxter collections reputedly from Kangaroo Island (APNI 2006: search in September 2005). *Correa pulchella* was in flower in England by 1824 (Sweet 1827). Baxter later collected copiously in the Albany region and many of Robert Brown's new Proteaceae (Brown 1830) were based on his collections.

To be of use to future navigators in these regions – sowing seeds

Both the British and the French made a practice of planting seeds of food plants at landfalls on these voyages. Peter Good's list of seeds for Kangaroo Island, planted near the "spring and various other situation of the island " in April 1802 is reproduced in his diary (Edwards 1981; Fig. 11). There is no apparent connection to any plants that have subsequently become weedy on the island. Indeed there was no mention in the Baudin account (Cornell 1974) of any evidence of Good's industry when the French visited the same part

Table 3: South Australian species introduced to Kew Gardens as a result of the *Investigator* voyage. These introductions were recorded in Aiton's *Hortus Kewensis* (1810-1813).

Plant introductions credited to Peter Good in 1803	Collection locality
Ixodia achilleoides R.Br.	Anchorage VIII (Thistle Island), IX (Memory Cove) and X (Port Lincoln)
Cassinia aurea R.Br. = *Angianthus tomentosa* Wendl.	Bay IV (St Francis Island)
Westringia dampierii R.Br.	Anchorages III (Fowlers Bay), IV (St Francis Island), VI (Waldegrave Islands) and VII (Flinders Island)
Acacia armata R.Br. = *A. paradoxa* DC.	Kangaroo Island & Bay IX (Memory Cove)
Lotus australis Andrews	Inlet XIV (top of St Vincent Gulf)
Pultenaea vestita R.Br.	Bay X (Port Lincoln)
Sclerothamnus microphyllus R.Br. = *Eutaxia microphylla* (R.Br.)J.Black	Anchorage VIII (Thistle Island)
Templetonia retusa (Vent.)R.Br.	King George Sound (Albany) and Bay IX (Memory Cove)
Myoporum viscosum R.Br.	Bay IX (Memory Cove)
Myoporum parvifolium R.Br.	Bay X (Port Lincoln)
Stenochilus glaber R.Br. = *Eremophila glabra* (R.Br.)Ostenf.	Bay III (Fowlers Bay) & Inlet XII (Mt Brown)
Melaleuca decussata R.Br.	Bay X (Port Lincoln)

of the island for three weeks in January 1803, some nine months after Good planted these seeds.

As well as planting seeds, animals were also left behind. Baudin left a rooster and two hens and a boar and sow at the spring on Kangaroo Island in the hope that they would multiply. He was careful to request that the American sealer, Pendleton, whom he later met in King Georges Sound and pointed in the direction of Kangaroo Island, "prevent his men from killing the pigs and poultry [that he had] left there for the use of future navigators" (Brown 2000, p. 345). Hog Bay was probably named in recognition of the success of this request.

Botanical illustrations from the voyages

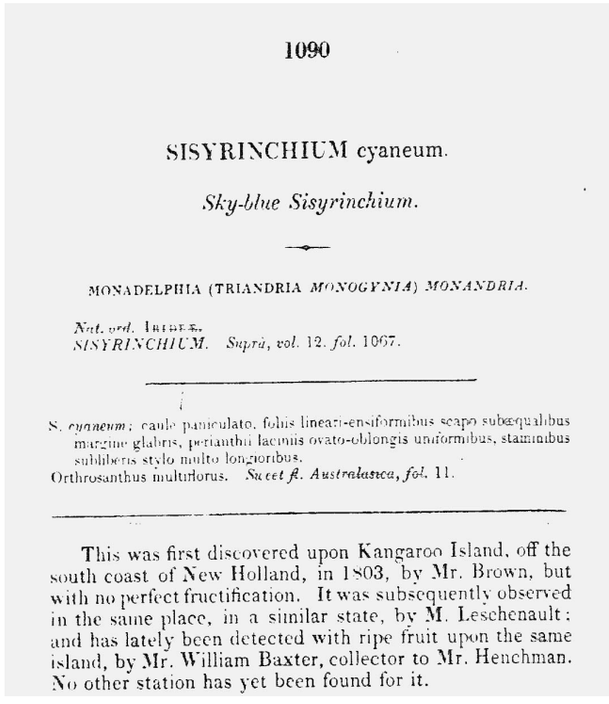
Both the British and the French carried artists on board their ships, but only Ferdinand Bauer on board the *Investigator* was specifically illustrating botanical subjects in the field. Despite his prolific output only a very small percentage of Bauer's work was published at the time. The artists on board the French ships concentrated predominantly on animals and marine organisms. It was artists in Paris, working with botanists, who illustrated Australian plants grown in French gardens from the collections of the French voyage.

French illustrations of Australian plants

When the French left Le Havre in 1800, they had on board three official artists. They also had on board two other artists who had been signed on as assistant gunners but in reality for their abilities as artists. Baudin employed Lesueur and Petit to illustrate the Captain's log with drawings of all of the marine creatures encountered (Bonnemains 2002)

The three official artists left the ships at Île de France, almost certainly having been offered a more comfortable and more lucrative life style on the island, particularly when compared with conditions on board the ships.

The unofficial artists, Lesueur and Petit, subsequently became fully occupied by the zoologist Péron; Petit specialised in portraying the people and coastal studies and Lesueur in painting the animals. There appear to be no paintings by Lesueur, in particular, that are wholly devoted to plants. Instead they appear only incidentally in his depictions of the animals of Australia. Apart from the illustrations of Piron, who accompanied Labillardière on the d'Entrecasteaux Voyage (Duyker & Duyker 2001) French drawings of Australian plants were mostly done



1090

SISYRINCHIUM cyaneum.

Sky-blue Sisyrinchium.

MONADELPHIA (TRIANDRIA *MONOGYNIA*) *MONANDRIA.*

Nat. ord. IRIDEÆ.
SISYRINCHIUM. Suprà, vol. 12. *fol.* 1067.

S. *cyaneum*; caule paniculato, foliis lineari-ensiformibus scapo subæqualibus margine glabris, perianthii laciniis ovato-oblongis uniformibus, staminibus subliberis stylo multo longioribus.
Orthrosanthus multiflorus. *Sweet fl. Australasica, fol.* 11.

This was first discovered upon Kangaroo Island, off the south coast of New Holland, in 1803, by Mr. Brown, but with no perfect fructification. It was subsequently observed in the same place, in a similar state, by M. Leschenault: and has lately been detected with ripe fruit upon the same island, by Mr. William Baxter, collector to Mr. Henchman. No other station has yet been found for it.

Fig. 10. Lindley's 1827 account of the collection of *Sisyrinchium cyaneum* (now *Orthrosanthus multiflorus* Sweet) from Kangaroo Island in *Botanical Register.* Note that both the British and the French made collections of this species, neither of them with seeds present. The 1803 date presumably relates to when seed collections were received at the Royal Botanic Gardens, Kew; almost all of Peter Good's seed introductions to Kew are attributed in Aiton (1810–13) as 1803.

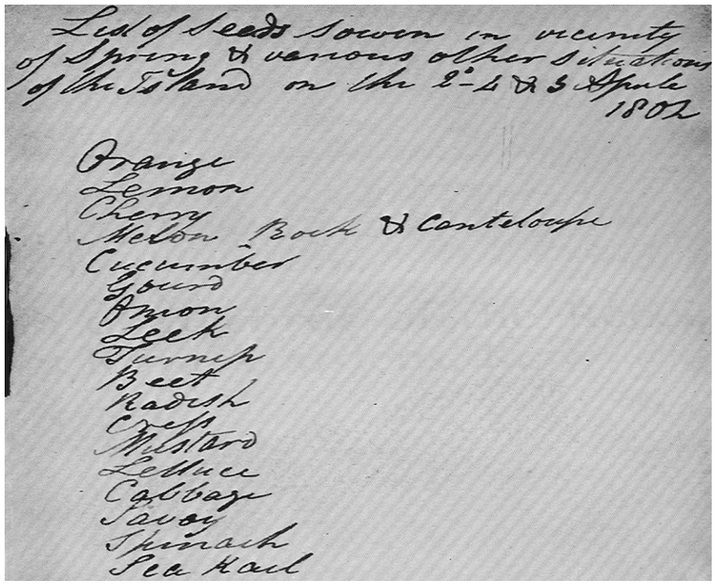


Fig. 11. Peter Good's list of seeds planted at the spring on Kangaroo Island. Reproduced from the Journal of Peter Good (Edwards 1981).

in Europe for French botanists describing these plants, often from garden collections. And in stark contrast to the work of Ferdinand Bauer, the French illustrations were published at the time of their painting, accompanying a formal botanical description of the plant.

One of the artists most closely associated with such illustrations was Pierre-Joseph Redouté (1759–1840). Redouté, Belgian by birth, and from a long line of painters, first came to Paris in 1782 to join his brother. His interest in painting flowers took him to the Jardin du Roi, and it was here that he is assumed (Blunt 1963) to have met the French magistrate and amateur botanist, L'Héritier de Brutelle. Redouté's first Australian plant illustration was probably that of the type species of *Eucalyptus*, *E. obliqua*, which was published in 1789 in L' Héritier's *Sertum Anglicum,* based on rare plants "cultivated in the gardens around London, especially in the Royal Gardens at Kew" and "observed from the year 1786 to the year 1787". Redouté had joined L' Héritier in London at this time. The specimens of *E. obliqua* had been collected on Cook's third voyage by David Nelson and William Anderson (L'Héritier de Brutelle 1789).

Redouté next illustrated Australian plants for Jacques-Julien Houtou de Labillardière, botanist of the 1791–93 d'Entrecasteaux voyage in search of La Pérouse. In his first account of the botany associated with the voyage in the 2 volume *Relation du voyage a la recherche La Pérouse* (Labillardière 1800), the accompanying Atlas contained depictions of the people, birds and plants as well as maps. There were 12 plates of Australian plants, some of them by the artist of the voyage, Piron, improved by Redouté, others by Redouté alone. Editions of this work were so popular that that it was reprinted twice in France before the end of the year, three times in England, between 1800 and 1802, twice in Germany (1801 and 1804) and a Russian edition was also produced (Duyker 2003).

Later, between 1804 and 1807 Labillardière published *Novae Hollandiae Plantarum Specimen*, the first comprehensive account of the Australian flora to that time. Included in this work were a few of the specimens collected by Baudin's expedition (discussed by Carr & Carr 1976; Nelson 1974, 1975). Each plant was comprehensively described and was accompanied by a line drawing, the majority of these by Pierre Antoine Poiteau. Redouté's contribution was four *Eucalyptus* plates (Labillardière 1804–06).

Redouté's depictions of Australian plants continued with the publication of plates to accompany Ventenat's descriptions of cultivated plants growing in the garden of the horticulturist Jacques Martin Cels in Paris (Ventenat 1800–03). Twenty-three Australian plants were depicted in this publication, none of them emanating from collections made in South Australia.

Redouté and Ventenat were subsequently employed by Empress Josephine to paint and describe plants growing in the garden at Malmaison, the home of Napoleon and Josephine. Many of these plants were Australian, some of them originating from collections made by the Baudin expedition. On the death of Ventenat, the botanical role was taken over by Bonpland. *Eucalyptus diversifolia* Bonpl. and *Acacia paradoxa* DC. from Kangaroo Island (see above) were described by Bonpland (1812–17) and painted by Redouté[9] in an account of plants growing in the gardens of Josephine at Malmaison and Navarre[10]. It is noticeable that the cultivated plant of *Acacia paradoxa* appears to be less spiny than in its native habitat.

Whether there are other unpublished botanical illustrations resulting from the Australian collections gathered together in France at this time has never really been investigated. The philosophy of dispersal of garden material within France and adjoining countries as well as within French colonies makes it possible that there are more illustrations of Australian plants (and perhaps South Australian plants) from this time still to be found.

[9] Or possibly Pancrace Bessa (1772–1835). Redouté signed the original watercolour of *Eucalyptus diversifolia* but the mirror-image painting in Bonpland is attributed to Bessa, who also produced illustrations for this work. They are reproduced side by side in Hewson (1999).

[10] Colour plates associated with *Eucalyptus diversifolia* are reproduced in Hewson (1999, p. 68) and also in Jill, Duchess of Hamilton (1999, p. vi). A colour plate of *Acacia paradoxa* (as *A. armata*) is reproduced in the latter publication (Jill, Duchess of Hamilton 1999, p. 159). Both plates can also be seen in black and white on microfiche in the Botanic Gardens and State Herbarium of South Australia library or in colour on the Rare Book website (Missouri Botanic Gardens 1995–2006) where the Bonpland book is reproduced.

British illustrations of Australian plants

Ferdinand Bauer illustrations based on South Australian material.

On his return to London in 1805, Ferdinand Bauer was employed for some years to produce paintings of those plants he had drawn and colour coded in Australia. Of the c. 2000 drawings done by him while in Australia, only a relatively low percentage became fully coloured paintings. Most of these (c. 200) were presented to the Admiralty, where they languished for many years, until eventually being presented to the British Museum (Natural History)[11] in 1843 (Mabberley & Moore 1999). Ten of the finished plates were based on plants drawn and collected in South Australia[12]; these were:

**Eremophila glabra* (R.Br.)Ostenf. (from Fowlers Bay and/or Mt Brown)
Scaevola spinescens R.Br. (Fowlers Bay)
Enchylaena tomentosa R.Br. (St Francis Island)
Sarcostemma viminale (L.)R.Br. ssp. *australe* (R.Br.) P.I.Forst. (St Francis Island)
**Solanum hystrix* R.Br. (St Peter Island)
**Dodonaea humilis* Endl. (from Memory Cove)
Grevillea pauciflora R.Br. (Port Lincoln)
**Eremophila scoparia* (R.Br.)F.Muell. (Mt Brown)
**Cynanchum floribundum* R.Br. (Mt Brown)
Senna artemisioides (Gaudich. ex DC.)Randell (Mt Brown)

A small number of Bauer's drawings were reproduced as line drawings in Flinders (1814) account of the voyage, and Bauer attempted to publish some himself in his *Illustrationes* sets (Bauer 1813–16) when it became clear that Joseph Banks was not going to assist either Brown or himself to publish their results. The latter were available either in colour or as black and white line drawings.

None of the plants depicted in these two publications were based on South Australian collections, although some of the species do occur in the state, e.g. *Brunonia australis* Sm. ex R.Br., *Azolla pinnata* R.Br. from Flinders (1814) and *Levenhookia pusilla* R.Br.*, Tricoryne elatior* R.Br. (Fig. 12), and *Stylidium calcaratum* R.Br. of the *Illustrationes.*

Those illustrations produced for sale within *Illustrationes* were often different from the finished drawings of the same species presented to the British

Fig. 12. *Tricoryne elatior* R.Br. Plate 11 of the *Illustrationes* (Bauer 1813-16) produced by Ferdinand Bauer at his own expense for sale to the public. This illustration differs considerably from his illustration of the same species for presentation to the Admiralty. (Reproduced from microfiche in Botanic Gardens & State Herbarium, Adelaide).

Admiralty. Thus the image of *Tricoryne elatior* R.Br. in the *Illustrationes* (Fig. 12) has fewer branches, has had roots added to the plant and also has a depiction of fruits; the fruits are absent from the Admiralty painting and the flower and umbel with spent flower are quite separate, whereas they overlap in the published illustration.

Bauer's field drawings

Bauer returned to Vienna in 1813, taking his original drawings with him. On his death in 1826, these were purchased by Emperor Franz I and donated to the Naturhistorisches Museum of Vienna where they are still to be found (Riedl-Dorn in Pignatti-Wikus et al. 2000b). A copy of one example of a field drawing, *Zygophyllum billardierei* DC., found in the collection of Zygophyllaceae papers of the late Hj. Eichler is reproduced here (Fig. 13); the rearranged and "finished" drawing which would have been done on the return to Europe was also within the papers. On the field drawing

[11] The institution still houses them today. It has been recently renamed the Natural History Museum, London.

[12] The original Bauer paintings of the asterisked species were displayed at the Art Gallery of South Australia in their *The Encounter 1802* exhibition in 2002. The plates were reproduced in the catalogue of the exhibition with a botanical commentary for each of them by the author (R.M. Barker 2002). These images and *Grevillea pauciflora*'s are now available at the website (Natural History Museum, London 2006). There are copies of the other five, which are not available in publications, in the State Herbarium of South Australia; these are not of high quality and were provided by the Natural History Museum in London for the State Herbarium's *Botanical Legacy* of 1802 display. There are also small black and white reproductions of all of the paintings in Mabberley & Moore (1999).

Fig. 13. Ferdinand Bauer's field drawing of *Zygophyllum billardierei* DC. in the Naturhistorisches Museum of Vienna. Note the economical use of paper, the numbers indicating the colour of each of the parts and the locality and date (Salt Island [Middle Island, Recherché Archipelago], South coast, May 1803) in the bottom right hand corner. The annotation 'No 754' is Bauer's field number for this illustration.

can be seen the annotation indicating that the drawing was made at Salt Island[13] in 1803.

Illustrations in the field were composed on minimal paper since this was an extremely scarce commodity. Both Brown and Bauer experienced paper supply difficulties, with Brown sending numerous requests for supplies since there was none available in the colony and Bauer experiencing difficulties because much of his paper went mouldy in the tropics (Vallance et al. 2001 and Norst 1989). The drawing was colour coded with Bauer's numbers (for a discussion of Bauer's techniques see for example, Lack & Ibánez 1997, Mabberley & Moore 1999), with these numbers being reproduced on the re-arranged and much larger "finished" drawing, prepared on the return to England.

There are other field drawings of South Australian and Australian plants by Bauer still in the Vienna Museum and Professor David Mabberley is presently working with Australian botanists to identify these.

[13] Salt Island is now known as Middle Island. In the Recherche Archipelago, Western Australia, it is where salt was collected on the *Investigator*'s first visit in 1801. The drawing was made at the time of Bauer's second visit to the island on the rushed return trip to Sydney after the *Investigator* was found to be unsafe.

Endlicher's publications of Bauer's drawings

After Bauer's death, the botanist Stephan Endlicher of the Naturhistorisches Museum of Vienna made use of many of Bauer's illustrations, publishing them as line drawings in his *Atakta botanica* (1833–35) and *Iconographia generum plantarum* (1837–41). Those listed below were based on specimens collected in South Australia. Bauer did not develop the last two as colour plates.

Dodonaea humilis Endl. (Memory Cove) (Fig. 14)
Sarcostemma viminale (L.)R.Br. ssp. *australe* (R.Br.) P.I.Forst. (St Francis Island) (Fig. 15)
Eremophila scoparia (R.Br.)F.Muell. (Mt Brown traverse) (Fig. 16)
Eremophila glabra (R.Br.)Ostenf. (Mt Brown traverse and/or Fowlers Bay) (Fig. 17)
Adenanthos terminalis R.Br. (Port Lincoln) (Fig. 18)
Choretrum glomeratum R.Br. (Memory Cove) (Fig. 19)

These plates were clearly based on Bauer's original field drawings but, just as Bauer rearranged his coloured illustrations (see above), the components of these, too, were often rearranged. This can be seen by comparing the line drawing of *Dodonaea humilis* in Endlicher's work (Fig. 14) with Bauer's original colour plate (Thomas 2002, Natural History Museum, London 2005; see also a small black and white image in Mabberley & Moore 1999).

