

Robert Brown (1773-1858) and the natural history of Matthew Flinders' voyage in H.M.S. Investigator, 1801-1805

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It is surprising that there is no full-length biography of Robert Brown, though there are some short biographical sketches of his life and achievements. This paper deals with the most important episode in his long life. The main source materials are manuscripts in the Departments of Botany and Zoology, British Museum (Natural History) and Banksian documents assembled by H. B. Carter, as a preliminary to his full-length biography of Sir Joseph Banks (1743–1820), to which he very kindly gave me access.

Robert Brown was born in Montrose, Scotland, on the 21st December, 1773, the son of a Scottish Episcopalian minister. His early education was at Montrose Grammar School and Marischal College, Aberdeen where he began his medical studies. Brown entered Edinburgh University as a medical student in 1790 and remained until 1793 when he obtained his diploma. He then enlisted as an Ensign in the Fifeshire Regiment of Fencibles and for the next five years saw service in Ireland as a Surgeon's mate.

Like Sir Joseph Banks, Brown was a schoolboy naturalist, who at 18, read a paper on 'The botanical history of Angus' before the Edinburgh Natural History Society (Brown 1871). As part of his medical training Brown would have paid regular visits to Edinburgh Botanic Garden. The Department of Botany has a manuscript list of some of the plants he saw in the garden, and also a botanical record of what was probably a natural history foray, with some fellow students, to the Highlands of Scotland, in 1793. His botanical activity while in Ireland can be gauged by another manuscript, 843 neatly written folio pages of descriptions of plants collected 1794–98. His diary for 1800–01 has also survived. It gives a detailed picture of his daily routine as a Surgeon's mate, and also of his off duty activities.

At that time Brown was learning German and reading recently published medical and scientific textbooks – e.g. Jackson '*On the fevers of Jamaica*'; J. H. B. de St. Pierre '*On the cause [sic. theory] of tides*', 1795; W. Nicholson '*On the elements of Chemistry*', 1795. The diary also records discussions with fellow officers and naturalist friends, collecting forays and the study and description of specimens. A further early glimpse of Brown as a botanist can be seen in two important letters to William Withering (1741–99) in the Archives of the Royal Botanic Gardens, Kew. One letter dated the 29th January, 1797 from his Mother's home in Edinburgh, underlines his extreme modesty, "the only way, which I can hope to reinstate myself in your graces, will be to send you what useful information with regard to Scotch plants I happen to have in my possession, my former communication has already explained to you, what sort of botanist I am, my necessary avocations will never allow me to be more than a smatterer in the sciences, but the

fondness of the study is far greater than the time." On a recruiting mission to London in 1798, Brown writes to Withering (15th June), mentions their recent meeting, and requests that Withering should write him an introduction to Sir Joseph Banks; the letter is annotated by Withering indicating that the required letter was sent to Soho Square, the London home of Sir Joseph. It is interesting to note that an introduction to Sir Joseph was not necessary to gain access to the famous Banksian Herbarium and Library for in the 15th June letter, Brown gives Withering some data taken from a Banksian herbarium specimen and from a volume in the Banksian Library. Brown's recruiting mission would appear to have lasted some six months. He is known to have visited the Linnean Society on the 6th February, 5th and 17th July. On the latter date he was elected an Associate. His certificate of recommendation states that Brown was a good practical botanist. His sponsors are interesting. Jonas Dryander (1748–1810) a former pupil of Linnaeus, was Vice-President of the Society and Curator/Librarian to Sir Joseph Banks. It was clearly through Dryander that Brown first gained access to the Banksian collections. James Dickson (1738–1822) was a fellow Scot from Peebleshire, who had settled in London, where he started his own seedsman and nursery business in 1772. Dickson was an enthusiastic collector of the British flora and particularly of mosses. Brown's 1800–01 diary indicates his study of this group of cryptogamic plants about that time. Later correspondence shows that this acquaintance with Dickson blossomed into a lifelong friendship. Robert Teesdale (d.1804) who was at one time gardener for the Earl of Carlisle at Castle Howard, was later a seedsman in the Strand. William Patterson (1755–1810) from Kinnettles, Montrose, had travelled and collected in South Africa and Australia, and was later to become the well known Lieut. Governor of New South Wales, an office he held when Brown was in the Antipodes. Finally, Archibald Menzies (1754–1842) from Aberfeldy, who had travelled widely as a surgeon/naturalist, and who had already made a collection of specimens from Australia. Here among Brown's sponsors were two men, who had travelled abroad as naturalists; both had in fact visited Australia and had obviously wetted Brown's appetite to visit this new colony.