What can these collections tell us?

This listing of these early collections has reiterated a number of queries concerning the natural occurrence of certain plant species in South Australia and raised a few more.

Native plants sometimes considered to be weeds

Plants with prickles have a tendency to be regarded as non-native by members of the community and *Acacia paradoxa* DC. and *Solanum hystrix* R.Br. are no exception. Both species were first collected and named as a result of the Baudin and Flinders expeditions and both are clearly native to the state.

Heliotropium europaeum – from declared plant to native species?

Heliotropium europaeum L., previously treated as an introduction in South Australia (Robertson 1957, Craven 1986), has, since the discovery that it was collected by Robert Brown on Mt Brown in 1802,

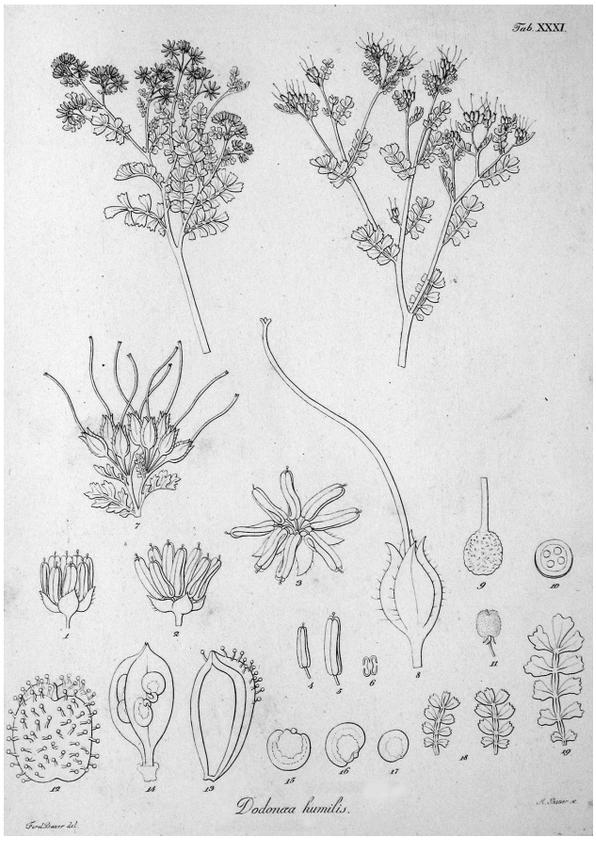


Fig. 14. *Dodonaea humilis* Endl. in Endlicher's *Atakta botanica,* t. 31. Drawn from material collected at Memory Cove. Endlicher published a number of plants using Bauer's drawings in the Naturhistorisches Museum of Vienna. There was considerable rearrangement of, and additions to, the dissected parts when compared with the Admiralty illustration now in the Natural History Museum in London (see Thomas 2002, p. 109 or Mabberley & Moore 1999, p. 103). Male (to left) and female (to right) branches are depicted here. (Reproduced from copy of book held by National Herbarium of Victoria).

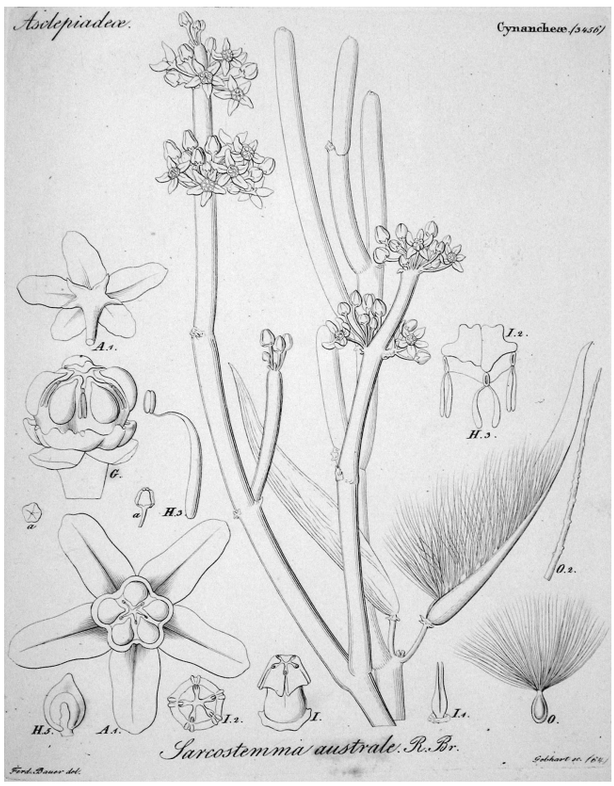


Fig. 15. *Sarcostemma viminale* (L.)R.Br. ssp. *australe* (R.Br.)P.I.Forst. in Endlicher's *Iconographia generum plantarum* t. 64. Illustrated from material collected from St Francis Island. Endlicher used Bauer's illustration of this species in the Naturhistorisches Museum of Vienna. The same elements are very differently arranged when compared with the finished painting in the Natural History Museum in London (Mabberley & Moore 1999, p. 137). (Reproduced from copy of book held by National Herbarium of Victoria).

been considered native to the state (Craven 1996, W.R. Barker et al. 2005). For many years it was treated as a declared plant in South Australia, primarily because of its toxicity to sheep and cattle; it remains on the general list for Australia and the more specific lists for Western Australia and Tasmania (Navie 2004).

If it was an introduction, it is very difficult to account for its presence on Mt Brown. However, given the ability of this plant to spread, it is just possible that, as with *Salsola kali* (see below), it may have originated and spread from earlier undocumented arrivals of ships along the southern coast-line. Although poisonous, it has well-documented herbal uses and also is a common contaminant of crops, both possible explanations for its presence on board any ship. Animals carried on board these ships had to be fed and fodder could easily be contaminated with the seeds of this plant. Both *Heliotropium europaeum* and the next species, *Salsola kali,* were identified as plants growing on ballast deposits in the port of Philadelphia in the United States in 1876 (Martindale 1876). Or perhaps, a more prosaic explanation is that the Brown specimen has been wrongly labelled as to the locality of the collection. This is made more unlikely by the fact that there are two

extant specimens and Brown specifically mentioned it in the list he later compiled for Mt Brown. He clearly did not equate his own collection with *H. europaeum* since he gave it a new name.

***Salsola kali* – weed or native species?**

Salsola kali L. has been variably documented in South Australia as a weed or a native species. Tate and J.M. Black implied, by their treatments (Tate 1890; Black 1909, 1924), that they considered the plant to be native while in the treatment in Jessop & Toelken (1986) it was considered an introduction. Eichler (1965) indicated that the specimens then in the State Herbarium belonged to various species and that a revision of the species was needed. He considered that var. *strobilifera* recognised by Bentham and applying to specimens from the north west of the state was probably a distinct species and also added another subspecies, ssp. *austroafricana* Aellen; material in the State Herbarium of South Australia (AD) of the latter taxon, native to southern Africa, was identified as such by the author of the subspecies. Wilson (1984) treated it as an introduction and it is frequently found in weed lists for Australia. *The Census of Vascular Plants of Victoria* (Victorian Plant Census

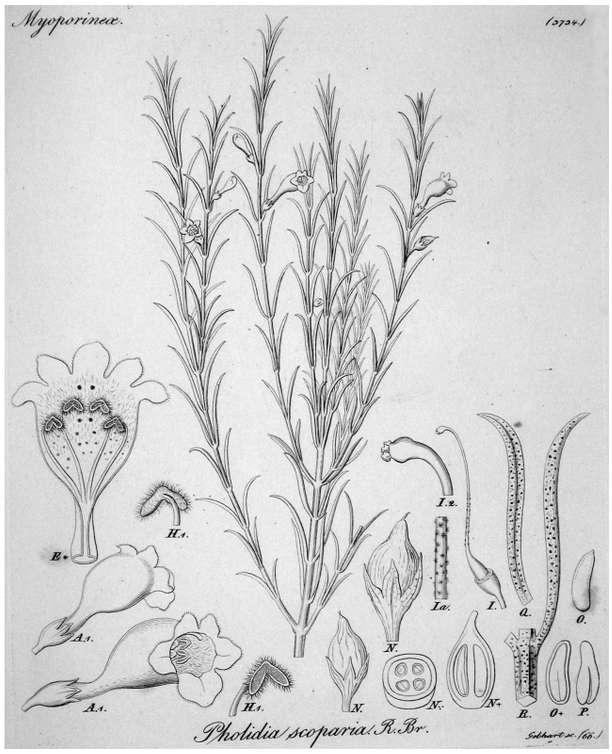


Fig. 16. *Eremophila scoparia* (R.Br.)F.Muell. (as *Pholidia scoparia* R.Br.) in Endlicher's *Iconographia generum plantarum* t. 66. Illustrated from material collected from Mt Brown. Endlicher used Bauer's illustration of this species in the Naturhistorisches Museum of Vienna but with a different arrangement of the dissected elements and considerable thinning of the branch when compared with Bauer's finished painting in the Natural History Museum in London (Mabberley & Moore 1999, p. 141). (Reproduced from copy of book held by National Herbarium of Victoria)

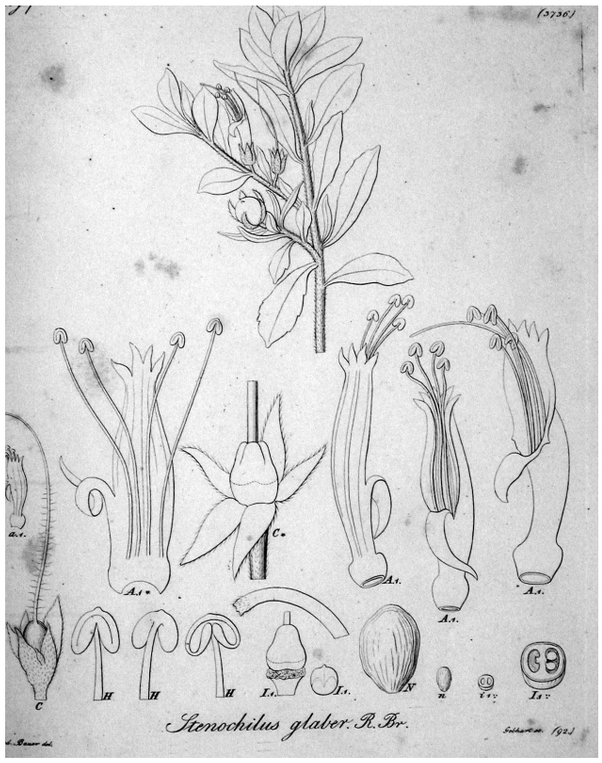


Fig. 17. *Eremophila glabra* (R.Br.)Ostenf. (as *Stenochilus glaber* R.Br.) in Endlicher's *Iconographia generum plantarum* t. 92. Illustrated from material collected from Fowlers Bay or from Mt Brown. Endlicher used Bauer's illustration of this species in the Naturhistorisches Museum of Vienna but with a different arrangement of the dissected elements and considerable shortening and thinning of the branch when compared with Bauer's finished painting in the Natural History Museum in London (Mabberley & Moore 1999, frontispiece and p. 141). (Reproduced from copy of book held by National Herbarium of Victoria)

2005) indicates that it is impossible to know whether the species is native or not, the New South Wales Census (Botanic Gardens Trust 2005) treats it as native and the Western Australian Census (Western Australian Herbarium 2005) treats *Salsola kali* (as *Salsola tragus* L.) as native.

Salsola was collected from St Francis Island by Robert Brown in 1802 (see Appendix 2). *Salsola kali* is rich in soda and was earlier used in making washing soda for both soap and glass manufacture; a common name of *Salsola kali* in Europe is 'prickly glasswort'. Before 1810 and the introduction of the Le Blanc method for extracting soda from salt, large quantities of the ashes of these plants were imported to England from southern Europe and northern Africa under the name of Barilla (a soda ash made by burning plants of *Salsola kali* and related species). The juice and fruits of *Salsola kali* were also used as a diuretic (Grieve 1931). Given its importance in these times there is the possibility of the introduction of *Salsola* to St Francis Island by Pieter Nuyts's ships in 1627 or by voyagers who landed there in the intervening period. Possible sources of

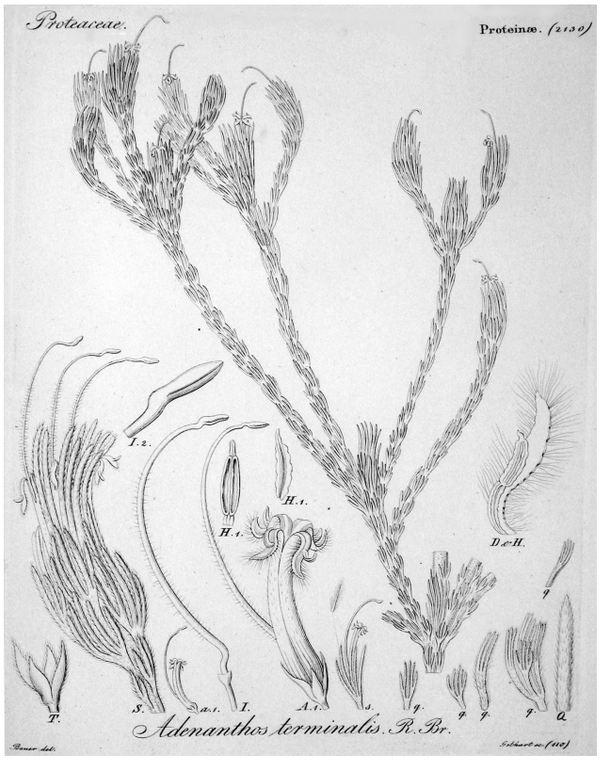


Fig. 18. *Adenanthos terminalis* R.Br. in Endlicher's *Iconographia generum plantarum* t. 110. Illustrated from material collected from Port Lincoln. Endlicher used Bauer's illustration of this species in the Naturhistorisches Museum of Vienna. *Adenanthos terminalis* is not represented in Bauer's finished painting in the Natural History Museum in London. (Reproduced from copy of book held by National Herbarium of Victoria)

introduction include ballast or fodder carried on ships or the deliberate carrying of seeds for planting because of useful properties, a practice which we have already seen was common to the British and French ships.[14]

Whether either of these plant species is native or not may be able to be determined from DNA studies but for the moment their status remains unclear.

Acacia cyclops – determining its natural distribution

Acacia cyclops A.Cunn. ex G.Don occurs naturally along the south western coastline of Western Australia through to the Nullarbor and Fowlers Bay, mostly in calcareous sand. The status of disjunct populations of *A. cyclops* on Kangaroo Island, Yorke and Fleurieu Peninsulas is unclear. It seems most likely that they are introduced populations since the the oldest collections in the State Herbarium of South Australia of the species from these localities date from 1945. This Herbarium also indicates that the species was being grown in Adelaide in the Botanic Gardens and in North Terrace Reserve in the 1920s, suggesting that recognition of its horticultural value was already known. It has been heavily used in revegetation projects of the last forty or so years and is clearly spreading at the expense of native bush in some areas (e.g. Hallet Cove, personal observation).

Brown did collect *A. cyclops* from the southern coast of Australia, but only from King George Sound (*Bennett 4351*). He did not collect the species from anywhere in South Australia and so the early collections do not tell us whether the present day populations on Kangaroo Island and Yorke Peninsula are natural. The lack of any collections from the coastal localities visited by Brown, and by the French, suggest that it was not present at that time, and therefore the present day populations are not natural.

Other puzzling collections

There are undoubtedly other collections in the lists given below which will cause puzzlement. For example, *Acacia myrtifolia* is recorded from Mt Brown with an accompanying specimen by Robert Brown. However the species is unknown there today (M.O'Leary, pers. comm. May 2001; no collection in the State Herbarium of South Australia). Is the specimen misidentified or

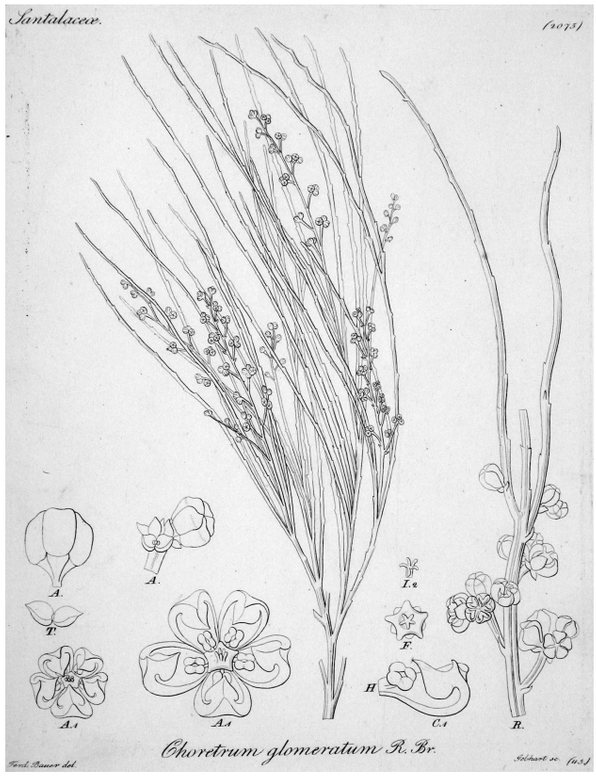


Fig. 19 *Choretrum glomeratum* R.Br. in Endlicher's *Iconographia generum plantarum* t. 45. Illustrated from material collected from Memory Cove. Endlicher used Bauer's illustration of this species in the Naturhistorisches Museum of Vienna. *Choretrum glomeratum* is not represented in Bauer's finished painting in the Natural History Museum in London. (Reproduced from copy of book held by National Herbarium of Victoria)

[14] See Peter Good's list of introductions to Kangaroo Island (Fig. 11) and Duyker & Duyker's (2001, pp. 38, 140) account of the attempts by the gardener Delahaye to establish a garden in Tasmania.

mis-labelled or did the species occur on Mt Brown 200 years ago?

Chenopodium glaucum L. is considered to be an introduction to South Australia (W.R. Barker et al. 2005). But according to the determinations on specimens in the Natural History Museum in London, Robert Brown collected it from Kangaroo Island in 1802. Is the identification correct? Will the status of this species need to be revisited in the future?

Robert Brown's collection of mudwort, *Limosella australis* R.Br., from Kangaroo Island in April 1802 is of interest. These plants are undercollected, but the only other collections of this species from the island are from Ravine des Casoars (*Eichler 15148*) in November 1958 and from Vivonne Bay (*W.R. Barker 8144 & S.D.Hopper*) in September 2000. Could this species have been found around the water supply where Good planted his alien seeds? Likewise Brown's collection of *Pleurosorus rutifolius* (R.Br.)Fee from Kangaroo Island; this is presently represented by only three collections in the State Herbarium of South Australia, none of them from the eastern end of the island.

Conclusion

This is the first attempt to draw together the botanical outcomes of the French and British voyages of discovery to South Australia in 1802–03. Although the lists produced will not be totally accurate and the French list is still incomplete, they form a base-line indication of the near-coastal vegetation of pre-European South Australia.

Acknowledgements

A debt is owed to the many authors who have produced the more recent books, web pages and databases accessed and cited here. Without their work it would have been much harder, if not impossible, to try and work out what was collected and where, and what happened to the plant collections subsequently. This applies particularly to the database of Robert Brown specimens maintained by the Western Australian Herbarium and Natural History Museum, London (Robert Brown Database 2001) – without access to this the lists produced could not have been as comprehensive as they are. The upgrading of the census of South Australian plants (W.R. Barker et al. 2005) coincided with the production of these lists and this, together with the *Australian Plant Name Index*, proved invaluable for checking names and distributions.

The exhibition *Botanical Legacy of 1802,* held in the State Herbarium of South Australia during the *Encounter 2002* celebrations, provided much of the impetus for this research.

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Appendix 1
Plant collections by the French from South Australian waters in 1803: an interim list

The Baudin expedition was based on Kangaroo Island from 7 January to 1 February, 1803. For a discussion of just where they were anchored see Matheson (2001). Leschenault (in Péron & Freycinet's *Voyage de decouvertes*... vol. 2, p. 366) claimed to have discovered a great number of new species, and these were listed by Tate (1883) as including:

> a *Nicotiana* growing on the sands by the sea shore, a *Melaleuca* with long filiform leaves, a *Melaleuca* with yellow flowers, many new species of *Eucalyptus*, a very pretty species of *Anthericum*, a plant of the order Irideae, a new species of *Solanum* and a *Convolvulus* without stem.

Similarly Tate records that Péron, the zoologist, wrote:

> at the head of this grand bay [Nepean Bay] there are forests which appear to extend far away towards the interior, and which are composed of different species of *Eucalyptus, Banksia, Phebalium, Acacia, Casuarina, Metrosideros, Leptospermum, Styphelia, Conchium, Diosma, Hakea, Embothrium* etc.

A list is included here of those species which are now known to have been collected from Kangaroo Island and St Peter Island.

The basis for the list

Sources consulted include the SONNERAT database of the Muséum National d'Histoire Naturelle, Paris (P) (SONNERAT 2005), the de Candolle Herbarium of the Conservatoire Botanique, Geneva (G) on microfiche in the Botanic Gardens and State Herbarium of South Australia library, the Australian Plant Name Index (APNI 2006), Péron's account of the voyage (Péron & Freycinet 1807–16), and the translation of Baudin's journal by Cornell (1974).

The source of the information is indicated after each species, although most are from the SONNERAT database, the search being conducted on 4 July 2005. The number beginning P00 is the number of the specimen in the database and the collector of the specimen is given as it appears in the database. A number of the specimens are housed under old names and these have been brought up to date where possible. However there is no guarantee that the identifications given in the database are correct. A number of specimens bear names of species that do not occur in the area and where this happens this is indicated in the notes following the species name.

Specimens annotated as coming from Île des Kangourous have been listed separately from those annotated as coming from Île Dècres even though they are referring to the same place. The name of the island was contentious. Flinders had given it the name Kangaroo Island because of the number of kangaroos, but Baudin, after mapping the greater part of the island, decided that he should have the honour of naming it (Cooper 1952, p. 80; Cornell 1974) and used the name Île Borda, in honour of Jean Charles Borda, a French mathematician. After Baudin died at Mauritius on the return journey, Péron, and then Freycinet, wrote up and published the outcomes of the expedition (Péron & Freycinet 1807–16). In this account, the name of the island was changed to Île Dècres, in honour of the French Minister of Marine. French specimens

have been seen which have been annotated with either Île des Kangourous or Île Dècres (there seem to be fewer of the latter) but none with Île Borda. Even though the collections from Île Dècres are mostly anonymous with respect to collector, the use of this name was presumably confined to those associated with the Baudin voyage.

Specimens listed as being collected from St Francis Island by members of the Baudin expedition are erroneously labelled. At the time there was some confusion on board as to their locality (Cornell 1974) and specimens were attributed to St Francis Island when they should have been attributed to St Peter Island or possibly the mainland adjacent to it. In the St Peter Islands between 7th and 11th February 1803 (Cornell 1974), only Baudin's party in the *Géographe* anchored and made collections for at least one or two days in that time; Freycinet in the *Casuarina* did spend time in the area but was unable to find an anchorage.

Kangaroo Island (as Île des Kangourous) (7 January – 1 February, 1803)

Acacia paradoxa DC. (P00293911, P00293912, P00293913 – Baudin).

Acacia dodonaeifolia (Pers.)Balb. (P00293880: as 'dodoniifolia' – Baudin; P00293881: as 'dodoniifolia' – Anon.).

Acrotriche ovalifolia R.Br. (P00256438 – Anon.) = *Acrotriche cordata* (Labill.)R.Br.

Atriplex paludosa R.Br. ssp. *baudinii* (Moq.)Aellen (P00256035 – Anon.) = *A. paludosa* ssp. *cordata* (Benth.)Aellen

Atriplex sp. (P00256037 – Anon.). There are at least 5 species of *Atriplex* on Kangaroo Island.

Bulbine semibarbata (R.Br.)Haw. (P00298229 – Anon; P00298230 – Baudin).

Casuarina stricta Miq. (P00230058, P00230014 - Baudin) = *Allocasuarina verticillata* (Lam.)L.A.S. Johnson *Convolvulus acaulis* Choisy (P00256180 – Leschenault) = type gathering of species.

Correa sp. (P00337623, P00337621 Baudin). There are six species of *Correa* presently recognised for Kangaroo Island (W.R. Barker et al. 2005).

Correa alba Andrews (P00337618 – Baudin). Of the six species of *Correa* presently recognised for Kangaroo Island, this is not one. It may be wrongly identified but *C. alba* is recorded for the adjacent Southern Lofty region (W.R. Barker et al. 2005).

Eucalyptus amygdylina Labill. (P00291907 – Baudin). This is a Tasmanian endemic species and so the specimen is either wrongly named or has an erroneous locality. Fruiting specimens may have been confused with *E. baxteri* (Benth.)Maiden & Blakely which does occur on the island.

Eucalyptus cneorifolia DC. (P00291915, P00291913 – both attributed to Guichenot; P00291912 – Baudin)

Eucalyptus diversifolia Bonpl. (P00291916 – Anon.).

Eucalyptus obtusiflora DC. (P00291935 Baudin). This is a Western Australian endemic species and so once again the specimen is either wrongly named or has an erroneous locality. Fruiting specimens may have been confused with *E. leucoxylon* F.Muell.which does occur on the island.

Eurybia linearifolia DC. (P00270028, P00270028 – Anon.). = *Olearia axillaris* (DC.)F.Muell. ex Benth.

Leucophyta brownii Cass. from Kangaroo Island (pers. comm. Philip Short)

Leucopogon microphyllus R.Br. (P00256416 – Anon.). This is the name of an eastern states of Australia species. There are 7 species of *Leucopogon* on Kangaroo Island. The most likely species, since it is common and coastal, is *Leucopogon parviflorus* (Andrews)Lindl.

Melaleuca nodosa Sm. (P00291940, P00291941 – Baudin). This species is found only in New South Wales and Queensland and is presumably wrongly named. *Melaleuca lanceolata* Otto is the most likely species to have been collected.

Melaleuca sp. (P00291961, P00291960 – Anon.). There are at least 10 *Melaleuca* species on Kangaroo Island (W.R. Barker et al. 2005).

Myoporum tuberculatum R.Br. (P00256116 Baudin; P00256117, P00256118 – Anon.) This name is currently not in use for Australian collections. The species could be any one of the three species of *Myoporum* occuring on Kangaroo Island, but *M. insulare* R.Br. is the one most likely to be encountered in coastal areas.

Nicotiana maritima H.-M.Wheeler (P00256131 – Baudin).

Nicotiana australis R.Br. (P00256129 – Anon; P00256130 – Leschenault): usually treated as synonymous with *N. velutina* H.-M.Wheeler (see Purdie et al. 1982). *N. velutina* is an arid species of *Nicotiana* and so this specimen is either wrongly identified or has an erroneous locality. *N. maritima* is the only species recorded for Kangaroo Island (W.R. Barker et al. 2005).

Orthrosanthus multiflorus Sweet (not listed in SONNERAT but mentioned under *Sisyrinchium cyaneum* in Lindley (1827) as having been collected by both the British and the French, but without fruits (see Fig. 10).

Pimelea serpyllifolia R.Br. (P00235912 – Baudin).

Pimelea sp. (P00235936 – Anon.). There are 8 species of *Pimelea* recorded for Kangaroo Island (W.R. Barker et al. 2005).

Senecio crithmifolius A.Rich. (P00272114 – Baudin) probably *S. pinnatifolius* – see Belcher (1994)

Senecio odoratus (P00272125 – Anon.).

Solanum aviculare ssp. *fasciculatum* (P00256165 – Anon.). One of the Kangaroo apples. *S. capsiciforme*, *S. symonii* and *S. laciniatum* are recorded from the island, although the last of these is not usually thought to be native there (Symon 1994).

Solanum symonii Eichler (P00256141 – Baudin).

Vittadinia sp. (P00270035 – Anon.). There are three species native to the island and all are reasonably common.

Kangaroo Island (as Île Dècres)

Agonis linearifolia (DC.)Sweet as *Leptospermum linearifolia* DC. Île Dècres is cited in the protologue as the type locality. This is assumed to be a misplacement of labels as this WA species does not occur on Kangaroo Island.

Senecio odoratus Hornem. (P00262366 – Baudin; P00262357 – Anon).

Senecio sp. (P00262356 – Anon.).

Melaleuca armillaris Sm. (P00291959 – Anon.). This species occurs on Kangaroo Island as a recent introduction only. See comments above re *Melaleuca*.

Eucalyptus oraria L.A.S.Johnson (det. Brooker 1977) (P00291899 – "Isle Dècres (côte occidentale)"). *E. oraria* is an endemic Western Australian species and so this identification is incorrect. The specimen may well be *E. cneorifolia* DC. which is from the same systematic group (Brooker et al. 2002).

Callistemon viridiflorus Sims (P00291965 – Anon.) – this species does not occur on Kangaroo Island. It is more likely to be *Callistemon rugulosus* (D.F.K.Schltdl. ex Link)DC. if it comes from Kangaroo Island (W.R. Barker et al. 2005).

St Peter Island (during 7 – 11 February 1803)

Acacia anceps DC. (P00293908 – Côte occidentale, Île St Pierre). The type of *A. anceps* is attributed to Leschenault from this locality or the adjacent mainland; see Maslin & Whibley 1987. A second specimen, P00293909, is merely attributed to "Côte occidentale" [West Coast]. In the protologue the specimen is attributed to "orâ orientali [East coast] (v.s. ex Mus. Par.)". *A. anceps* is confined to the southern coast-line from Recherche Archipelago to Yorke Peninsula. The locality St Pierre has presumably been added in more recent times since other specimens from the Baudin collection are invariably labelled as coming from St Francis Island (see below).

Beyeria lechenaultii (DC.)Baill. (as St Francis Island). From the protologue (Fig. 1).

Leucophyta brownii Cass. (as St Francis Island). Information pers. comm. Philip Short (DNA).

Frankenia fruticulosa DC. (as St Francis Island). From the protologue, reproduced in APNI (2006).

Myoporum brevipes Benth. (P00256103 – "Île St François", Anon. – determined by R.J.Chinnock, May 1989).

Appendix 2
Plant collections by the British from South Australian waters in 1802

Produced below are lists of the plants collected at each of the South Australian localities where collections were possible.

The basis for the lists

The lists primarily come from a search of the database of Robert Brown's collections (Robert Brown Database 2001) maintained by the Western Australian Herbarium (PERTH) and the Natural History Museum, London (BM) . Since the identifications of these plants are not always correct, notes are often provided with each species listed. Also listed is Robert Brown's manuscript name given to the species at the time, since this has helped in determining the identity of a number of Peter Good's seed collections; these have also been given for each of the landings. Many of the collections are types and Bauer illustrated some of them. This information also appears where relevant.

For background purposes a summary of Robert Brown's (Vallance et al. 2001) and Peter Good's (Edwards 1981) diary descriptions for each of the landings has also been included.

Since the localities visited were yet to be named they were allocated a Roman numeral by Brown (see Table 2 and Fig. 4) and it is these which appear on the labels of the plant collections. These numerals are preceded by "Bay" or "Anchorage". Memory Cove and Kangaroo Island were named at the time of the visit and these are also found on the labels of some specimens. Flinders' own map (Flinders 1814) or the maps in Vallance et al. (2001) offer more detailed information for each of these areas.

Bay III, Fowlers Bay (29 January 1802)

> the most miserable part of the coast we had landed on.
> *Peter Good* (Edwards 1981)

29th January. Brown went ashore at 5 a.m. and walked about a mile parallel to the beach. He commented that it was one of the most barren spots that he had seen, although he found a few new plants, plus several out of season. He caught a small quadruped – thought to be the Western Barred bandicoot, which Bauer drew at this locality. He commented on the tide rising to a considerable height as judged by the *Zostera* thrown on the beach by up to 6 feet above sea level and because of shells found 50 yards into the bush.

Amongst his collections he listed two new ants, shells, sponges, pied haemotopus (Pied Oystercatcher), a duck, two waders and possibly a honey-eater.

Good's account parallels Brown's and so it is likely they went ashore together. He records ascending the neck of land which shelters the bay and since a few new plants were found they directed themselves to the flat low country inland which was covered with salt. Good recorded that this was the only part of the mainland where none of the bushes had been set on fire, commenting that it would have been difficult to do so since the plants were so "thin scattered".

They set sail again at 1 p.m.

Brown's collections from Bay III (Fowler's Bay) still extant

Cratystylis conocephala (F.Muell.)S.Moore (*Bennett 2307*)

Dodonaea stenozyga F.Muell. (*Bennett 5443 p.p.*)

Eremophila glabra (R.Br.)Ostenf. (*Bennett 2338 p.p.*) – as *Stenochilus glaber* R.Br. Endlicher's use of Bauer's illustration of *E. glabra* from this locality or from Mt Brown in the Naturhistorisches Museum of Vienna is shown in Fig. 17. The finished painting in the Natural History Museum in London is shown in Mabberley & Moore (1999) and on their website (Natural History Museum, London 2006).

Eucalyptus oleosa F.Muell. (*Bennett 4772*)

Eucalyptus rugosa R.Br. ex Blakely (*Bennett 4764 p.p.*)

Frankenia sessilis Summerh. (*Bennett 5199*) [Brown's annotation: Frankenia dealbata]

Goodia pubescens Sims (*Bennett 4241 p.p.*) = *Goodia medicaginea* F.Muell. [Brown's annotation: Platylobioides hedysarifolia/Cystisoides]

Goodenia varia R.Br. (*Bennett 2518 p.p.*). Lectotype collection (see Carolin 1990). Also collected from St Peter Island, Thistle Island and Memory Cove.

Halosarcia indica (Willd.) Paul G. Wilson subsp. *leiostachya* (Benth.) Paul G. Wilson (*Bennett s.n.*) [Brown's annotation: Salicornia indica]

Halosarcia pterigosperma (J. Black) Paul G. Wilson (*Bennett 3080*) [Brown's annotation: Salicornia australis]

Lawrencia squamata Nees ex. Miq. (*Bennett 4998 p.p.*) [Brown's annotation: Sidioides microphylla]

Myoporum ellipticum (Bennett 2802 p.p.) = M. insulare R.Br. (pers. comm. R.J. Chinnock, August 2006) [Brown's annotation: Myoporum caecum]

Myoporum humile R.Br. = *M. parvifolium* R.Br. *(Bennett 2791 p.p.)* Part of type gathering of *M. humile* R.Br.

Nitraria billardierei DC. (*Bennett 5346 p.p.*) – the illustration of this species by Bauer which was later worked up into a completed painting (Mabberley &

Moore 1999, p. 99) was based on a later collection from Goose Island Bay in May 1803. [Brown's annotation: Nitraria australis]

Pannaria rubiginosa (Thunb. ex Ach.)Del. – a lichen (*Bennett 556*)

Pittosporum phylliraeoides DC. (*Bennett 5447*) = *P. angustifolium* Lodd. [Brown's annotation: Pittosporum angustifolium]

Samolus repens (Forst. & Forst.f.)Pers. (*Bennett 2817 p.p.*) [Brown's annotation: Samolus umbellatus]

Santalum acuminatum (R.Br.)A.DC. (*Bennett 3214 p.p.*) – part of type gathering of *Fusanus acuminata* R.Br. [Brown's annotation: Fusanoides lanceolatum]

Scaevola spinescens R.Br. (*Bennett 2573 p.p.*). Type gathering; see *Flora of Australia* 35: 97(1992). Drawn by Bauer from material collected here and at St Francis Island, *q.v.*; a black and white rendition of the completed watercolour in the Natural History Museum, London can be seen in Mabberley & Moore (1999, p. 130) and a low resolution colour reproduction is held by the State Herbarium of South Australia.

Suaeda maritima (L.)Dumort. = *Suaeda australis* (R.Br.)Moq. (*Bennett 3032*) [Brown's annotation: Chenopodium angustifolium]

Westringia dampierii R.Br. (*Bennett 2383 p.p.*) – part of type of *W. cinerea* R.Br. [Brown's annotation: Westringia cinerea]

Westringia rigida R.Br. (*Bennett 2382)* – ?type gathering of *W. rigida* R.Br.

Peter Good's seed list from Bay III

Myoporum [caec]um ? [*Myoporum insulare* R.Br.]
Atriplex diocea [possibly *A. paludosa* R.Br., later referred to by Brown as Atriplex reniformis (male)]
Croton viscidum [?*Beyeria lechenaultii* (DC.)Baill..]
Mimosa spathulata [*Acacia* sp]
Rutae: Gen: an nov! [perhaps *Geijera*]
Nov Gen Syngen: flor non vis [usually referred to a composite]
Nov Gen didym: angiosp: [possibly *Stenochilus* – now *Eremophila, or Goodia – didynamia* refers to 4 stamens with two of them longer than the other two]
Myoporum floridum [?M. parvifolium R.Br.]
Pittosporum [*Pittosporum angustifolium* Lodd.]
Samolus littoralis var [*Samolus repens* (J.R.Forst. & G.Forst.)Pers. – collected by Brown (*Bennett 2817 p.p.*) from Bay X under this name]
Nov Gen stam 15 Drup super monosp [*Lawrencia squamata* Nees would fit this description of a new genus with 15 stamens and the fruit superior and 1-seeded]
Westringia rigida [Brown collected this and his collection, *Bennett 2382,* is the type of *W. rigida*]

Bay IV, St Francis Island
(2–4 and 8–9 February 1802)

3rd February. Anchored in Petrel Bay off the north side of the island. In the morning Brown and Good at least, walked to the opposite side of the island – both commenting on the burrows of the mutton birds and a sharp grass which ran into their legs. The heat was excessive. Brown returned to shore in the evening while mutton birds were being captured for food.