Through the late 1790's, Sir Joseph Banks had discussions with the Admiralty over a plan to send an expedition to explore the interior of Australia (*H.R.N.S.W.* 1895 3 382–383). Such an expedition was to be equipped with a naturalist and artists. In 1798, Mungo Park, who had recently returned from a successful journey into the interior of Africa, volunteered for the post as naturalist. By September of that year the plans for the expedition were well advanced. Park then suddenly decided to get married and withdrew his offer. Banks had thus to quickly find a substitute. A friend of Brown's, the exiled Portuguese naturalist, Abbe Correia de Serra, wrote to Banks on the 17th October, 1798 "Mr. Brown, a very good naturalist, who frequents your library . . . learning that Mungo Park does not intend to go to New Holland, offers to go in his place. Science is the gainer in this change of man, Mr. Brown being a professed naturalist." (*D.T.C.11* 111). A letter from Governor Hunter to the Duke of Portland 10th July 1799 speaks of the impossibility of penetrating the interior of Australia and stressed the knowledge that could be obtained from a sea-based expedition taking full advantage of navigable rivers and of arms of the sea (*H.R.N.S.W.* 1895 3 690–694). Flinders in a letter to Banks dated 6th September 1800 indicates that the revised plan was to circumnavigate New Holland. He also suggests to Banks the importance of exploring the strait between New Holland and New Guinea. (*Mitchell Library Brabourne papers* 20: 59 *et seq.*). By 12th December 1800 Lord Spencer, a member of the Cabinet, agreed the details of the

expedition, which included the provision of a naturalist, botanical painter, landscape and figure painter and a gardener. (Mitchell Library Brabourne papers 11 A 79–84). On the same date Banks wrote to Brown, in Ireland, offering him the post of naturalist at the salary of £400 per year. (BM Add.Ms 32439 1 f.24). Banks signs the letter “Yours Sir with real esteem and regard.” Brown was thus, at 27, offered a post beyond his wildest dreams. In a letter to Dryander dated 20th December he says “hardly any situation which could have been devised would have so completely met my wishes.” Possibly the factor which most recommended Brown to Banks, was that Brown was an enthusiastic botanist. Moreover, to his already substantial knowledge of the British flora, Brown was, as letters and his diary indicate, adding an acquaintance with foreign plants in the Banksian and Linnean Society’s herbarium collection, supplemented by living plants in the important English botanic gardens of the period. The other members of the team are mentioned next. Ferdinand Lucas Bauer (1760–1826) went as natural history painter. Ferdinand Bauer and his brother Franz Andreas Bauer (1758–1840), who was the first resident botanical artist at the Royal Gardens at Kew, are considered to be the two finest botanical artists of all time. Ferdinand Bauer, an Austrian, was in England at the time, completing drawings made while travelling in Crete, Cyprus and Greece as natural history assistant to John Sibthorp (1758–96), who was Sherardian Professor of Botany at Oxford. These drawings were later to be engraved and published in Sibthorp’s famous *Flora Graeca* (1806–40). William Westall (1781–1850) was appointed landscape and figure painter. W. T. Aiton (1766–1849), who was in charge of the Royal Gardens at Kew, was responsible for the choice of Peter Good as the gardener. Good had been a foreman at Kew and had successfully conveyed a selection of living plants from Kew to the East India Company’s Garden at Calcutta, and on the return journey brought back, for the Royal Gardens, a selection of Asian plants prepared by Christopher Smith (d.1808?), in Calcutta. When Aiton wrote to Good on the 14th January 1801, offering him the post, he was working as gardener at Wemys Castle in Scotland (Mitchell Library Brabourne papers 11 A 79–84). Matthew Flinders in a letter to Banks, 6th September 1800, remarks that it could be profitable to investigate the mineralogy of the country. Banks would appear to have readily adopted this suggestion for on the 20th January 1801, he writes to William Milnes of Ashover urging him to renew his efforts to find a miner willing to go on the voyage. Milnes was in charge of the Gregory lead mine in Derbyshire. John Allen, the young miner who agreed to accept the post, was a member of a family known to Banks as they were living near his uncle and former guardian’s estate at Overton. The miner’s duty was “to take specimens of all rocks, and particularly of the contents of all mineral veins he meets with and bring them home.” (*H.R.N.S.W.* 1876 4 290–291). The natural history artist, the miner and the gardener were to be under the direction of the naturalist.