4th February. Brown and Good both remain aboard ship.

8th February. Good went ashore on the second visit and traversed a different portion of the island, commenting on being equally as unsuccessful as on the first visit. Brown did not leave the ship. Bauer illustrated *Enchylaena tomentosa* and *Sarcostemma australe* from this anchorage.

Brown's collections from Bay IV (St Francis Island) still extant

Acacia oswaldi F.Muell. (*Bennett 4337*) [Brown's annotation: Mimosa mucronata]

Acrotriche patula R.Br. (*Bennett 2470*). Type collection of species. [Brown's annotation: Styphelia patula]

Angianthus tomentosa Wendl. (*Bennett 2137*) [Brown's annotation: Novum genus Corymbifer]

Correa sp. (*Bennett 5314*) identity uncertain because of the state of taxonomy of *Correa.* [Brown's annotation: Correa alba]

Dissocarpus biflorus F.Muell. (*Bennett 3075*). Type collection of *Sclerolaena biflora* R.Br. [Brown's annotation: Salsoloides incana]

Dodonaea viscosa Jacq. (*Bennett 5435 p.p.*)

Enchylaena tomentosa R.Br. (*Bennett 3036*). Type collection of species. Drawn by Bauer from material collected here. A black and white rendition of the completed painting in the Natural History Museum, London can be seen in Mabberley & Moore (1999, p. 145) and a low resolution colour reproduction is held by the State Herbarium of South Australia.

Eremophila glabra (R.Br.)Ostenf. (*Bennett 2338 p.p.*)

Lawrencia glomerata Benth. (*Bennett 5103*). [Brown's annotation: Sida insularis]

Lawrencia squamata Nees ex. Miq. (*Bennett 4998 p.p.*) [Brown's annotation: Sidoides microphylla]

Olearia axillaris (DC.)F.Muell. ex Benth. (*Bennett 2247 p.p.*) [Brown's annotation: Aster gnapholodes]

Pimelea microcephala R.Br. (*Bennett 3165*). Type collection of species. [Brown's annotation: Pimelea breviceps]

Pimelea serpyllifolia R.Br. (*Bennett 3178 p.p.*). Type collection of species. [Brown's annotation: Pimelea parvifolia]

Salsola kali L. (Dryander dupl., of *Bennett 3081?*) [Brown's annotation: Salsola australis] – this name may need to be changed to *Salsola tragus* L. (see notes on this species above).

Sarcostemma viminale (L.)R.Br. subsp. *australe* (R.Br.)P.I. Forst. (*Bennett 2872*) [Brown's annotation: Cynanchum aphyllum B[anks] & S[olander]/Cyn viminale L.] Type gathering of *Sarcostemma australe* R.Br. Completed watercolour by Ferdinand Bauer in Natural History Museum, London (see Mabberley & Moore 1999, p. 137); a low resolution colour reproduction is held by the State Herbarium of South Australia. Endlicher's reproduction of Bauer's drawing can be seen in Fig. 15.

Sclerolaena uniflora R.Br. (Bennett 3076). Type collection of species. [Brown's annotation: Salsoloides]

Westringia dampieri R.Br. (*Bennett 2383 p.p.*). This specimen is apparently the lectotype of *W. cinerea* R.Br., now a synonym of *W. dampieri* R.Br.

Peter Good's seed list from Bay IV

Cynanchium aphyllum [*Sarcostemma viminale* (L.)R.Br. subsp. *australe* (R.Br.)P.I. Forst. Brown's collection of this (*Bennett 2872*) bears this name]
Westringia angustifolia [*Westringia dampieri* R.Br. or part of that complex. *Bennett 2383*, see above, has this name on it] – successfully grown in Kew Gardens.
Lepidium insulare afr L. diffusum Sol. [*Lepidium* sp. – no extant Brown specimen]

Cartodium? Nov. sp [?*Angianthus tomentosa* Wendl., although most species that Brown referred to Cartodium were *Calocephalus*, suggesting this might also be *C. brownii*. However *Angianthus tomentosa* seed was successfully grown at Kew Gardens as *Cassinia aurea* R.Br. and attributed to Good's collection].

Festuca pungens not ripe [*Triodia irritans* R.Br.]

Sida [*Lawrencia* sp. – two species were collected by Brown from Bay IV, with *L. squamata* annotated as Sidoides microphylla and *L. glomerata* as Sida insularis by Brown]

Apium an ver A. prostratum [presumably *Apium prostratum*, although no Brown collections are extant from here]

Nov Gen Didym Angiosp: idem B III [a new genus, also collected at Bay III – almost certainly Eremophila with 4 stamens in unequal pairs]

Mimosa mucronata [Brown's collection of *Acacia oswaldii* F.Muell. (*Bennett 4337*) is annotated with this name]

Bay V, St Peter Island (6–7 February 1802)

6th February. Anchored in the evening off the northern side of Goat Island at its eastern end.

7th February. At 6 a.m. Brown and Good landed on St Peter Island and set off in a north-easterly direction for about 2 miles, then headed towards the beach. Brown became separated from the rest of the party "the heat being intolerable & pretty well loaded I found myself much more exhausted than I had done in any of my expeditions in this country" (Vallance et al. 2001, p. 127). Brown eventually reached the beach and some shade. He had lost all sense of direction and after resting, initially set off in the wrong direction for the boat. On returning to his resting place he finally had to climb up from the beach to get a sight of the boat, 4 miles away. On the return he had to walk nearly knee deep in water for an hour and a half before meeting the boat which had been sent out to meet him [in the text it says "us" – indicating that he may not have been alone].

Good was back on board by 1 p.m. Bauer was on Goat Island with Flinders.

> On this island we found no water: It is generally thinly covered with shrubs, the Pittosporum glaucum [presumably the familiar *Pittosporum phillyreoides,* now known as *P. angustifolium*] being the only tree we saw & that seldom exceeding 10 feet. The plants were nearly the same as those observed at No III [Fowlers Bay] but here there was less variety. Some spots here and there were occupied by grass which grew in tufts distant from each other, a space scarce more than their own size which was generally about 10 inches Diameter [presumably *Triodia irritans*, the type of which was collected from here].
>
> *From Brown's diary,* (quoted in Vallance et al. 2001, p. 128).

Brown's collections from Bay V (St Peter Island) still extant

Atriplex pumilio R.Br. (*Bennett 3024 p.p.*) Type gathering of *A. pumilio* R.Br.

Atriplex paludosa R.Br. [possibly collected by Flinders from here (see Vallance et al. p. 129). Referred to by Flinders as *Atriplex reniformis* of Brown and represented by *Bennett 3027* which is here attributed to Kangaroo Island]

Goodenia varia R.Br. (*Bennett 2518 p.p.*). Part of type gathering.

Pittosporum sp.; presumably what is now known as *P. angustifolium*: mentioned by Brown in his diary but not mentioned on a specimen of this (*Bennett 5447*), which is attributed to Anchorage III

Solanum hystrix R.Br. (*Bennett 2677*) Type collection. Drawn by Bauer; the completed painting is shown on the Natural History Museum, London (2002) website and in Thomas (2002, p. 57). A low resolution colour reproduction is held by the State Herbarium of South Australia.

Scaevola spinescens R.Br. (*Bennett 2573 p.p.*). Part of type gathering. Drawn by Bauer from material collected here and at Fowlers Bay (Bay III) q.v. A black and white rendition of the completed watercolour in the Natural History Museum, London can be seen in Mabberley & Moore (1999, p. 130); a low resolution colour reproduction is held by the State Herbarium of South Australia.

Triodia irritans R.Br. (*Bennett 6258*). Type gathering.

Peter Good's seed list for Bay V

Pittosporum nov sp idem Bay III [*Pittosporum angustifolium*]

Alyxia buxifolia [*Alyxia buxifolia* R.Br. – not recorded as being collected by Brown from SA, but it was collected along the southern coast from all of the other states (*Bennett 2854*)]

Syngenis: fol lanat [leaves woolly, stamens joined – ?does not really apply to any of species in list, but Syngenesia was the Linnaean method or reference to a composite]

Anchorage VI, Waldegrave Island (11 February 1802)

11th February. No new plants were recorded, but 21 species were observed, including mosses and excluding algae. Ten to twelve species of algae were noted. Mutton birds were common, together with some Cape Barren geese and rats. An abundance of seals was recorded.

Extant plant specimens

It would appear that so many of the specimens here were the same as those already encountered that Brown and Good may not have made any real effort to collect either pressed specimens or seeds. There is only one Brown collection in the database and no seed list for this location. The algal species noted appear not to be represented by collections in the Natural History Museum, London.

Westringia dampieri R.Br. (*Bennett 2383 p.p.*). Type of *Westringia cinerea* R.Br.

Anchorage VII, Flinders Island, Investigator Group (13 February 1802)

Brown records landing at 8 a.m. on the beach. He walked about half a mile in a southerly direction, then south-east, then north-east, to arrive at the beach at the eastern end of island. He recorded a fern, *Casuarina* and *Melaleuca*, the species all previously observed. A large numbers of Tammar Wallabies and seals were seen.

Traversed the greater part of the island according to Good.

Brown's collections from Anchorage VII (Flinders Island) still extant

Allocasuarina sp. (*Bennett 3141*). According to L.A. S. Johnson (1989, p. 200) the specimen, which is the type of *Casuarina bicuspidata* Benth., is *A. trichodon* (Miq.)L.A.S. Johnson which is confined to Western Australia. It was suggested that the locality data on the label must be erroneous.

Lasiopetalum discolor Hook. (*Bennett 5165 p.p.*). [Brown's annotation: Lasiopetalum bracteatum]

Westringia dampieri R.Br. (*Bennett 2383 p.p.*). Type of *Westringia cinerea* R.Br.

Peter Good's seed list for Bay VII

Astragalus [Leguminous plant – none listed in Brown's collections from here]

Mimosa spinosissima [*Acacia paradoxa* DC. Not included in Brown's extant collections from this locality, but collected at Bay IX and annotated with this name.]

Anchorage VIII, Thistle Island (21 February 1802)

21st February. Brown went ashore at 6 a.m. He walked a mile towards the middle of the island, then to a salt lagoon and returned via the beach. He was back on board by 12.30 p.m. He recorded it as a well-wooded island of *Casuarina equisetifolioides* [*Allocasuarina verticillata*], *Melaleuca albiflora* [*M. lanceolata*], *Eucalyptus* sp. and *Pittosporum*. Mangroves [*Avicennia*] were seen in several places and a tufted grass [?*Themeda* or any others] as on Flinders Island.

He saw Tammar Wallaby and brushtail possum, one Carpet Python, 7 feet 9 inches long, and others which were smaller.

They were back on board ship by noon, according to Good.

The cutter went off with the Master, Mr Thistle, midshipman, Mr Taylor and 6 crew to map the coastline. They were seen to be returning on dusk when the cutter disappeared from sight.

Brown's collections from Anchorage VIII (Thistle Island) still extant

Atriplex prostrata R.Br. (*Bennett 3024 p.p.* as *2324*) = *A. pumilio* R.Br

Eucalyptus viminalis Sm. (*Bennett 4744 p.p.*) This is presumably ssp. *cygnetensis* Boomsma (W.R. Barker et al. 2005).

Eutaxia microphylla (R.Br.)J.Black (*Bennett 4090*). Type of *Sclerothamnus microphyllus* R.Br. [Brown's annotation: Oplocharis microphylla]

Exocarpos aphyllus R.Br. (*Bennett 3203 p.p.*). Part of type gathering of this species.

Goodenia varia R.Br. (*Bennett 2518 p.p.*). Part of type gathering.

Ixodia achilleoides R.Br. (*Bennett 2147 p.p.*) [Brown's annotation: Gen nov prope …]

Lasiopetalum discolor Hook. (*Bennett 5165 p.p.*). [Brown's annotation: Lasiopetalum bracteatum]

Myoporum humile R.Br. = *M. parvifolium* R.Br. (*Bennett 2791 p.p.*) Part of type gathering of *M. humile* R.Br.

Pomaderris racemosa Hook. (*Bennett 5369 p.p.*) [Brown's annotation: Ceanothus tomentosa]

Peter Good's seed list for Bay VIII

Legum: leg 1 sperm: fl not seen [?*Eutaxia microphylla* (R.Br.)J.Black]

Umbellat [perhaps *Apium prostratum*, but possibly also species of *Hydrocotyle, Centella* or *Xanthosia*]

Scleria ensis [*Scleria* is a Cyperaceous genus, but this name was not used by Brown for any South Coast specimens. He did describe a number of species within *Scleranthus*, *Sclerolaena* and *Sclerothamnus*]

Myoporum caecum caule arbor [tree Myoporum: *M. insulare* – see previously]

Bay IX, Memory Cove (22–25 February 1802)

22nd February. The crew searched for the cutter lost on the previous evening, Brown and party (including Good) working north west along the shore in the opposite direction to Flinders party. Despite this search for the cutter and its crew they still found about 20 new plants. A Port Lincoln Ringneck [*Barnardius zonarius*] was shot by Mr Bell, the surgeon, and later drawn by Ferdinand Bauer. Native huts were seen.

23rd February. Brown and Good climbed to the top of the hill west of the ship after breakfast. They walked down the opposite side of the hill and returned to the ship through a recently burnt valley. They recorded a further 6–7 plants and 3 more specimens of Port Lincoln parrot. The beach was reached at 4 p.m.

24th February. Good returned to cover the same ground as on the 22nd while Brown remained on board arranging and describing plants. He described 13 plants on this day.

25th February. A copper inscription commemorating the loss of the crew was affixed to a tree in Memory Cove before departure at 9.30 a.m.

Brown's collections from Bay IX (Memory Cove) still extant

Acacia acinacea Lindl. (*Bennett 4344*). Possibly *A. halliana* Maslin, since *A. acinacea* does not occur here. [Brown's annotation: Mimosa intermedia]

Acacia dodonaeifolia (Pers.)Balb. (*Bennett 4341 p.p.*). [Brown's annotation: Mimosa fucata]

Acacia falcata Willd. (*Bennett 4350*) Identification to be checked – not a South Australian species. [Brown's annotation: Mimosa paniculata]

Acacia latifolia Benth. var. (*Bennett 4276*) – Identification to be checked since this is a northern tropical species with flat leaves and flowers in long spikes. Probably *A. longifolia* (Andrews)Willd. ssp. *sophorae* (Labill.) Court (see Whibley & Symon 1992).

Acacia myrtifolia (Sm.)Willd. (*Bennett 4347 p.p.*)

Acacia salicina Lindl. (*Bennett 4338 p.p.*) Identification possibly not correct as this species is not recorded for the area; (Whibley & Symon 1992). [Brown's annotation: Mimosa pedunculata]

Acacia armata R.Br. ex Aiton (*Bennett 4313 p.p.*) = *Acacia paradoxa* DC. Part of type gathering of *A. armata* R.Br. ex Aiton. [Brown's annotation: Mimosa spinosissima]

Acacia juniperina (Vent.)Willd. (*Bennett 4296*). This is an eastern state species now known as *A. ulicifolia* (Salisb.)Court. The species is most likely to be *A. rupicola* F.Muell. ex Benth. since this has similar

phyllodes and flowers (Maslin 2001) and furthermore is viscid (Whibley & Symon (1992), thus complying with Brown's manuscript name of Mimosa viscosa.

Acacia retinodes Schltdl. (*Bennett 4348*) [Brown's annotation: Mimosa no. 2]

Acacia spinescens Benth. (*Bennett 4316 p.p.*) [Brown's annotation: Mimosa ?aphylla]

Acaena ovina A.Cunn. ? = *A. echinata* Nees (*Bennett 4391 p.p.*). On present day concepts *A. ovina* does not occur here (W.R. Barker et al. 2005) [Brown's annotation: Acaena interrupta/Ancistrum latebrosum]

Adriana klotzchii Müll.Arg. = *A. quadripartita* (Labill.)Müll.Arg. (*Bennett 3585 p.p.*)

Apalochlamys spectabilis (Labill.)Steud. (*Bennett 2153*) [Brown's annotation: Genus Syngense]

Astroloma humifusum (Cav.)R.Br. (*Bennett 2405*) [Brown's annotation: Styphelia denticulata/coccinea]

Beyeria opaca F.Muell. (*Bennett 3586 p.p.*) Almost certainly *Beyeria lechenaultii* (DC.)Baill. [Brown's annotation: Crotonoides dyalifolia]

Bulbine semibarbata (R.Br.)Haw. Leek Lily. (*Bennett 5675 p.p.*)

Bursaria spinosa Cav. (*Bennett 5457 p.p.*)

Cassinia spectabilis R.Br. (*Bennett 2153*). Type collection of species (Labelled as `Genus Syngense and `Genus Nova' by Brown.)

Choretrum glomeratum R.Br. (*Bennett 3211*). Type gathering of species. Bauer's line-drawing of this species in Endlicher's *Iconographia* (1838: t. 45) is shown in Fig. 19. [Brown's annotation: Corethrium glomeratum]

Chrysocephalum apiculatum (Labill.)Steetz (*Bennett 2180*) [Brown's annotation: Gnaphalium]

Correa sp. (Bennett 5311) [Brown's annotation: *Correa varia*]

Correa sp. (Bennett 5320 p.p.): [Brown's annotation: *Correa glabra*]

Dodonaea humilis Endl. (*Bennett 5442*). [Brown's annotation: Dodonaea aptera] Type is based on illustration in Endlicher's (1834) *Atakta Botanika*, which is based on Bauer's original drawing in the Naturhistorisches Museum of Vienna. Bauer's line-drawing in Endlicher's *Atakta botanica* t. 31 is reproduced here as Fig. 14. Bauer's original worked plate can be seen on the Natural History Museum, London (2006) website.

Dodonaea viscosa Jacq. subsp. *spatulata* (Sm.)J.West (*Bennett 5438*)

Exocarpos aphyllus R.Br. (*Bennett 3203 p.p.*). Part of type gathering of this species.

Exocarpos cupressiformis Labill. (*Bennett 3207 p.p.*)

Eucalyptus angulosa Schauer (*Bennett 4773 p.p.*) [Brown's annotation: Eucalyptus costata]

Eucalyptus baxteri R.Br. ex Benth. (*Bennett 4744*) – there are 2 sheets with this Bennett number. The other relates to *E. viminalis* at this locality, Kangaroo Island and Anchorage VIII. The identification of this sheet as *E. baxteri* is probably incorrect.