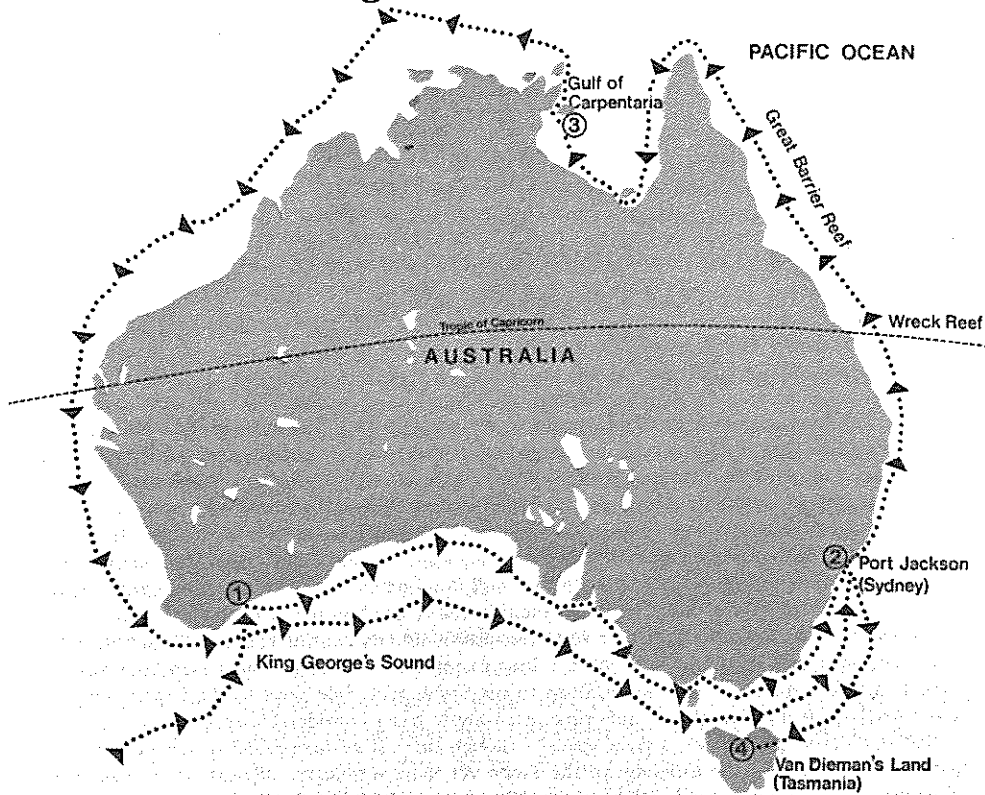
Sir Joseph, in spite of the Napoleonic wars, generally succeeded in arranging special facilities for the safe transport of plants. Few vessels left England for the new colony without supplies of seed, and whenever possible living plants in pots or boxes, to maintain, and to augment the horticultural and economic wealth of the new colony. The *Investigator* was no exception, it carried some cases of seed, and in the greenhouse, a number of berry fruit bushes in pots. A prefabricated plant cabin was also on board for the gardener’s use when circumnavigating Australia. The consignment of plants was under the special care of the gardener, Peter Good. Good’s commission was the collection of seed, the selection and maintenance of a collection of choice Australian plants in pots and boxes, and to give assistance to Brown.

While Sir Joseph and the Admiralty were making their last minute arrangements, Brown, who arrived in London on 25th December, began his own preparations for the voyage. His diary informs us that he studied nearly all the plants in Banks's possession previously brought from Australia. Further with Sir Joseph's permission he and Dryander extracted a collection of some thousand duplicates for Brown to take with him. These were small, but nevertheless, representative pieces; several species being hastily mounted on to sheets of tough brown cartridge paper. A number of these sheets have been recently located in the herbarium of the British Museum (Natural History) by my colleague J. B. Marshall. Brown also read all the published accounts of Australian plants and copied Solander's manuscript descriptions — some 647 folios! Brown, no doubt, looked at the Parkinson Australian drawings and sketches, as well as other relevant drawings in Banks's possession. Sir Joseph's instructions to Brown are given in a letter dated the 15th June, in which he advises Brown "to restrict his attention to those branches of natural history with which he is best acquainted and collect specimens carefully, noting the places where they were found"; although instructions in geology and mineralogy are given he advises him to regard these sciences as subsidiary to botany, entomology and ornithology; the miner is an intelligent man, who must be instructed on how to collect specimens of minerals, rocks, etc. in each place at which the ship makes a stay. (BM Add MS 32439.41). Brown was given some instruction in geology by a Mr. Hawkins. In a letter dated 28th April to Sir Evan Nepean, Under Secretary of State, Banks sets out the instructions regarding the sketches to be made by the artists Bauer and Westall, "that all such drawings as shall be finished during the voyage and all such sketches as their Lordships shall order to be finished after the return of the ship to England, shall be the property of the public. What plants and animals to be sketched would be at the discretion of Brown and for landscapes and figures at the discretion of Flinders" (P.R.O. Adm. 1/4377).