Eucalyptus dumosa A.Cunn. ex J.Oxley var. *conglobata* R.Br. ex Benth. (*Bennett 4749 p.p.*) Probably *E. conglobata* (Benth.)Maiden. [Brown's annotation: Eucalyptus conglobata]

Eucalyptus incrassata Labill. (*Bennett 4763*)

Eucalyptus rugosa R.Br. ex Blakely (*Bennett 4764 p.p.*) [Brown's annotation: Eucalyptus rugosa]

Eucalyptus viminalis Sm. (*Bennett 4744 p.p.*) ssp. *cygnetensis* Boomsma.

Euphrasia collina R.Br. ssp. *tetragona* (R.Br.)W.R.Barker (*Bennett 2720 p.p.*) [Brown's annotation: Euphrasia cfr collina]

Gahnia deusta (R.Br.)Benth. (*Bennett 6051*). Type gathering of *Cladium deustum* R.Br. [Brown's annotation: Schoenus collinus ss]

Gonocarpus mezianus (Schindl.)Orchard (*Bennett 4554*) [Brown's annotation: Schoenus collinus ss]

Goodenia varia R.Br. (*Bennett 2518 p.p.*). Part of type gathering.

Goodia pubescens Sims (*Bennett 4241 p.p.*) = *Goodia medicaginea* F.Muell.

Helichrysum apiculatum DC. = *Chrysocephalum apiculatum* (Labill.)Steetz *(Bennett 2180 p.p.)*

Helichrysum leucopsideum DC. *(Bennett 2193)* [Brown's annotation: Argyrocome revoluta]

Hibbertia densiflora F.Muell. *(Bennett 4892) = H. cinerea* (R.Br. ex DC.)Toelken. Type gathering of *Pleuranda cinerea* R.Br. ex DC. *(Toelken 1998)*.

Hibiscus huegelii Endl. *(Bennett 5133) = Alyogyne huegelii* (Endl.)Fryxell [Brown's annotation: Hibiscus althaoides]

Ixodia achilleoides R.Br. (*Bennett 2147 p.p.*) [Brown's annotation: Gen Nove prope ..]

Ixiolaena supina F.Muell. (*Bennett 2159 p.p.*) [Brown's annotation: Chrysocomoides penicellatum]

Lasiopetalum baueri Steetz. (*Bennett 5156*). [Brown's annotation: Lasiopetalum cinereum]

Lasiopetalum discolor Hook. (*Bennett 5165 p.p.*). [Brown's annotation: Lasiopetalum bracteatum]

Lasiopetalum schulzenii Benth. (*Bennett 5164*). [Brown's annotation: Lasiopetalum rugosum]

Leptomeria aphylla R.Br. (*Bennett 3199*). Type gathering of this species. [Brown's annotation: Oxycarpus junceus]

Lobelia gibbosa Labill. (*Bennett 2626 p.p.*)

Logania crassifolia R.Br. (*Bennett 2902 p.p.*). Part of type gathering.

Myoporum viscosum R.Br. (*Bennett 2796*). Type of *M. viscosum* R.Br.

Myoporum sp.indet. (*Bennett s.n.*). [Brown's annotation: Myoporum viscidium suggests that this is also *Myoporum viscosum*].

Olearia axillaris (DC.)F.Muell. ex Benth. (*Bennett 2242*) [Brown's annotation: Aster exsulens]

Olearia lanuginosa (J.H.Willis)N.A.Wakef. (*Bennett 2244*) [Brown's annotation: Asteroides fasciculata]

Pimelea flava R.Br. (*Bennett 3181 p.p.*) Part of type gathering.

Pimelea glauca R.Br. (*Bennett 3163 p.p.*). Part of type gathering.

Pimelea serpyllifolia R.Br. (*Bennett 3178 p.p.*)

Pomaderris obcordata Fenzl. (*Bennett 5375 p.p.*) [Brown's annotation: Ceanothoides cuneatus]

Pomaderris racemosa Hook. (*Bennett 5369 p.p.*) [Brown's annotation: Ceanothus tomentosa]

Prostanthera serpyllifolia (R.Br.)Briq. ssp. *microphylla* (R.Br.)B.J.Conn (*Bennett 2360*). Type of *Cryphia serpyllifolia* R.Br.

Pultenaea acerosa R.Br. ex Benth. (*Bennett 5041*). Syntype: see de Kok & West (2003).

Pultenaea rigida R.Br ex Benth. (*Bennett 5034*). Type collection of species = *P. acerosa* R.Br. ex Benth.: see de Kok & West (2003).

Santalum acuminatum (R.Br.)A.DC. (*Bennett 3214 p.p.*) ?Part of type gathering of *Fusanus acuminatus* R.Br.

Scleranthus pungens R.Br. (*Bennett 3088*). Type collection of species

Schoenus deformis (R.Br.)Poir. ex Roem. & Schult. (*Bennett 6009*). Type gathering of *Chaetospora deformis* R.Br.

Senecio odoratus Hornem (*Bennett 2304 p.p.*) [Brown's annotation: Senecio polymorphus]

Templetonia retusa (Vent.)R.Br. (*Bennett 5076 p.p.*) [Brown's annotation: Rafnia retusa]

Peter Good's seed list for Memory Cove (Edwards 1981, p. 165)

Lasiopetalum angustifolium [probably *Lasiopetalum baueri* Steetz]
Hibiscus [*Alyogyne huegelii* (Endl.)Fryxell, Brown specimen is *Bennett 5133*]
Legum: legum compress fol retus [*Templetonia retusa* (Vent.)R.Br. *T. retusa* was successfully raised at Kew Gardens and its introduction attributed to Peter Good]
Lasiopetalum rugosum [Brown's manuscript name for *Lasiopetalum schulzenii* (F.Muell.)Benth.]
Eucalyptus turbinata [Eucalyptus with turbinate fruit]
Curatelloides canescens [*Curatella* is a genus of Dilleniaceae, and so this is possibly an *Hibbertia* spp.]
Cistoides urticifolia [Cistoides of Brown usually denoted a species of *Hibbertia*]
Dioica flor. masc. spec. [dioecious flowers, male specimen: *Adriana*, *Beyeria* and *Dodonaea* are all possibilities in the list above]
Eucalyptus rudis pedunul compress fruit multiangul [Eucalyptus with multiangular fruit]
Bursaria speciosa [*Bursaria spinosa – Bennett 5457 p.p.*]
Mimosa spinosissima [Brown's ms name for *A. paradoxa* DC. (*Bennett 4313 p.p.*)]
Eucalyptus purpurascens [Brown's ms name for *Eucalyptus lansdowneana* F.Muell. & J.E.Brown (*Bennett 4735*)]
Cassytha nov Holland [any one of three species recorded for this area. There is apparently no extant Brown specimen]
Legum fol ternat legum plan compress polysperm [ternate leaves, probably *Goodia medicaginea* F.Muell. (*Bennett 4241*)]
Scutellarioides odorata [*Prostanthera serpyllifolia* (R.Br.)Briq. ssp. *microphylla* (R.Br.)B.J.Conn. Extant Brown collection is *Bennett 2359*]
Myoporum viscidum [*Myoporum viscosum* R.Br. – successfully grown at Kew Gardens and its introduction in 1803 credited to Peter Good]
Dodonaea alata [*Dodonaea* with winged fruits would seem to be more likely to be *D. viscosa*, *D. lobulata* or *D. stenozyga*. Fruits of *D. humilis* (D. aptera of Brown) are sticky and unwinged, *D. hexandra* not noticably winged)
Lasiopetalum bracteatum few seeds [Brown's manuscript name for *Lasiopetalum discolor*]
Centauroides scariosa [presumably a composite resembling *Centaurea* in appearance]
Ceanothoides apetala [Brown's ms name for *Pomaderris* spp.]
Gnaphaloides viscida [perhaps *Cassinia uncata* Cunn. ex DC. Although not recorded as being collected by Brown, it does occur in the area and is a sticky species found in coastal areas]
Gnaphalium aureum probably no seed [*Chrysocephalum apiculatum* (Labill.)Steetz (*Bennett 2180*)]
Dodonaea an var viscosa [one of the forms of *Dodonaea viscosa*]
Eucalyptus nov sp
Melaleuca nov sp
Melaleuca decussata (*Melaleuca decussata* R.Br.
Scaevola viscida [possibly *Scaevola crassifolia* Labill. (*Bennett 2557* from Bay X, Port Lincoln) which has young leaves which are viscid]

Peter Good's document on soil types

Some species included in a list documenting soil types (Edwards 1981, p. 153) did not occur in the list above; these have been added below, since some of them are not mentioned elsewhere.

Myoporum procumbens
Myoporum caecum [= *Myoporum insulare*]
Crotonoides urticifolia [Crotonoides usually meant a Beyeria species, but the epithet urticifolia was used by Brown in combination with Cistoides, which usually denoted a Hibbertia species. Both genera were collected at this locality]
Clematis [possibly *Clematis microphylla* DC. (*Bennett 4853*). The herbarium specimen merely is attributed to South Coast without a specific locality]
Mesembryanthemum [presumably *Mesembryanthemum clavellatum* Haw. = *Disphyma crassifolium* (L.)L. Bolus. According to the protologue this species was raised by Haworth from seed supplied by Kew in 1803. See list of introductions to Kew Gardens attributed to Peter Good, see Table 3]
Mimosa triquetra [*Acacia* sp., possibly *Acacia triquetra* Benth., which does occur in this area. Seed was also collected at Bay X]
Mimosa viscida [viscid *Acacia* sp., also listed for Bay X]
Campanula afr. simplicicaulis [this is the name Brown applied to *Wahlenbergia bicolor* Lothian (*Bennett 2617 p.p.*) = *W. luteola* P.J.Smith]

Bay X, Port Lincoln (25 February – 6 March 1802)

25th February. Anchored in the bay about 4 p.m. Brown and Good went on shore for an hour or so. They collected a possum which they thought to be new, but could not find any fresh water, their prime goal at this stage.

26th February. A party landed at 5 a.m. and walked to the top of the nearest hill [Stamford Hill] where they had a good view of the bay and all its possible anchorages, as well as a lake [Sleaford Mere] which they supposed to be fresh water. Apart from Bauer's collection of a new species of *Acacia*, no new plants were observed and they were back on board by 10 a.m.

The *Investigator* was moved further up the bay towards the lake and anchored again at 1 p.m. Flinders, Brown and Good investigated the lake, which was found to be brackish, but fresh water was later located near the beach. Good records collecting several new plants during this excursion, but Brown only records a new snake being killed.

27th February. Tents were erected on shore. The scientific party set off at 8 a.m. to walk to the top of North Side Hill. Both Brown and Good commented on the recent burning of the area and the presence of fires, still burning, in the distance. They returned by walking straight down the hill to the sea and then walking parallel to the shore. Although they came across a well trodden path, they saw sign of the local aborigines or any of their huts.

Brown records collecting a a few new plants, amongst them a *Banksia*. William Westall's painting[15] of Spencer's Gulf, *Banksia* was almost certainly made here since *Banksia marginata* does not occur at the top of the gulf.

[15] See Thomas (2002, p. 113) or view it on-line on the National Library of Australia (2004) webpage.

28th February. Brown remained on board ship describing and preparing his plant collections. Good went ashore at Brown's behest to walk down the opposite side of the bay, but found little of interest except a native path, similar to that seen the day before.

1st March . Landed at 8 a.m. and the scientific party walked to the lake [Sleaford Mere] and then around it and across to Sleaford Bay, where they found the mainsail of the lost cutter. Good comments on the "dreadful surf" all around. They found little of interest, Brown recording he had found only one new species for his collection.

2nd March. Brown and Good remained on board dealing with the plants collected the day before.

3rd March. Brown and Good went ashore and walked along the bay to the bottom of North Side Hill. Brown records finding no new plants but an *Oxalis* in flower and a new Rutaceous plant [*Microcybe pauciflora* Turcz.]. Fowler was sent off to Memory Cove in the cutter for 2–3 days to look for further wreckage and the bodies of the lost crew.

4th March. Brown again remains on board. Good went ashore in the afternoon and found flowering specimens of the *Melaleuca* found at Memory Cove and of a *Convolvulus*. He records seeing four emus at a distance. He also notes that two aborigines were seen near the tents and records the finding of a native hut containing 17 spears and other implements.

Following the observation of the eclipse of the sun experienced this day, the tents were dismantled and preparations made for moving off early the next day.

5th March. Having left early the ship anchored in Spalding Cove about 10 a.m., according to Good. Brown records departure in the forenoon and anchorage in the evening. Good's account is supported by that of Flinders. Fowler returns from Memory Cove having had no success in locating the wreck of the cutter or any of the crew.

Good and Brown went ashore here on the South point. Vallance et al. (2001) suggest he means Cape Colbert.

6th March. Departure in the morning.

Brown's collections from Bay X (Port Lincoln) still extant

Acacia calamifolia Sweet ex Lindl. (*Bennett 4301*) [Brown's annotation: Mimosa intermedia]
Acacia dodonaeifolia (Pers.)Balb. (*Bennett 4341 p.p.*) [Brown's annotation: Mimosa cf. Fucata]
Acacia myrtifolia (Sm.)Willd. (*Bennett 4347 p.p.*)
Acacia pycnantha Benth. var. *angustifolia (Bennett 4340*) = *A. gillii* Maiden & Blakely. Type of *A. pycnantha* var. *angustifolia* Benth. Listed, in error, in *Flora of Australia* 11A: 278, as having been collected at Memory Cove.
Acacia retinodes Schltdl. (*Bennett 4350*)
Acacia salicina Lindl. (*Bennett 4338 p.p.*) Identification possibly not correct as this species is not recorded for the area (Whibley & Symon 1992). [Brown's annotation: Mimosa pedunculata]
Acacia spinescens Benth. (*Bennett 4316 p.p.*) [Brown's annotation: Mimosa ?aphylla]
Acaena ovina A.Cunn. (*Bennett 4391 p.p.*). Possibly *A. echinata* Nees var. *echinata.* [Brown's annotation: Acaena interrupta.]
Adenanthos terminalis R.Br. (*Bennett 3260*). Type of the species. [Brown's annotation: Proteoides appressa]. Bauer's original illustration of this specimen in the Naturhistorisches Museum of Vienna was used as the basis for the illustration in Endlicher's (1837–41) *Iconographia generum plantarum* in 1838 (see Fig. 18).
Adriana klotzchii (F.Muell.)Müll.Arg. = *A. quadripartita* (Labill.)Müll.Arg. (*Bennett 3585 p.p.*)
Baeckea behrii F.Muell. (*Bennett 4588 p.p.*) [Brown's annotation: Baeckea mucronata]
Banksia marginata Cav. (*Bennett 3394*) Type of *Banksia patula* R.Br.
Beyeria opaca F.Muell. (*Bennett 3588*). Probably *B. lechenaultii* (DC.)Baill. since Kangaroo Island material is wrongly determined as this. [Brown's annotation: Crotonoides sp. 5]
Billardiera cymosa F.Muell. (*Bennett 5465, 5466*) [Brown's annotation: Billardieria digyna/B. sericea]
Bursaria spinosa Cav. (*Bennett 5457 p.p.*)
Casuarina baxteriana Miq. (*Bennett 3136 p.p.*) a Western Australian, not South Australian species. Presumably one of the three shrubby species occurring in the area.
Casuarina humilis Otto & A.Dietr. = ?*Allocasuarina helmsii* (Ewart & M.Gordon)L.A.S.Johnson (*Bennett 3128*)
Centella asiatica L. = *Centella cordifolia* (Hook.f.)Nannf. (Bennett 4494) [Brown's annotation: Hydrocotyle grandis]
Convolvulus remotus R.Br. (*Bennett 2766 p.p.*) Type collection of species. [Brown's annotation: Convolvulus remotus R.Br.]
Correa sp. (Bennett 5309) [Brown's annotation: Correa varia var furfuracea]
Correa sp. (Bennett 5310) [Brown's annotation: Correa varia var dentibus and var glabrel]
Correa sp. (Bennett 5320 p.p.) [Brown's annotation: Correa glabra]
Dodonaea hexandra F.Muell. (*Bennett 5426*) [Brown's annotation: Dodonaea sericifolia]
Dodonaea viscosa Jacq. (*Bennett 5435 p.p.*)
Eucalyptus rugosa R.Br. ex Blakely (*Bennett 4764 p.p.*)
Eucalyptus angulosa Schauer (*Bennett 4773 p.p.*)
Eucalyptus viminalis Sm. ssp. *cygnetensis* Boomsma (*Bennett 4742*)
Eucalyptus grandis W.Hill (*Bennett 4799 p.p.*) Identification erroneous – this is an eastern states species only; possibly *E. leucoxylon* F.Muell.
Eucalyptus oleosa F.Muell. (*Bennett 4770 p.p.*) [Brown's annotation: Eucalyptus longisate]
Eucalyptus dumosa A.Cunn. ex Oxley var. *conglobata* R.Br. ex Benth. (*Bennett 4749 p.p.*) [Brown's annotation: Eucalyptus conglobata]
Eucalyptus anceps (R.Br. ex Maiden)Blakely (*Bennett 4748 p.p.*) – det needs checking
Exocarpos cupressiformis Labill. (*Bennett 3207 p.p.*)
Gahnia lanigera (R.Br.)Benth. (*Bennett 6052*). Type of *Cladium lanigerum* R.Br. [Brown's annotation: Schoenus lanigerum]
Geijera parviflora Lindl. (*Bennett 5336*) (not otherwise recorded for Eyre Peninsula (W.R. Barker et al. 2005), but *G. linearifolia* (DC.)J.M.Black is) [Brown's annotation: Fagaria linearis]
Grevillea aspera R.Br. (*Bennett 3341*) Type collection of

species.
Grevillea ilicifolia (R.Br.)R.Br. (*Bennett 3314*) Type of *Anadenia ilicifolia* R.Br.
Grevillea pauciflora R.Br. (*Bennett 3340* p.p.) Part of type gathering. Bauer's completed painting of this species is in the Natural History Museum, London. It has been reproduced in Olde & Marriott (1994, 1, t.14), in Mabberley & Moore (1999, p. 150), and on the Natural History Museum, London (2006) website.
Hakea cycloptera R.Br. (Bennett 3373)
Hakea rugosa R.Br. (*Bennett 3382*)
Hakea vittata R.Br. (*Bennett 3372*) [Brown's annotation: Conchium S]
Helichrysum apiculatum DC. = *Chrysocephalum apiculatum* (Labill.)Steetz (*Bennett 2181*) [Brown's annotation: Gnaphalium]
Hibbertia stricta (R.Br. ex DC.)F.Muell. (*Bennett 4880 p.p.*) – identification still to be clarified. [Brown's annotation: Curatelloides/Pleurandra taxifolia]
Humea cassiniacea F. Muell = *Haeckeria cassiniiformis* F.Muell. (*Bennett 2155*)**.**
Imperata cylindrica Beauv. (*Bennett 6135 p.p.*)
Ixodia achilleoides R.Br. (*Bennett 2147 p.p.*) [Brown's annotation: Gen Nov prope..]
Juncus kraussii Hochst. ssp. *australiensis* (Buchenau)Snogerup (*Bennett s.n.* or *5791 p.p.*) – subspecies not recognised in South Australian census (W.R. Barker et al. 2005)
Lawrencia spicata Hook. (*Bennett 5110*). [Brown's annotation: Sida.]
Lasiopetalum behrii F.Muell. (*Bennett 5159*). [Brown's annotation: Lasiopetalum strictum]
Lasiopetalum discolor Hook. (*Bennett 5165 p.p.*). [Brown's annotation: Lasiopetalum bracteatum]
Lepidosperma viscidum R.Br. (*Bennett 6035*). Type collection of species. [Brown's annotation: Schoenus viscidum]
Logania crassifolia R.Br. (*Bennett 2902 p.p.*). Part of type gathering.
Linum marginale A.Cunn. (*Bennett 5214 p.p.*) [Brown's annotation: Linum Novae Hollandiae]
Lobelia alata Labill. (*Bennett 2622 p.p.*)
Lobelia gibbosa Labill. (*Bennett 2626 p.p.*)
Melaleuca acuminata F.Muell. (*Bennett 4688 p.p.*)
Melaleuca decussata R.Br. (*Bennett 4682*). Type gathering of species.
Melaleuca wilsonii F.Muell. (*Bennett 4689*).
Monotaxis sp. indet (*Bennett 5498*). There are no coastal representatives of this genus in South Australia and so the identification needs to be revisited.
Myoporum humile R.Br. = *M. parvifolium*
Myoporum humile R.Br. = *M. parvifolium* R.Br. *(Bennett 2791 p.p.)* Part of type gathering of *M. humile* R.Br.
Myoporum parvifolium R.Br. (*Bennett 2790*) Type collection of species.
Microcybe pauciflora Turcz. (*Bennett 5477*) [Brown's annotation: Genus Rutac..]
Olearia axillaris F.Muell. (*Bennett 2247 p.p.*) [Brown's annotation: Aster gnaphalodes]
Olearia ciliata (Benth.)F.Muell. ex Benth. (*Bennett 2225 p.p.*) [Brown's annotation: Aster peduncularis/ Asteroides rigida]
Olearia rudis (Benth.)F.Muell. ex Benth. (*Bennett 2015 p.p.*) [Brown's annotation: Asteroides scabrata/Aster asperrimus]
Pelargonium littorale Hugel (*Bennett s.n. or 5225*)
Picris hieracioides L. (*Bennett 2216*). *P. hieracioides* does not occur in S.A. – this is probably *Picris angustifolia* DC. which does occur in the area [Brown's annotation: Picris macrospermis]
Pimelea glauca R.Br. (*Bennett 3163 p.p.*). Part of type gathering.
Pimelea sp. (*Bennett 3191 p.p.*). Collected here or at Mt Brown.
Pomaderris obcordata Fenzl. (*Bennett 5375 p.p.*) [Brown's annotation: Ceanothoides obcordata]
Prasophyllum nigricans R.Br. (*Bennett 5551*). Type collection of species. Now known as *Genoplesium nigricans* (R.Br.)D.Jones & M.Clements. "The type consists of a study set only, remainder lost in transit" is written on the sheet (Clements 1989).
Prostanthera serpyllifolia (R.Br.)Briq. ssp. *microphylla* (R.Br.)Conn (*Bennett 2359*). Type of *Cryphia microphylla* R.Br.
Pultenaea elliptica Sm. (*Bennett 5038*) not in SA – identification needed. According to de Kok & West (2002) this is *P. tuberculata* Pers. but that species does not occur in South Australia [Brown's annotation: Pultenaea cinerea].
Pultenaea tenuifolia R.Br. ex Sims (*Bennett 5040 p.p.*)
Pultenaea vestita R.Br. (*Bennett 5039*). Type collection of species.
Samolus repens (Forst. & Forst.f.)Pers. (*Bennett 2817 p.p.*) [Brown's annotation: Samolus littoralis]
Senecio hispidulus A.Rich. var. *dissectus* (Benth.)Belcher (*Bennett 2281*) [Brown's annotation: Senecio plebeius]
Scaevola aemula R.Br. (*Bennett 2559*). Type collection of species.
Scaevola crassifolia Labill. (*Bennett 2557*).
Scaevola linearis R.Br. (*Bennett 2566*). Type collection of species.
Selliera radicans Cav. (*Bennett 2538 p.p.)* [Brown's annotation: Goodenia littoralis/repens]
Solanum simile F.Muell. [see Symon 1981, p. 89] (*Bennett 2665 p.p.*) [Brown's annotation: Solanum laciniatum var. integrifolium]
Sporobolus virginicus Kunth (*Bennett 6209 p.p.)* [Brown's annotation: Agrostis virginicus]
Schoenus nitens (R.Br.)Poir. ex Roem. & Schult. (*Bennett 6014 p.p.*). Type of *Chaetospora nitens* R.Br.
Scirpus nodosus Rottb. = *Isolepis nodosa* (Rottb.)R.Br. (*Bennett 5973 p.p.*)
Tricoryne tenella R.Br. (*Bennett 5696*). Type gathering of species. [Brown's annotation: Anthericoides tenella]
Themeda australis (R.Br.)Stapf = *Themeda triandra* Forssk. (*Bennett 6194 p.p.*). ?Part of type gathering of *Anthistiria australis* R.Br.
Vittadinia australis A. Rich. (*Bennett 2025, 2028*) [probably *V. australasica* (Turcz.)N.T.Burb. var. *australasica* – see Burbidge (1982)] [Brown's annotation: Erigeron glandulosum]
Wahlenbergia bicolor Lothian (*Bennett 2617 p.p.*) = *W. luteola* P.J.Smith [Brown's annotation: Campanula simplicaulis]
Zygophyllum billardieri DC. (*Bennett 5221 p.p.*) [Brown's annotation: Zygophylloides octandra]

Peter Good's seed collections from Bay X

Conchium fol teretifolius sp. A caps gibbous (*Hakea vittata* R.Br. or *Hakea cycloptera* R.Br.)
—— sp. B caps compress (*Hakea vittata* R.Br. or *Hakea cycloptera* R.Br.)
—— sp. C caps rugos compress mucronat apic reflex (*Hakea rugosa* R.Br.)
Casuarina equisetifolia [*Casuarina* or *Allocasuarina* species, probably *A. verticillata* (Lam.) L.A.S.Johnson]
Melaleuca 4 gone affin maxim M. armillaria [one of the 10 species of *Melaleuca* in the area]
Epilobium cfr E. glabellum Forst. [*Epilobium*

billardieranum Ser.]
Scaevola cfr S. varia [one of the 3 listed *Scaevola* species collected by Brown]
Lotus nov Hollandiae [*Lotus australis* or *Lotus cruentus* – repeated below – Peter Good was credited by Aiton with the introduction of this species to Kew Gardens in 1803]
Linum nov Hollandiae [*Linum marginale* A.Cunn]
Asteroides nov sp. [?*Olearia* sp.]
Sida paradoxa [*Lawrencia* sp.]
Melaleuca maxim affin M. albiflora [one of the 10 species of *Melaleuca* in the area]
Mimosa viscida [viscid *Acacia* sp., also listed for Memory Cove]
Nov Gen composit [either *Ixodia achilleoides* R.Br. (*Bennett 2147 p.p.*), since Brown's labels comment on this new genus which was collected from Anchorages 8–10 or *Humea* (*Bennett 2155*), also labelled as a new genus. However *Ixodia achilleoides* was successfully grown in Kew Gardens and attributed to Peter Good]
Mimosa triquetra [*Acacia* sp., possibly *Acacia triquetra* Benth., which does occur in this area. Seed was also collected at Memory Cove]
Pultenaea riparia [one of the *Pultenaea* species above, probably *P. vestita* R.Br. since this was successfully raised at Kew Gardens and attributed to Peter Good]
Asteroides microphylla [possibly *Olearia lepidophylla* (Pers.)Benth. or *O. lanuginosa* (J.H.Willis)N. A.Wakef.]
Campanula cfr simplicicaulis Sol. [*Wahlenbergia bicolor* Lothian]
Ancistrum cfr Ancist sanguisorba [?*Acaena echinata* Nees]
Melaleuca decussata [*Melaleuca decussata* R.Br. *(Bennett 4682*)] – successfully grown in Kew Gardens.
Scaevola hirta caule erecto ramoso foliis limonibus integris dentatum [*Scaevola* spp.]
Goodenia varia affin ovalis [*Goodenia varia* R.Br. or *Selliera* sp.]
Baeckia [*Baeckea behrii* F.Muell.]
Goodenia uniflora – acaulis scapo subuniflora [*Selliera radicans* Cav. (*Bennett 2538 p.p.)*]
Billardiera sericea affin B scandens [*Billardiera cymosa* F.Muell.]
Linum Nova Hollandiae [repeated, see above]
Lobelia caule subsimplex erecto floribus pallida coeruleas [?*Lobelia gibbosa* Labill.]
Gen [Te]hymaloid dioic and caps dicona [?*Pimelea* sp.]
Convolvulus [*Convolvulus remotus* R.Br.]
Fagara enodia cfr [*Geijera parviflora* Lindl.]
Arenaria marina [*Spergularia marina* – treated as introduced]
Orima marginata [no suggestions]
Anthericoides juncea [*Tricoryne tenella* R.Br. was collected from here, but the manuscript name Anthericoides juncea more usually referred to *Tricoryne elatior* R.Br., which also occurs in this area, but was apparently not collected by Brown]
Lotus amanus [*Lotus australis* or *Lotus cruentus*]
Mimosa [*Acacia* sp.]

Anchorage XI, Kirkby Island (6–7 March 1802)

6th March. Anchorage under the lee of this island at 5 p.m.

7th March. Brown and Good went ashore after breakfast. Brown records covering the greater part of the island, before returning on board at midday. He made comments about the granitic nature of the island and listed several bird species, amongst them a Pacific gull, pelican and Fairy penguin. He also recorded what he thought might be a new species of *Salsola* (generic term for Chenopodiaceae) and what might be a distinct species of *Polygonum*.

Good records departure from the island, to proceed up the gulf, at noon. He also notes that, in accordance with Navy custom, the belongings of the lost crew were sold at auction and two promotions of crew made to cover the loss of the officers.

Brown's collections from Anchorage XI still extant

Maireana brevifolia (R.Br.)Paul G.Wilson (*Bennett 3084?*). Type of *Kochia brevifolia* R.Br.

Inlet XII, Mt Brown (9–13 March 1802)

9th March. Anchored off Red Cliff Point at the top of Spencer Gulf.

10th March. Before 6 a.m. a party of seven, including Robert Brown (naturalist), Peter Good (gardener), Ferdinand Bauer (botanical artist), William Westall (landscape artist), John Allen (miner) and Brown's and Westall's servants (Porter and White) set off for the highest mountain which they thought to be no more than 5 miles from the beach.

The route across the plain. From the boat, the party waded for half a mile through water nearly a foot deep and mostly covered with sea-grasses (*Zostera*). The first mile of country crossed was flat and sandy and covered with almost the same plants as those observed at their previous stop at Fowlers Bay. The next mile was also over flat ground but with salt rivulets and vegetation associated with salt marshes.

At the end of the swampy ground they entered a sandy area, also about a mile broad, with scattered small shrubs with wind blown sand accumulated on their land side. This was succeeded by a wood, "the trees of which were of no considerable size and chiefly a species of Eucalyptus". There were native huts at the edge of this mallee scrub, which was of "considerable breadth". After this they again entered a plain, this time with tufty grass and occasional shrubs on a stony surface. The stones were similar to those on the mountain.

There was a gradual ascent in the area where they encountered the beds of several rivulets with banks a few feet in height.

The ascent. At 2 p.m. they reached the base of the mountain and "climbed the hill a little east of the mountain whose top we intended to ascend". Brown records this first hill as steep. Both of the servants were so overcome with fatigue that they were ordered to go back and remain at the spring (Woolundunga) at the base of the mountains. From the summit of this first hill the party had to continually ascend and descend similar hills until they made it to the summit of Mt Brown just before sunset. Brown recorded the hills as being rounded and

separated from each other by narrow ravines, with their sides mostly covered with a spiny grass [spinifex or *Triodia*] and *Xanthorrhoea*, and with herbs and shrubs in the hollows together with trees of "tolerable size" of *Casuarina equisetifolia* [*Allocasuarina verticillata*] and a species of *Eucalyptus*.

The view from the summit. Brown's only comment on the view of the inland was that it was quite flat, with no water or mountain ranges in sight, and they were unable to take bearings because the sun had set. Peter Good, on the other hand, was much more informative.

> It was very near sunset before we reached the summit when we had a most extensive view probably the most extensive ever had in New Holland, being elevated full 3000 feet above the level of the Sea and it may be said 100 miles in the heart of the country – on the south was the range of mountains rising behind each other with ravins & deep gullies from these mountains to West was a great tract of low land, the River or Arm of the Sea & and a hilly country beyond, from which to North was a level plain as far as the eye could reach with the continuation of the River gradually diminishing till it was lost in the low plains to the North from which to the East & Round to the South was a vast plain terminated by a range of hills parallel to what we were on running from North to South

A disturbed night. After resting for half an hour they descended about a third of the way from the top to a gully [now known as Peter Good Gully] where they spent an uncomfortable night, without water.

> Having gratified ourselves with viewing this extensive and boundless desert we begun to descend with all expedition, but were soon overtaken with darkness & some of the party being overcome with fatigue on arrival at the bottom of a deep Gullie we though fit to spend the night but it was spent uncomfortably – little firewood could be got the night air was very cool in this elevated situation – the ground was full of stones and so uneven that we could not lay – add to which some had no water having trusted to finding water among the mountains & we had not been so fortunate to find any – the morning was anxiously expected few of the party having had any refreshing sleep.

At day break the party descended the mountain and reached the spring about 7 a.m. where the servants were found "very comfortable, with plenty of fine water and a good fire". They had also had a disturbed night since they had heard human voices nearby and what they assumed to be dogs howling. The party quenched their thirst and ate some "musty bisquit & Salt Beef". They collected about the spring since Good records finding a Tobacco and other new plants.

Return to the ship. Just before 8 a.m. they set off again for the ship. They finally reached the shore about 5 p.m. all suffering considerably from fatigue and a lack of water as a result of the day being so hot. On going on board they found that Flinders had not yet returned from taking the cutter further up the gulf. He returned around 11 p.m., his party having rowed some 15 to 20 miles up the gulf to West Augusta, just below the present site of the Aridlands Botanic Gardens.

11th March. All remained aboard except Mr Fowler who went off in the cutter to take sounding in the western side of the bay. Brown and Good spent the day dealing with their collections from Mt Brown and Bauer is known to have done drawings of three of the plants which had been collected on the previous days, *Cynanchum floribundum, Senna artemisioides* and *Eremophila scoparia.*

Brown's collections from Inlet XII still extant

- *Acacia myrtifolia* (Sm.)Willd. (*Bennett 4347 p.p.*) – possibly a misidentification or wrong locality. The species is not considered to occur here (see above)
- *Acacia papyrocarpa* Benth. (*Bennett 4343*)
- *Acacia salicina* Lindl. (*Bennett 4345*)
- *Acacia longifolia* Willd. (*Bennett 4271*, as *4721*)
- *Alectryon oleifolius* (Desf.)S.Reyn. ssp. *canescens* S.Reyn. (*Bennett 5475*) [Brown's annotation: Cupanioides]
- *Amyema pendula* (Sieber ex Spreng.)Tiegh. (*Bennett 2952*) – possibly *A. miquellii* (Lehm. ex Miq.)Tiegh. since *A. pendula* is not recorded for this area. The specimen was growing on a Eucalypt species.
- *Boerhavia coccinea* Mill. (*Bennett 3009*)
- *Bassia divaricata* (R.Br.)F.Muell. = *Sclerolaena divaricata* (R.Br.)Smith in Rees (*Bennett 3078*)
- *Bassia paradoxa* (R.Br.)F.Muell. = *Dissocarpus paradoxus* (R.Br.)Ulbr. (*Bennett 3077*)
- *Brachyscome marginata* Benth. = *B. dentata* Gaudich. (*Bennett 2077*)
- *Callitris gracilis* R.T.Baker (*Bennett 3108*) [Brown's annotation: Callitris glauca Nob/Genus conifer]
- *Calostemma purpureum* R.Br. (*Bennett 5641*). Type of *Calostemma purpureum* R.Br. [Brown's annotation: Pancratium purpureum]
- *Carex pseudo-cyperus* L. = *C. fascicularis* Sol. ex Boott (*Bennett 6077*)
- *Calocephalus citreus* Less. (*Bennett 2142 p.p.*) [Brown's annotation: Cartodioides acida]
- *Cassia eremophila* A.Cunn. (*Bennett 4335*) = *Senna artemisioides* (DC.)Randell ssp. *coriacea* (Benth.)Randell [Brown's annotation: Mimosa]
- *Cassia phyllodinea* R.Br. (*Bennett 4253*) = *Senna artemisioides* (DC.)Randell ssp. *petiolaris* Randell [Brown's annotation: Cassia simplicifolia]. Illustrated by Ferdinand Bauer at this locality – the only image available of the finished painting in the Natural History Museum, London, is in Mabberley & Moore (1999, p.108) or there is a low resolution reproduction in the State Herbarium of South Australia.
- *Cassia sturti* var *coriacea* Benth. (*Bennett 4334*) = *Senna artemisioides* (DC.)Randell ssp. *coriacea* (Benth.)Randell [Brown's annotation: Mimosa pinnata]
- *Cassinia arcuata* R.Br. (*Bennett 2152*) Type gathering of species. [Brown's annotation: Gnaphalium]
- *Cassinia laevis* R.Br. (*Bennett 2151*) Type gathering of species.
- *Cheilanthes lasiophylla* Pichi-Serm. (*Bennett 4 b*)
- *Chrysocephalum apiculatum* (Labill.)Steetz (*Bennett 2183*) [Brown's annotation: Armochate stricta]
- *Convolvulus ?remotus* R.Br. (*Bennett 2766 p.p.*). Possibly *C. microsepalus* R.W.Johnson.
- *Cullen australasicum* (Schtdl.)J.W.Grimes (*Bennett 4135*) [Brown's annotation Trifoliastrum colleneum]
- *Cynanchum floribundum* R.Br. (*Bennett 2874*). Type gathering of species. Illustrated by Ferdinand Bauer at this locality – the finished painting in the Natural History Museum, London, is shown in full colour in Thomas (2002, p. 89), in black and white in Mabberley & Moore (1999, p.108), on the Natural History Museum, London (2006) website, and as a low resolution reproduction in the State Herbarium of South Australia.

Cyperus vaginatus R.Br. (*Bennett 5922 p.p.*). Part of type gathering

Dissocarpus paradoxus (R.Br.)F.Muell. ex Ulbr. (*Bennett 3077*) Type of *Sclerolaena paradoxa* R.Br. [Brown's annotation: Salsoloides captata]

Dodonaea baueri Endl. (*Bennett 5429 p.p.*) [Brown's annotation: Dodonia reposa]

Dodonaea stenozyga F.Muell. (*Bennett 5443 p.p.*)

Dodonaea viscosa Jacq. *ssp. angustissima* (DC.)J.G.West (*Bennett 5434 p.p.*)

Dodonaea lobulata F.Muell. (*Bennett 5444*) [Brown's annotation: Dodonae dentata]

Enneapogon nigricans (R.Br.)Beauv (*Bennett 6249*)

Eremophila alternifolia R.Br. (*Bennett 2340*) Type gathering of species.