It is interesting to note that commercial support for such an expedition was provided even in the early 19th century. The East India Company gave Flinders and his companions £1,200 "for their table." The Company's objective being "to encourage the scientific persons to discover things for the trade with India", and that Flinders would seek new passages for their merchantmen. (India Office Library, Court of Directors, Miscellanea, No. 41 p. 435).

Matthew Flinders and H.M.S. *Investigator* finally sailed on 18th July 1801. Brown's 1800–1801 diary informs us that he began the study of the Banks and Solander material even before the *Investigator* sailed. En route for the Cape he continued the examination of the specimens he had on board. The written descriptions he made are now filed in his extensive 'Slip Catalogue'. It is interesting to note that Brown dated these descriptions. He also found time to compile a 'Florula Capensis', a 'Florula Novae Hollandiae' and to keep a meteorological journal. These three manuscripts have, so far, not been traced. There was no let up regarding his self-education programme for Brown had on board the accounts of Cook's three voyages, Forster's *Observations on a voyage round the world*, 1772–1775, La Billardière in J. A. B. d'Entrecasteaux *Voyage d'Entrecasteaux envoyé à la recherche de la Peyrouse*, 1807–1808, J. C. Philibert *Introduction à l'étude de la botanique*, 1799, G. L. C. F. D. Cuvier *Leçons de anatomie comparée* and W. Henry, *Epitome of Chemistry*, 1801. As there was a possibility that the expedition would meet the French one led by Capt. Baudin, Brown gave Peter Good a daily lesson in French. It is unfortunate that this very personal diary was discontinued after they reached the Cape. Brown's diary of the whole voyage only gives the more important data relevant to

The Circumnavigation of 'Terra Australis'



MAIN COLLECTING AREAS

- 1 King George's Sound area, December 1801–January 1802.
- 2 Port Jackson (Sydney), May–July 1802, June–November 1803, September–May 1805.
- 3 Gulf of Carpentaria area, November 1802–March 1803.
- 4 Van Dieman's Land (Tasmania), January–September 1804.

NUMBER OF SPECIES COLLECTED

- King George's Sound 500 species.
- South coast 700 species.
- East coast 500 species.
- North coast 500 species.
- Port Jackson, 1803–5, 1000 species.
- Van Dieman's Land 700 species.

Plate 1. Map showing the route taken by the *Investigator*, with main collecting areas and number of species collected.

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his personal commitments. Brown's handwriting in this diary is not very legible and, in places, it is simply not possible to decipher; nevertheless a transcription of the major part will be attempted. The diary of Peter Good, the Kew gardener is, in contrast legible and comparatively full of detail. As Britten and Boulger in their *Biographical index of deceased British and Irish botanists*, 1931, mention this diary I am surprised that it has so long been ignored. Even a glance indicates its scientific and historical importance. The section relating to the period at the Cape has been published (Rourke, 1974) and has already solved one particular botanical problem. The section relating to the period on the Victorian coast has been quoted (Austin, 1974), and this part of the diary has settled a minor historical controversy.

It is only possible to give two extracts from each diary.

9th May 1802 Robert Brown diary of the Voyage:—

"Anchored in Sydney Cove"

Peter Good diary of the same day:—

"Kept plying to windward & at 1 P.M. got into the entrance of the Harbour where a boat met us and informed us that the French Frigate the Naturalist was in the Harbour also the Lady Nelson, the Porpois & some Whaler's but that no Ships had been from England later than us. The approach to this place is not very promising a perpendicular rugged cliff of Freestone presents itself to the Ocean and the entrance is scarce to be seen till quite in when it opens a fine Spacious Harbour with a very remarkable appearance a number of fine Snug Coves & inlets & after passing one fine Bay we open three or four more all as Smooth as a mill Pond which with the natural appearance of the Country, the North & West Shore entirely uncultivated & the South & East mostly cleared with pretty Snug houses & Gardens appears very romantic — on nearing the Town of Sydney it has a fine appearance It is Seated at the end of a Snug Cove on a piece of ground which Sops [Ed. slopes] in three directions, the Center Slops to the Sea & each Side slops to the Centre with a gentle declivity to the Sea at the same time. each house has a considerable space of Garden ground so that the Town spreads over a great space — though there is nothing grand or magnificent in the Construction of any of the Buildings of the Town yet there is a degree of neatness & regularity which has a fine effect Several of the principal houses are built with Brick and white washed others with wood painted, they are all covered with wood cut in the form of Tiles which very much resembles Slate — Art or even imagination can scarce form any thing more grand than the various windings of the harbour — Anchored between two & three P.M. at the entrance of Sydney Cove — Captn immediately waited on the Governor — Several other Gentlemen went ashore"