Eremophila glabra (R.Br.)Ostenf. (*Bennett 2338 p.p.*) Part of type gathering. See Figure 17.

Eremophila longifolia (R.Br.)F.Muell. (*Bennett 2339 p.p.*) Part of type gathering of *Stenochilus longifolius* R.Br.

Eremophila oppositifolia R.Br. (*Bennett 2341*) Type gathering of species.

Eremophila scoparia (R.Br.)F.Muell. (*Bennett 2337*) Type gathering of *Pholidia scoparia* R.Br. Illustrated by Ferdinand Bauer at this locality – the finished painting in the Natural History Museum, London, is shown in full colour in Thomas (2002, p. 59), in black and white in Mabberley & Moore (1999, p. 141), on the Natural History Museum, London (2006) website, and as a low resolution reproduction in the State Herbarium of South Australia. See Figure 16 for Endlicher's reproduction of Bauer's drawing.

Exocarpos cupressiformis Labill. (*Bennett 3207 p.p.*)

Geranium potentilloides L'Her. ex DC. (*Bennett 5224 p.p.*)

Hakea leucoptera R.Br. (*Bennett 3376*) Type collection of species . Fig. 3 shows the lectotype collection in the Natural History Museum (BM) in Britain.

Heliotropium asperrimum R.Br. (*Bennett 2921*) Type collection of species.

Heliotropium glandulosum R.Br. (*Bennett 2920*) Type collection of species. Synonym of *H. europaeum* L. and the basis for now considering this to be a native, rather than introduced species (Craven 1996)

Humea punctulata F. Muell (*Bennett 2153*) [Brown's annotation: Nov genus]

Ixiolaena tomentosa Sond. & F.Muell. ex Sond. = *Leiocarpa tomentosa* (Sond.)Paul G. Wilson (*Bennett 2161*)

Jasminum lineare R.Br. (*Bennett 2839*) Type gathering of species.

Lavatera plebeia Sims (*Bennett 5144*) [Brown's annotation: Lavatera dubia] = *Malva australiana* M.F.Ray

Lepidium sp.indet. (*Bennett 5271*)

Maireana aphylla (R.Br.)Paul G. Wilson (*Bennett 3085*) Type of *Kochia aphylla* R.Br. [Brown's annotation: Salsola aphylla]

Nicotiana sp. [probably *N. velutina* H.-M.Wheeler or *N. goodspeedii* H.-M.Wheeler] (*Bennett 2684*) [Brown's annotation: Nicotiana didyma]. There is a Tate collection of *N. velutina* from Mt Brown in 1881 (*pers. comm*. David Symon, August 2002.

Olearia pannosa Hook. ssp. *pannosa* (*Bennett 2226*) [Brown's annotation: Asteroides]

Phragmites australis (Cav.)Trin. ex Steud. (*Bennett 6259*)

Pycnosorus globosus Bauer ex Benth. (*Bennett 2143*)

Pimelea sp. indet. (*Bennett 3191 p.p.*)

Psoralea patens Lindl. (*Bennett 4135*)

Rhagodia parabolica R.Br. (*Bennett 3041*) Type gathering of species.

Santalum spicatum (R.Br.)A.DC. (*Bennett 3213*). Type of *Fusanus spicatus* R.Br. [Brown's annotation: Eucarya spicatus]

Scaevola humilis R.Br. (*Bennett 2561*). Type gathering of the species.

Sida petrophila F Muell. (*Bennett 5197*)

Sigesbeckia orientalis L. (probably *S. australiensis* D.Schultz for Bay XII) (*Bennett 2111*)

Senecio odoratus Hornem (*Bennett 2305*) [Brown's annotation: Senecio assimilis]

Teucrium racemosum R.Br. (*Bennett 2388*) Type gathering of species.

Themeda triandra Forssk. (*Bennett 6194 p.p.*) [Brown's annotation: Anthistiria australis] Part of the type gathering of *Anthistiria australis* R.Br.

Trichodesma zeylanica (Burm.f.)R.Br. (*Bennett 2933*) [Brown's annotation: Borago zeylanica]

Velleia paradoxa R.Br. (*Bennett 2548*) Base of the mountains near Inlet XII South Coast. Part of type gathering of species?

Zygophyllum sp.indet. (*Bennett 5222*)

Robert Brown's own plant list for Mt Brown (10–11 March 1802)

Robert Brown compiled his own list of plants for Mt Brown. This was apparently compiled well after the ascent and when he was back in England since the paper it is written on is watermarked "1819" (Vallance et al. 2001). This list has been reproduced below, with plants in the original order, since it differs somewhat from the extant collection list given above. For example, Brown lists three *Eucalyptus* species but there are no collections extant and so we can only speculate as to the identity of these species. Similarly he lists three *Acacia* species, but in this case there are four extant collections. The plant names Brown provided on his list are given in bold.

Cheilanthes: [*Cheilanthes lasiophylla* Pic. Serm.] (*Bennett 4b*)

Agrostis: *Sporobolus virginicus* (L.)Kunth – no specific collection from Inlet XII but *Bennett 6209* is from the South Coast.

Triodioides pungens: porcupine grass or spinifex [*Triodia sp.* – not *Bennett 6258* as cited in Vallance et al. (2001) since this is the type of *Triodia irritans* from St Francis Island. The species is common on Mt Brown]

Arundo Phragmites: [*Phragmites australis* (Cav.)Trin. ex Steud.] (*Bennett 6259 p.p.*)

Pappophorum nigricans: [*Enneapogon nigricans* (R.Br.)Beauv.] (*Bennett 6249 p.p.*)

?Anthistiria australis: [Kangaroo Grass *Themeda triandra* Forssk. (*Bennett 6194 p.p.*)]

Cyperus: [*Cyperus vaginatus* R.Br.] (*Bennett 5922 p.p.*)

Typha angustifolia L. (bulrush): no specimens traced but it is still to be found at the spring at the base of the mountain.

Xanthorrhaea apparently a distinct specimen the side of Mount Br: *X. quadrangulata* F.Muell. (no specimen traced, but common on the hillsides)

Calostemma purpureum in Mount Br: [*C. purpureum* R.Br.] (*Bennett 5641*): type gathering. [Brown's annotation: Pancratium purpureum]

Hakea: [*H. leucoptera* R.Br.] (*Bennett 3376*)

Salicornia (2): no specimens traced. *Salicornia arbuscula* R.Br. and *Salicornia indica* Willd. are both listed by Brown for the south coast; these become *Sclerostegia arbuscula* (R.Br.)Paul G.Wilson and *Halosarcia indica* (Willd.) Paul G. Wilson respectively, but there are no specimens of these for Inlet XII.

Kochia aphylla: *Maireana aphylla* (R.Br.)Paul G.Wilson (*Bennett 3085*).
Sclerolaena paradoxa: *Dissocarpus parad*oxus (R.Br.)F. Muell. ex Ulbr. (*Bennett 3077*).
Salsola australis R.Br.: [although Brown includes it in his list for Inlet XII, the only extant specimen is from Petrel Bay, St Francis Island] = *Salsola kali* L. (Dryander dupl.)
Anisacanthia divaricata: *Sclerolaena divaricata* (R.Br.)Sm. (*Bennett 3078*)
Fusanus This is probably the species providing the spherical fruit: *Santalum spicatum* (R.Br.)A.DC. (*Bennett 3213*).
Boerhaavia: *Boerhavia coccinea* Mill. (*Bennett 3009*) – Brown says "in montibus" .
Euphorbia: [?*Euphorbia drummondii* Boiss. = *Chamaesyce drummondii* (Boiss.)D.C.Hassall] No specimen found.
Callitris: *Callitris glauca* of Brown (*Bennett 3108*) = *C. gracilis* R.T.Baker
Casuarina acida: ?*Allocasuarina verticillata* (Lam.)L. A.S.Johnson (no specimen traced)
Dodonia (2): there are four collections from this locality, *Dodonaea baueri* Endl. (*Bennett 5429 p.p.*); *D. stenozyga* F.Muell. *(Bennett 5443); D. viscosa* Jacq. ssp. *angustissima* (DC.)J.G.West (*Bennett 5434 p.p.*); *D. lobulata* F.Muell. *(Bennett 5444).*
Plantago: probably *Plantago hispida* R.Br. (no specimen located)
Solanum: identity unknown, no specimens traced. *Solanum ellipticum* R.Br. is common at this locality, and there is a specimen (*Bennett 2683*) collected from the "South Coast", but this specimen is attributed to Baudin by Brown. This seems strange since Baudin did not land in any area in South Australia where he might have collected this species. The identification needs to be checked and if correct, then the attribution to Baudin questioned. The same comment applies to the listing of the *Heterodendrum* collection from this locality (*q.v.*). Both collections attributed to Baudin are more likely to have come from the Western Australian coast-line. Presumably Brown recognised that they were present at Bay XII and so included them in the list for here.
Nicotiana: probably *N. velutina* H.-M.Wheeler (*Bennett 2684*)
Halgania the small flowered species but with flower: *H. cyanea* Lindl. (*Bennett 5482*), the only *Halgania* species in the Brown database is not listed for Inlet XII or Mt Brown, but for Inlet XIV, the top of St Vincent's Gulf.
Heliotropium: there are two specimens housed in BM, one as *H. asperrimum* R.Br. (*Bennett 2921*), the type of the species and the other as *H. glandulosum* R.Br. (*Bennett 2920*), also the type of the species. The latter is now treated as *H. europaeum* L. by Craven and the Brown collection is cited as the reason for now considering this species to be native to Australia (Craven 1996).
Trichodesma: *Trichodesma zeylanicum* (Burm.f.)R.Br. (*Bennett 2933 p.p.*)
Teucrium (cf No 57 Cunningham): *T. racemosum* R.Br. (*Bennett 2388)*
Cynanchium: *Cynanchum floribundum* R.Br. (*Bennett 2874*).
Stenochilus longifolius: *Eremophila longifolia* (R.Br.)F. Muell. (*Bennett 2339*)
Eremophila oppositifolia R.Br.: (Bennett 2341).
Eremophila alternifolia R.Br.: (Bennett 2340).
Jasminium lineare: [*Jasminum didymum* Forst.f. ssp. *lineare* (R.Br.)P.Green] (*Bennett 2839*)
Velleia: [*V. paradoxa* R.Br. (*Bennett 2548*) – from base of mountains]
Scaevola spinescens: no specimens found but this species was collected from the mountain in 2001. *Scaevola humilis* R.Br. (*Bennett 2561*) was collected by Brown, but not listed by him.
Convolvulus: *Convolvulus remotus* R.Br. or *C. microsepalus* R.W.Johnson (*Bennett 2766 p.p.*)
Avicennia: *A. marina* (Forssk.)Vierh. var. *marina* (no specimen traced). Mangroves were not mentioned for Bay XII, but perhaps a sight record, since Good refers to them on the evening of their reaching the top of the gulf.
Sigesbeckia orientalis "on the side of Mt Brown": possibly the native *S. australiensis* D.Schultz rather than the introduced *S. orientalis* L. (*Bennett 2111*). Identification needs to be checked.
Aster (2): specimens identified as *Olearia axillaris* F.Muell. (*Bennett 2248*) and *Olearia microphylla* (Vent.)Maiden & Betche (*Bennett 2250*) both bear the annotation "Aster" from the "South Coast", with no mention of Inlet XII.
Senecio (2): *Senecio odoratus* Hornem. (*Bennett 2305*). Other *Senecio* species collected from here in 2001 were *S. pinnatifolius* A.Rich., *S. glossanthus* (Sond.)Belcher and *S. quadridentatus* Labill.
Craspedia: *C. globosa* (Bauer ex Benth.)Benth. *(Bennett 2143) = Pycnosorus globosus* Bauer ex Benth.
Cartodium: *Calocephalus citreus* Less. *(Bennett 2142 p.p.)*
"Antennarioides": nothing located with this annotation. The name suggests a resemblance to *Antennaria*, which according to Philip Short (pers. comm. 20 Aug 2001) is a gnaphaliod genus and is grouped with genera such as *Haeckeria* and *Cassinia*. The name then may refer to any one of the following composites collected by Brown at this locality: *Cassinia arcuata* R.Br. (*Bennett 2152*); *Cassinia laevis* R.Br. (*Bennett 2151*); *Humea punctulata* F.Muell. (*Bennett 2153 p.p.*) = *Haeckeria punctulata* (F.Muell.)J.H.Willis.
Loranthus (2): Identified as *A. pendula* (*Bennett 2952*) above; more likely *Amyema miquellii* (Lehm.ex Miq.)Tiegh.
Lepidium: *Lepidium* indet. *(Bennett 5271)* – a number of native species possible
Lavateria: *Lavatera plebeia* Sims *(Bennett 5144) = Malva australiana* M.F.Ray
Sida: *Sida petrophila* F.Muell. (*Bennett 5197*)
Oxalis: ?*O. perennans* Haw. (no Brown specimen found, but Dryander duplicate from "South Coast")
Heterodendrum: *Alectryon oleafolius (Bennett 5475)*. Apparently collected and named from Baudin's collection which almost certainly would have come from the Western Australian coast-line. .
Psoralea: *P. australasica (Bennett 4135)* now *Cullen australasicum* (Schtdl.)J.W.Grimes
Lotus: *L. australis* Andrews or *L. cruentus* Court (no specimen for Bay XII found, but there is a collection (*Bennett 4171*) from Inlet XIV, the top of St Vincent Gulf)
Indigofera: No specimens in the BM database. They may be on loan.
Cassia (3):
Cassia eremophila (*Bennett 4335*) = *Senna artemisioides* (DC.)Randell ssp. *coriacea* (Benth.)Randell
C. phyllodinea R.Br. (*Bennett 4253*) = *Senna artemisioides* (DC.)Randell ssp. *petiolaris* Randell (illustrated by Bauer, see above)
Cassia sturtii var *coriacea* (*Bennett 4334*) = *Senna artemisioides* (DC.)Randell ssp. *coriacea* (Benth.)Randell
Acacia (3):
A. papyrocarpa Benth. *(Bennett 4343);*
A. salicina Lindl. *(Bennett 4345);*

A. myrtifolia (Sm.)Willd. *(Bennett 4347 p.p.)* – the identification needs to be checked as it does not occur in this area today.
Acacia longifolia (Andrews)Willd. also listed for Bay XII in database (*Bennett 4271*)
Eucalyptus (3) – no specimens traced. *E. porosa* F.Muell. ex Miq. and *E. socialis* F.Muell. ex Miq. are suggested.

Peter Good's seed list from Bay XII

Alectryon [*Alectryon oleifolius* (Desf.)S.Reyn. or Bullock-bush]
Cassia simplicifolia [*Senna artemisiodes* (DC.)Randell]
Oxalis [*Oxalis perennans* Haworth – there is a Dryander dupicate of a Brown specimen in BM, but it has no specific locality details, merely 'South Coast' and the annotation 'Oxalis arida' by Brown.]
Mimosa [*Acacia*] lineariifolia
—— species [*Acacia* species]
—— foliis pinnatis cinereis [probably *Senna artemisioides* ssp. *coriacea* – see Brown's manuscript name above]
Teucrium [probably *T. racemosum* R.Br. – the type is from here]
Cartodium microcephalum [usually used by Brown for *Calocephalus* species, and so possibly *C. brownii* F.Muell.]
Dodonaea longifolia [probably *D. viscosa* Jacq. ssp. *angustissima* (DC.)J.G.West]
Gen viticum sem [seed] only in decay [*Eremophila sp. – Bennett 2341, 2337* each have a label bearing the annotation "Gen Viticum Inlet 12", while *Bennett 2338* has a label bearing the annotation "Gen viticum Bay 3–4 Inlet 12 South Coast". These are probably Peter Good's contribution to the collection.]
Mimosa [*Acacia*] crassifolia one seed
Xeranthemum [used by Brown for the *Helichrysum* group of species]
Gen Jasminiar [?*Jasminum didymum* R.Br. ssp. *lineare* – the type was collected from here by Brown]
Heliotropium aridum [*Heliotropium asperrimum* R.Br. or *Heliotropium europaeum* L. – Brown's collection of this was from Bay XII; he apparently considered it to be different from *H. europaeum*]
Syngenesist Frutex foli ovali dentati viscidis [composite with leaves oval and toothed, viscid]
Asteroides foliis ovatis subtus lanatus montis [a daisy, possibly *Olearia*]
Goodenia
Nicotiana [*Nicotiana* species listed]
Composit fol glaucus sem pappo [a daisy]
Gen viticum drupa baccata 4 loc nucleo solitaris [*Eremophila* sp.]
Anthisteria [*Themeda triandra* Forssk.]
Cartodium lanatum [?*Calocephalus*]
Gen composit cal contorti imbricat [a member of the Compositae or daisy family]
Aster sp [a daisy, probably *Olearia*, possibly *Olearia muelleri* (Sond.)Benth., for which Brown's manuscript name was Aster fulcatus]
Dodonaea dentata [*Dodonaea lobulata* F.Muell.]
Lepidium fol filiformi: floribus haud observatis insaxosis aridis in latim montes [*Lepidium* species listed]
Gen viticum stam didynam: cor irregularis coerulia [*Eremophila* sp. – see comments above]
Syngenesist flosculosi: sem pappos papillio capillare sessile folius lanatis incanus [daisy]
Melilotus [usually considered to be European introductions. Used as a medicinal and also for grazing at this time. Possibly confused with something else with trifoliate leaves – perhaps *Goodia* or *Cullen*]
Gnaphalium affin G. aureum Sol [a daisy, possibly one of the forms of *Chrysocephalum apiculatum* (Labill.)Steetz]
Conchium affin aciculare [*Hakea leucoptera* R.Br.]
Salsoloides echinata [one of the chenopods]
Pittosporum tenuifolium [presumably the easily recognised *P. phylliraeoides* DC., now known as *P. angustifolium* Lodd.]

Bay XIII, Kangaroo Island
(21–24 March & 1–7 April 1802)

21st March. Anchored off Kangaroo Island, off Kangaroo Head[16], at 7 p.m.

22nd March. Brown and Good went ashore early, walking along the edge of the scrub for about a mile and a half west of the landing place. Brown made comments about the geology, the soils and several ravines running at right angles to the shore. He surmised that these would have water in the wet season and found two frogs in support of his suggestion.

He commented that the number of trees was low, consisting chiefly of:

Mimosa insularis [probably *Acacia paradoxa* DC.], mixed with Casuarina equisetifolia [*Allocasuarina verticillata* (Lam.)L.A.S.Johnson], two species of Eucalyptus [one of these would be *Eucalyptus cneorifolia* DC.], Mimosa fucata [this name used for *Acacia dodonaeifolia* (Pers.)Balb. elsewhere] and Dodonaea viscosa, a similar tree to Mimosa fucata.