30th October 1802 Murrays Islands

Robert Brown diary of the whole voyage:

Early in the morning we had another visit from the natives about half past 7 had 7 canoes near the ship each containing from 12 to 16 people they continued to barter with equal fairness as on yesterday seeming to care little for any thing but iron & [?] of this to put very little value on anything less than a hatchett they came provided with Pandanus, a few green coconuts the fruit of a Eugenia probably *E. malasiensis* a few yams they parted very readily with their bows and arrows a small kind of spear? bracelets and necklaces and other ornaments latterly several of them ventured on board they showed no symptoms of fear but several of surprise one of them would (?) seem to be acquainted with the use of small shot as well as muskett bullets". To this entry Brown has added a Latin description of Homines.

Peter Good diary for the same day:

"Early several Canoes came off & soon got along Side to number of 7 with 15 or 16 men in each & soon commensed a traffic for Arms Ornaments & in leiu of hatchets knives clothing &c. They were all well made of a good stature & in good condition very active & expert swimmers they were naked but wore various ornaments, most all had the ears Cut in several places & pieces of a kind of pearle shell neatly cut & fixed in the ears of different shapes — they had various tassells made from

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fibres of the Bark of some Tree neatly plait & fixed some round the neck others the Arms some round the middle & some the legs, they had also Gorgets for the Breast some neat neck bands & some had a piece of a large Shell with string fastned to it to lye round the middle which completely covered the privy parts but few wore it. They had Cocoa nuts ripe & green plantains of five kinds raw & roasted, Yams & a kind of fruit of the size of a love apple of a beautiful red colour but rather an insipid taste, they were entirely without seed of any kind but had the remains of stamina on the top which resembled the Genus Eugenia. They had also many Bows arrows Baskets etc. etc They seemed perfectly to understand traffic & would not part with their articles without something that appeared to them of equal value, they knew Iron well & called it Iooru (?) It was most desired by them, however they also took clothing looking glasses etc. — One of them sold a Bow to Mr. Bell which had a piece of blue striped Cotton cloth tied to it which appeared of European manufactor — after trafficking for some time many swam to the Ship & came on Board where they looked around in surprise at everything but without fixing their attention to any one thing — at 8 AM we began to weigh Anchor & when they were given to understand that they were in the way readily retired & at desire sat down on Deck at the Stern of the Ship and when at last they were desired to leave the ship they readily did so & leapt into the Sea Swam to their Canoes Set Sail and Stood for the Shore. Their Canoes were one large tree hollowed and some pieces fixed on each end an elevated platform in the middle with outryger etc. their Sails were neat mats & they set two both in the Bow of the Canoe which were variously ornamented both in Bow & Stern with Shells hair paint — several of the man were much ruptured and one was blind of an eye was all the bodily defects I observed among them — the Canoes which came off last night brought a good quantity of water in Bamboos but finding no demand for it this day they brought none — on leaving this Island we had an intricate passage frequently obliged to change our course on acct of breakers which were on both sides we soon came in sight of Taits Island & some others to the North at about 4 PM Anchored to the Lee of a small low Island covered with trees & Captn Messrs Brown Bauer Westall landed and collected a few things."

One should add, however, that data omitted from Brown's diary is generally recorded elsewhere, in the very detailed letters Brown sent to Sir Joseph Banks and other friends, in memoranda filed with his diary and in other manuscripts written on the voyage. The opportunities to send letters home were few and when one arrived you find Brown writing several letters on the same day. Brown in his first letter to Banks dated 30th May 1802 states that he has devoted the greater part of his time to botany. "In zoology I have done but little the collecting, preserving and description of plants preventing me from paying half the attention to the animal kingdom which its great importance deserves. In mineralogy I have merely hithertoo collected what presented itself at the surface, having never been in the situation where it was necessary to sink a shaft Mr. Bauer has been indefatigable, and has bestowed infinite pains on the dissections of parts of fructification of the plants. In Mr. P. Good I have a most valuable assistant; a more active man in his department could hardly, I believe, have been met with". Brown gives brief details of collecting sites etc., adding that the season was too far advanced and the country in many places completely burnt. From a letter of the same date to Hon. G. F. Greville — "Upon the whole the number of plants falls short of the expectations I had entertained, but except at King George's Sound, and our next anchorage, called in the Chart Bay I (Lucky Bay), we were too late in the season for botany; unfortunately, too, in both places I had sore legs, which prevented me from any extensive excursions. The plants that we found are mostly new species; there are also a few new genera. In Banksias, too, we have been very fortunate, having observed upwards of 20 species, some of which I think are superior to any hitherto known. Dickson will be sorry that cryptogams are neither numerous or singular; most of the lichens observ'd are well known species; mosses are uncommonly few". Brown in both letters mentions meeting the French ships, *Le Geographie* at sea, on the south Coast and *Le Naturaliste* in