Western Grey kangaroos were in abundance and quite tame, this tameness suggesting to the party that they were on an island. Thirty were killed for food and gave their name to the island. Brown commented on their colour variation and also on the presence of the smaller species [Tammar wallaby], pelicans, pigeons, parrots and the seals.

A spring was found by the party which had walked to the east [Frenchmans Rock].

23rd March. Brown stayed on board but Good went ashore in the morning and headed east, at least as far as the spring. He commented that the kangaroos had now become wary and the shooting party were not very successful. He saw four emus and found several new plants which were listed by Brown.

Amongst the plants was a tree of *Bursaria spinosa* Cav. of considerable girth, a new *Eucalyptus* species, and a *Limosella* species [suggesting areas which had only just dried out]. A number of small birds of uncertain identity were shot .

24th March. Departure in the morning to map St Vincent Gulf.

2nd April. Anchorage in Nepean Bay, to the west of the previous anchorage, at midnight on 1st April.

Brown and Good went ashore, probably walking south along the shore of Eastern Cove for about a mile and a half, and making occasional incursions into the

[16] Present-day Hog Point (Cooper 1953, Matheson 2001).

vegetation. Trees and shrubs were considered the same as those seen before, but the soil inferior to that at the earlier landing place. Enough kangaroos were killed by the hunting party for all of the crew to have fresh provisions.

Bauer accompanied Flinders to a sandy beach at the top of the bay, probably Island Beach. He saw four emus within pistol shot, but there is no record of their having been collected. The French collection of emus from Kangaroo Island a year later are the only collections still surviving and since they were smaller and darker these were named as a distinct species (*Dromaius baudinianus*) by Parker in 1984. The ship's log recorded the sighting of a skin of an echidna (Vallance et al. p. 172).

3rd April. The ship was meant to move out to continue mapping but Flinders found that the timekeepers had stopped. He decided to stay an extra three days and a station was set up on shore. Wooding parties were sent out and a shooting party. Brown and Good stayed aboard.

4th April. Brown left at 5.30 a.m. with Flinders in the cutter, intending to climb a hill visible behind the bay [Mt Thisby or Prospect Hill]. Brown recorded seeing a few new plants and a number of birds, particularly pelicans breeding on the small islands in the inlet. They reached the base of the hill at 11 a.m. and after 12 they climb ed to the top and took bearings. Brown later described the view at some length in his diary. Having returned to the cutter they explored the eastern inlet [Pelican Lagoon], landing at several places, before making camp for the night at American River. The boobook or mopoke owl was heard calling during the night

Good on the other hand, went off early with Westall and Allen, carrying provisions for 2 days. He recorded climbing up a gully near the East point and from there making his way to the summit of the hills, but the trees were so thick that a view was not possible. He found a few new plants and that evening made his way to the spring (Frenchmans Rock) where he found Westall and Allen. They all spent the night here.

5th April. Brown and Flinders' party rowed to the mouth of the inlet, stopping in a few places to look for kangaroos. Oysters, similar to those of Oyster Harbour at King George Sound (Albany), were found at the mouth of the inlet. They were back on board ship by 10.30 a.m., bringing with them some pelicans.

Good took a walk through the scrub again, shooting a parrot and a kangaroo, whereas Westall and Allen had little success in this same pursuit. At least nine emus were seen but none taken, even though they were in range several times. Good must have at some stage this day planted his European seeds at the spring (see Fig. 11 reproduction of this list). Good also recorded a boat coming for them and it would appear that they may have had a pre-arrangement to meet at the spring. One of the boating party, attempting to kill a seal with a stick, was severely bitten on the leg. The party arrived back on board about 6 that evening. A further sighting of 14 emus by a brush cutting party was noted by Good.

6th April. Departure from the anchorage early in the morning but by noon anchored nearly in the same place as on their first visit, due to an adverse current and wind. By 2 p.m., with a change of current, they were underway again but progress was slow and they anchor in Antechamber Bay at 11 p.m. for the night.

7th April. Good summarised his thoughts on the island which appeared to him "to be the most desirable place we have met with on the Coast of New Holland"

Brown's collections from Kangaroo Island (Bay 13) still extant

Acacia armata R.Br. ex Aiton (*Bennett 4313 p.p.*) = *Acacia paradoxa* DC. Part of type gathering of *A. armata* R.Br.

Atriplex paludosa R.Br. subsp. *cordata* (Benth.)Aellen (*Bennett 3027*). Type of *A. reniformis* R.Br. [Brown's annotation: Atriplex reniformis]

Atriplex pumilio R.Br. (*Bennett 2323 = 3023*) Type collection of species. This species is not listed as occurring on Kangaroo Island and the lectotype of the species is listed (*Flora of Australia* 4: 101) as coming from St Peter Island. [Brown's annotation: Atriplex prostrata]

Beyeria opaca F.Muell. (*Bennett 3586 p.p.*) – there are two *Beyeria* species on Kangaroo Island but not this one. The Kangaroo Island endemic is *B. subtecta* J.Black which is confined to the American River area. *B. lechenaultii* (DC.)Baill. is common along the coast and Brown also collected this species at Memory Cove, making it the more likely candidate. [Brown's annotation: Crotonoides dyalifolia]

Bulbinopsis semibarbata (R.Br.)Haw. (*Bennett 5675 p.p.*). = *Bulbine semibarbata*(R.Br.)Haw. Type of *Anthericum semibarbata* R.Br.

Callistemon rugulosus (D.F.K.Schldl.)DC. var. *rugulosus* (*Bennett 4664*) [Brown's annotation: Metrosideros]

Callitris gracilis R.T.Baker (*Bennett 3109*) [Brown's annotation: Callitris propinqua]

**Chenopodium glaucum* L. (*Bennett 3031 p.p.*) – cosmopolitan in muddy eutrophic conditions and treated as an introduction in the South Australian census (W.R. Barker et al. 2005). If the identification is correct, should this now be considered native? [Brown's annotation: Chenopodium ambiguum]

Chenopodium pumilio R.Br. (*Bennett 3033*) Type gathering of species. Occurs as weed of agriculture today.

Correa sp. (*Bennett 5316*) [Brown's annotation: Correa furfuracea]

Correa sp. (*Bennett 5312*) [Brown's annotation: Correa rubicunda]

Dodonaea viscosa Jacq. ssp. *angustissima* (DC.)J.G.West (*Bennett 5434 p.p.*)

Eucalyptus anceps (R.Br. ex Maiden)Blakely (*Bennett 4748 p.p.*) Probably *E. rugosa* R.Br. ex Blakely [Brown's annotation: Eucalyptus anceps] A. anceps does not occur on Kangaroo Island.

Eucalyptus cladocalyx F.Muell. (*Bennett 4800*). [Brown's annotation: Eucalyptus] Present day distribution is mostly on the western end of the island with ?relict stand at Penneshaw.

Eucalyptus cneorifolia DC. (*Bennett 4766*) [Brown's annotation: Eucalyptus stricta] The type collection from Kangaroo Island was gathered by the French under Baudin in 1803.
Eucalyptus grandis W.Hill (*Bennett 4799*) Erroneous identification, eastern states species only. Possibly *E. leucoxylon* F.Muell.
Eucalyptus incrassata Labill. (*Bennett 4750*) This species does not occur on Kangaroo Island. [Brown's annotation: E. sphenopoda]
Eucalyptus obliqua L'Hér. (*Bennett 4743*). [Brown's annotation: Eucalyptus 46]. Not found on the eastern end of the island – possibly *E. diversifolia* Bonpl.
Eucalyptus oleosa F.Muell. (*Bennett 4770 p.p.*)
Eucalyptus viminalis Sm. (*Bennett 4744 p.p.*) ssp. *cygnetensis* Boomsma.
Haloragis mucronata (Nees)Benth. (*Bennett 4434*). This is *Haloragis acutangula* F.Muell. Forma is unknown since the specimen is flowering only. [Brown's annotation: Haloragis littoralis]
Hibbertia stricta (R.Br. ex DC.)F.Muell. (*Bennett 4880 p.p.*) – identification still to be clarified. [Brown's annotation: Curatelloides/Pleurandra taxifolia]
Ixiolaena supina F.Muell. (*Bennett 2159 p.p.*) [Brown's annotation: Chrysocomoides penicellatum]
Limosella australis R.Br. (*Bennett 2698 p.p.*) Part of type gathering of species.
Melaleuca acuminata F.Muell. (*Bennett 4688 p.p.*)
Melaleuca sp. (*Bennett 4704*). Attributed to *M. armillaris* (Sol. ex Gaertn.)Sm. in Brown database, but this species does not occur on Kangaroo Island.
Orthrosanthus multiflorus Sweet (*Bennett 5618*). Published as *Sisyrinchium cyaneum* Lindl. in *Edwards Bot Reg*. 13 (1827) t. 1090 – see Fig. 10 [Brown's annotation: Cfr Diplarennhia]
Plantago varia R.Br. (*Bennett 2985*) Type collection of species. [Brown's annotation: Plantago cfr polymorpham & scabrum]
Rhagodia crassifolia R.Br. (*Bennett 3038*). [Brown's annotation: Chenopodium crassifolium] Part of the type gathering of the species.
Rhagodia nutans R.Br. (*Bennett 3044*). = *Einadia nutans* (R.Br.)A.J.Scott ssp. *nutans* [Brown's annotation: Chenopodium prostratum] Climbing or nodding saltbush.
Scutellaria humilis R.Br. (*Bennett 2354 p.p.*). Part of type gathering of species.
Senecio odoratus Hornem (*Bennett 2304 p.p.*) [Brown's annotation: Senecio polymorphus]
Solanum sp. (Bennett 2665 p.p.) [Brown's annotation: Solanum laciniatum]
Vittadinia australis A. Rich. (*Bennet 2027*). Probably *V. australasica* (Turcz.)N.T.Burb. var. *australasica* since *V. australis* does not occur in Australia – see Burbidge (1982). [Brown's annotation: Erigeron diffusum]
Zygophyllum billardieri DC. (*Bennett 5221 p.p.*) [Brown's annotation: Zygophylloides octandra]

Ferns

Adiantum aethiopicum L. (*Bennett 70*)
Cheilanthes austrotenuifolia Quirk & Chambers (*Bennett 74*). [Brown's annotation: Adiantoides crispa]
Pleurosorus rutifolius (R.Br.)Fee (*Bennett 7 p.p.*) [Brown's annotation:Grammitis rutaefolia].

Seed collections by Peter Good from Kangaroo Island (see Fig. 6)

Anthericum [*Bulbine semibarbata* (R.Br.)Haw. (*Bennett 5675 p.p.*)]
Asteroides [*Olearia* sp.]
Saniculoides echinata [*Sanicula* is a European genus of Apiaceae]
Solanum laciniatum [*Solanum laciniatum* Aiton]
Mimosa fucata [*Acacia dodonaeifolia* (Pers.)Balb. Brown's collections, *Bennett 4341,* from Memory Cove and Bay X have this name on them]
Scutellaria plebeia [*Scutellaria humilis* R.Br.]
Nov Gen conifer [probably *Callitris gracilis* R.T.Baker (*Bennett 3109*)]
Meterosideros cf M. saligna [*Callistemon* sp., see comments above (*Bennett 4664*)]
Dodonaea longiloba [*Dodonaea ?viscosa* Jacq.]
Eucalyptus affin E. saligna Smith [*Eucalyptus* sp.]
Mimosa affin. M. foliolia [*Acacia ?paradoxa* DC.]
Astragalus?
Gen Iridem affin forte Sisyrinchioides [*Orthrosanthus multiflorus* Sweet – see Fig. 10]
Asteroides sauveolens [Olearia sp. – Brown later used this name on a collection of *Olearia tomentosa* (Wendl.)DC. (*Bennett 2230*) from Sydney, but the species does not occur in South Australia).

Bay XIV, head of St Vincent Gulf (29 March – 1 April 1802)

29th March. Anchorage off Mangrove Point

30th March.

Getting to shore. At 6 a.m. Brown went with Flinders in the cutter to the head of the gulf to determine whether there was a river or not. Peter Good recorded that only one boat was sent because of the long distance to the shore and he stayed aboard on this occasion (as a result he listed no seed from this location). There were shoals for up to a mile and a half from the shore. These shoals were intersected by deeper channels and the cutter was able to make its way up one of these to within a quarter of a mile of the beach. The mangroves at the landing place and either side for a considerable distance were more luxuriant than any they had encountered before. Behind these grew two species of *Salicornia* which they had already seen at the head of Spencer Gulf (Bay XII).

The land traverse. The land was flat for a mile, then rose gently c. 200 feet. The country beyond this was of similar swells and covered with tufty grass and partly with low wood. No water was seen. Plants were similar to those at the head of Spencer Gulf (Bay XII) in the low land but they were nowhere near as numerous, and some on the raised ground were similar to those on Mt Brown.

The party saw what was possibly a Western Barred bandicoot, a black swan and other small birds, none of which was shot. A hawk was shot by Flinders from the boat and this is probably now housed in the Natural History Museum in London.

Brown remarked on a "long, flattish toppd hill about 8 miles distant" which was probably the end of the chain of mountains they had encountered at the head of Spencers Gulf. This was the South Hummocks. Good recorded that the intention was to get to this highest point but it was further than expected, and so unlike the Mt Brown occasion, the party returned. The party was

back in the boat at 4 p.m., and on board ship again at 7 p.m.

Brown's collections at Bay XIV (head of St Vincent Gulf) still extant

Acacia oswaldi F.Muell. (*Bennett 4342*)
Acacia salicina Lindl. (*Bennett 4345 p.p.)*
Brachyscome ciliaris (Labill.)Less. (*Bennett 2069*) [Brown's annotation: Micropogon/Inter Bellidem & Micropogon]
Calotis erinacea Steetz (*Bennett 2045*) [Brown's annotation: Cotuloides]
Dodonaea baueri R.Br. (*Bennett 5429 p.p.*) [Brown's annotation: Dodonia reposa]
Eremophila longifolia (R.Br.)F.Muell. (*Bennett 2339 p.p.*) [Brown's annotation: Stenochilus longifolius/Gen vitie]
Halgania strigosa Schltdl. = *H. cyanea* Lindl. (*Bennett 5482*) [Brown's annotation: An genus Malvae]
Lotus australis Andr. (*Bennett 4171*) [Brown's annotation: Lotus amanus]
Myoporum platycarpum R.Br. (*Bennett 2798*) Type collection of species.
Olearia pannosa Hook. (*Bennett 2229*)
Rhagodia spinescens R.Br. (*Bennett 3042*) Type collection of species.
Sida corrugata Lindl. var. *corrugata* (*Bennett 5102*). [Brown's annotation: Sida prostrata.] Part of the Natural History Museum (BM) collection can be seen in Fig. 3.

South Coast plants with no specific locality details in the Brown database.

A number of Angiosperm species collected by Brown have no other attribution than South Coast and there is usually no way of assigning them to a particular locality, particularly as some of them are common coastal species e.g. *Logania ovata* and *Wilsonia humilis*. Some of them may not have even come from South Australia e.g. *Solanum ellipticum.*

The other group of collections for which it is difficult to give locations are the algae. When the Brown database was accessed on 18 Jan 2002 and a search carried out for algal collections it was found that there were 37 Phaeophyta, 28 Rhodophyta and 4 Charophyta listed. Most of these are merely annotated "South Coast". Four of these were doubtfully attributed to South Australia in the database, although the basis for this was not clear. Brown specifically mentioned a collection of algae from Anchorage VI (Waldegrave Island: see above), but this locality was not given for any of the specimens listed in the database.

There were also twenty Bryophytes listed in the database when it was accessed on 18 Jan 2002. None of these was attributed to South Australia.

?Acrotriche ovalifolia R.Br. = *A. cordata* (Labill.)R.Br. (*Bennett 2471*). 'King George Sound to Bay 9'. Type gathering of *A. ovalifolia* R.Br.
Clematis microphylla DC. (*Bennett 4853*) – Peter Good lists a seed collection from Memory Cove.
Juncus pallidus R.Br. (*Bennett 5790*). Part of the type gathering.
Helichrysum semipapposum (Labill.)DC. (Bennett 2185, 2188) = *Chrysocephalum semipapposum* (Labill.)Steetz [Brown's annotation: Chrysochaete]
Logania ovata R.Br. (*Bennett 2904*) Type gathering of species.
Olearia axillaris F.Muell. (*Bennett 2248*) [Brown's annotation: Aster australis]
Olearia glandulosa (Labill.)Benth. (*Bennett 2022*) [Brown's annotation: Asteroides glabrata]
Olearia microphylla (Vent.)Maiden & Betche (*Bennett 2250*) [Brown's annotation: Aster]
Olearia muelleri (Sond.)Benth. (*Bennett 2019*). [Brown's annotation: Aster fulcatus]
Oxalis perennans Haw. (Dryander duplicate) [Brown's annotation: Oxalis arida] Brown mentioned an Oxalis in flower for Bay X and listed it for Mt Brown. Peter Good included it in his seed list for Mt Brown.
Solanum ellipticum R.Br. (*Bennett 2683*). Annotated as "Solanum a D. Baudin south Coast 1802" suggesting that this specimen was obtained from Baudin. If this was the case then the specimen must have been collected from the Western Australian coastline since Baudin had no opportunity to collect *Solanum ellipticum* from South Australia to this time[17]. The specimen also suggests that there was an exchange of specimens, either at the time of the Encounter or while both parties were in Sydney in 1802.
Wilsonia humilis R.Br. (*Bennett 2787 p.p.*). Part of type gathering of species

Erroneous locality

Xanthoparmelia australiensis (Cromb.)Hale (*Bennett 525*) was probably collected in South Australia, and later erroneously labelled as coming from Tasmania (Groves & Moore 1989).

Algae attributed as having possibly been collected in South Australia

Phaeophyta
Cystophora retroflexa (Labill.)J.Ag. (*Bennett 209*, two labels). Brown's annotations as Fucus ramosissimus and Fucus retroflexus Labill.
Scytothalia dorycarpa (Turn.)Grev. (*Bennett 216*, 2 sheets). Brown's annotations as Fucus platycarpus and Fucus dorycarpus Turn
Platythalia quercifolia (R.Br. ex Turn.)Sond. (*Bennett 217*, 3 labels). Brown's annotations as Fucus quercifolius, Fucus quercifolius and Fucus quercifolius Turn.
Cystophora sp.indet. (*Bennett 219*). Brown's annotations as Fucus vagus

Rhodophyta
Pterocladia lucida (R.Br. ex Turn.)J.Ag. (*Bennett 266*). Brown annotation as Fucus lucidus

[16] If the collection came from South Australia, on present day distribution *Solanum ellipticum* could only have been collected from the top of Spencer Gulf. It has already been indicated that Baudin only collected from Kangaroo Island and St Peter Island in the year following the Encounter.