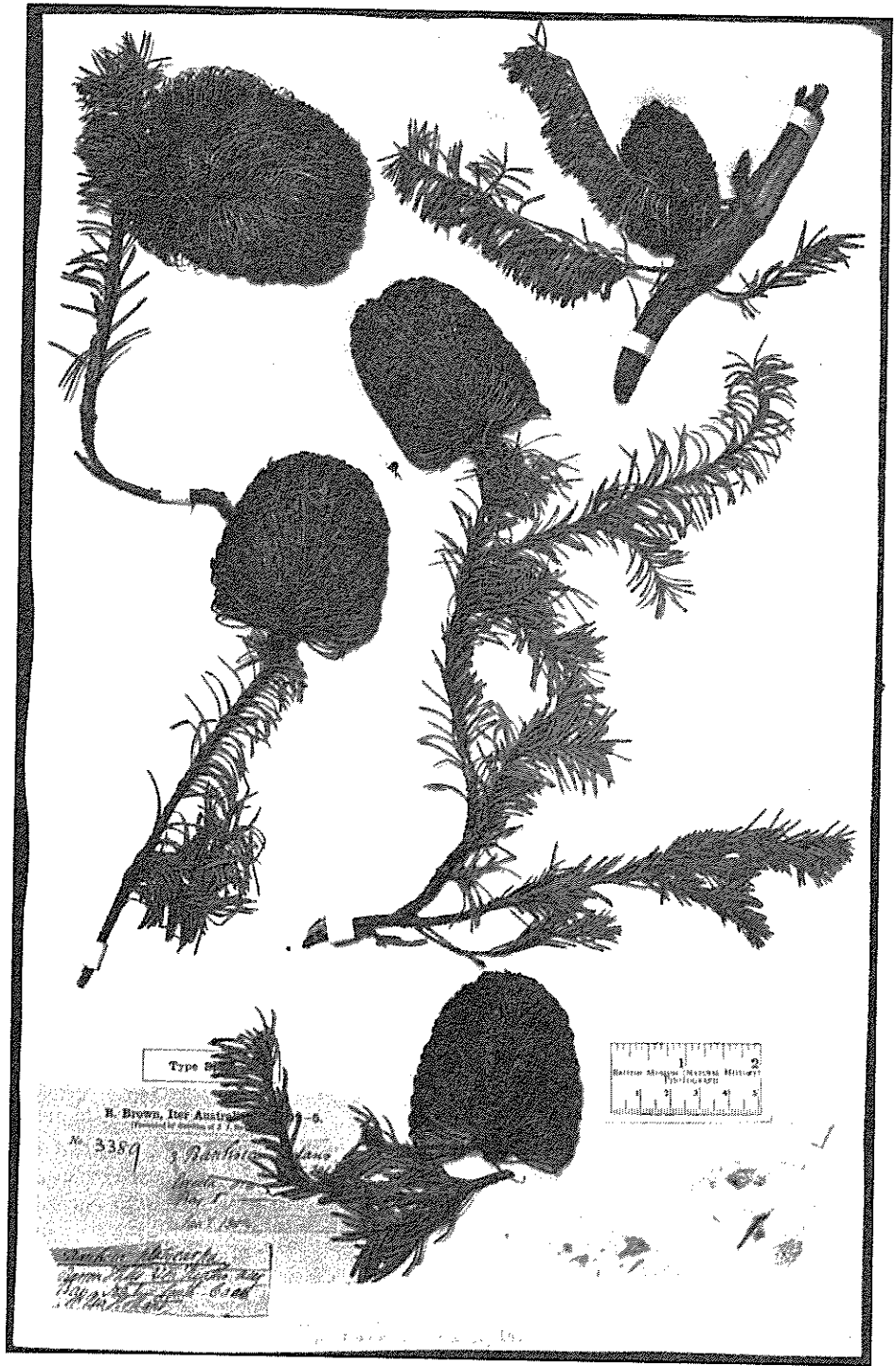
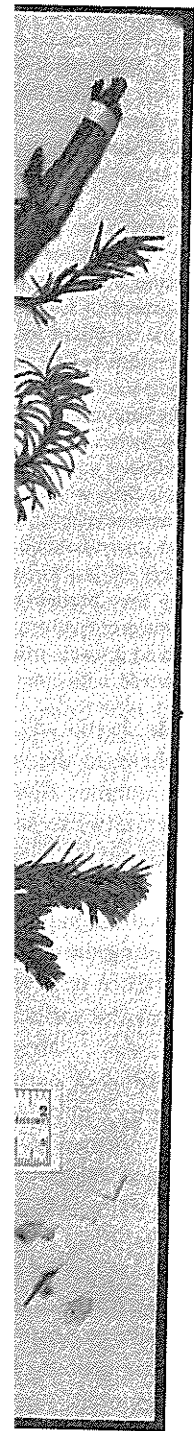


Plate 2. *Banksia nutans* R. Type specimen collected at Bay 1, 1802.

Port Jackson. In a further letter to Dryander on the same day he adds, "out of the new species of 750 observed, 120 had been previously found in this neighbourhood, Port Jackson and, along the east coast by Sir Joseph; 140 more by Mr. Menzies at King George's Sound. I reckon that Billardièrre may, in the neighbourhood of Porto del Esperence have found 140 more, and a few in New Zealand, with one or two Linnean species. I need hardly say that the animals are much less numerous than the plants; they also differ less from those in Port Jackson, as might naturally be expected. In mineralogy we have extremely little variety". (*H.R.N.S.W.* 1874 4, 773-779).

In June 1803 Flinders considered the *Investigator* unseaworthy. After a two week stay in Timor, Flinders made a dash for Sydney which was reached in two months. On 10th August he set sail for England in the *Porpoise* to acquire a new survey ship. Unfortunately the *Porpoise* was wrecked on the coral reef. On Flinders' second attempt to reach England he was interned by the French in Mauritius.

Brown in a letter dated 6th August 1803 explains to Banks his reasons for remaining in Australia. "I have in conjunction with Mr. Bauer, stated to him [Flinders] the advantages of our remaining here during his absence, and after consulting with Governor King, he has acquiesced in the sufficiency of our reasons, and we accordingly remain, either till his return in the prosecution of the voyage, or if the idea of completing it should for the present be given up, till instruction relative to us arrive from England, limiting, however, the period of such arrival to eighteen months from the date of his departure from this port in the *Porpoise*". Mr. Allen requests to go home "and as the department to which he belongs has hitherto afforded us so very little, I think he has judged very wisely. Poor Peter Good, who while he enjoyed health was most indefatigable, and whose exertions in his department were without doubt the cause of his untimely fate, died a few days after our arrival here of dysentery, contracted soon after our departure from Timor". It had been hoped that the voyage would discover navigable rivers up which an advance into the interior could be made. Brown continues, "our excursions have nowhere extended to more than a few miles from the shore. The interior of New Holland therefore, is as completely unknown as ever." Brown then summarises the natural history results: "No new quadrepeds, few nondescript birds, ichthyology I have been unable to attend to, insects and shells are neither numerous nor interesting, mineralogy uniformly barren field, species of plants 2,000 - 700 to 800 new, of these most refer to genera already published though not well defined and a considerable number have been seen only in an imperfect state." Brown then outlines his plans for the next year, which were to complete his rough descriptions of the plants collected, which were then to be rewritten. Brown also informed Sir Joseph that he was unable to get boxes made in Sydney in which to send home his plant specimens, and that he had to resort to using puncheons (wine casks). A puncheon containing his best specimens collected on King George's Sound and the following five anchorages was unfortunately sent with Flinders on the *Porpoise*. Brown informs Sir Joseph that these plant specimens were arranged according to De Jussieu's classification. He however adds, "but I soon found the plants of doubtful affinity, so numerous that I judged it better to use the Linnean method". The pre-fabricated plant cabin brought out on the *Investigator* and used by Peter Good during the voyage was also placed on the *Porpoise*. Brown sent Banks a list of plants that Good had introduced into the garden during the cruise, what survived sometime after leaving the coast and, lastly, what was embarked alive on the *Porpoise*.



George Caley (1700?–1829) was invited, but declined to join Brown and Good on the *Investigator* voyage; however he did join Brown in a number of expeditions to the foothills of the Blue Mountains during the *Investigator's* twelve week stay at Port Jackson, in 1802. He joined Brown again in November 1804 on a journey to Mt. Hunter and in February 1805, after Brown's return from Tasmania, on a trip to the coast near Narrabeen. Brown mentions in some manuscript descriptions that the specimen was given to him by Caley.

During the eighteen month period from Flinders' departure to Brown's visit to Tasmania in January 1804, Brown continued the task of arranging and describing his collections. His rough descriptions were written in notebooks and are collectively entitled 'Descriptorium plantarum Novae Hollandiae que in fasciculis parvis Continentur', ff. 407; index ff. 20. His finalised descriptions are filed in his 'Slip Catalogue' to which N. T. Burbidge has made a typescript index to all the Australian species. The descriptions Brown made early in the voyage relate to the following collections, duplicate specimens of which he had with him; Banks & Solander 1st Cook Voyage, 1768–1771, David Nelson 3rd Cook Voyage, 1776–1780, Archibald Menzies who sailed with Vancouver and who visited King George's Sound in 1791, David Burton, Banks's collector in Port Jackson, c.1790–1792, John White, Surgeon General at Botany Bay 1788–1794, and Colonel William Paterson, Lieut. Governor Botany Bay 1800–1810. For the plants collected at King George's Sound and between there and Port Jackson, December 1801 to May 1802, and along the Queensland coast and the Gulf of Carpentaria, July 1802 to March 1803, Brown gives the date of collection, for the other collecting areas the place only (Burbidge, 1956). Before Brown went to Tasmania he made his plant collections ready for the journey home. His fully documented herbarium collection was arranged in Linnean class order and placed in 12 puncheons. The puncheons and four boxes of seed for the Royal Gardens at Kew and two boxes of seed and seed vessels for the Banksian herbarium was sent home in the *Calcutta*. Brown's manuscript inventory of his herbarium collection is entitled 'Herbarium Novae Hollandiae', ff. 644. This manuscript indicates the number of specimens of a particular species and the place or places of collection. The specimens travelled comparatively well, only a few suffering mould damage.

Brown went to Tasmania early in 1804 and stayed nine months. He was in the *Lady Nelson* at Port Phillip when it was decided to move the colony to the Derwent. Brown was thus present at the first settlement at Risdon Cove under Lieut. Brown and also at the settlement at Sullivan Cove (modern Hobart) under Lieut. Col. Collins. One of Brown's Linnean Society sponsors, then Lieut. Col. Paterson, established the settlement at Port Dalrymple. Brown made an important collection of herbarium specimens and seed in these three locations in Tasmania.

Supplementing Brown's 'Slip Catalogue' of plants descriptions are a number of local floras.

"Descriptiones plantarum insulae Maderae" ff. 49.

"Descriptiones plantarum Capotis b. Spei" ff. 229.

"Flora vicinitatis Portis Jackson N.C. Australis inclusio Fluvio Hunter" ff. 174.

"Flora vicinitatis Fluvii Hunteri Oct. – Nov. 1804" ff. 46.

"Plants introduced at Port Jackson" ff. 139–140.

[Plants from the] "Kents Islands; Primitiae florulae insularum Dec. 12–19 1803" ff. 100–138.

"Species novae plantarum in Insula Diemeni" ff. 1–8.

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"Plantae in summitatis Montis Tabularis Insula Diemeni" ff. 9, 14-18.

"Plantae primum observatio in Monte Tabulari" ff. 10-11.

"Florula Montis Tabularis in vicinitate Fluvio Derwent" ff. 12-13.

"Plantae Portus Dalrymple January 1-18, 1804 observatio in vicinitate Derwent February August 6 non visio" ff. 19-22.

"Primitae florulae vicinitatis fluvii Derwent" ff. 144-190.

"Plantae rariores Port Philip" ff. 141-143.

[Lists of plants from Tasmania giving localities stating where descriptions may be found] ff. 28-97.

Lists and descriptions of plants collected by Brown in Timor ff. 316.

"Chloris fluvii Cygnorum" ff. 2.

"Florula Spencer's Gulf" ff. 2.

"Proteaceae in ora occident-meridional King George's Sound at Middle Island and in ora occident prope Swan River and Baie de Geographie" ff. 4.

Peter Good the Kew gardener sent Sir Joseph Banks consignments of seed at every opportunity. His lists of seed include the locality, generally the date of collection, and are sometimes accompanied by notes stating the type of soil and the habit of the plant. These lists, which are in the Department of Botany, British Museum (Natural History) are of seed from the following localities:-

10th December 1801	South Coast of New Holland
4th January 1802	King George III Sound
10th-13th January 1802	Bay 1, 2, 4; Anchorage 5, 7 & 8; Memory Cove, Bay 10, Anchorage 11, 12, Kangaroo Island, Kings Island, Port 2, Shoalwater Bay, Cape Townsend Island, Broad Sound, Northumberland Islands
10th May - 20th July, 1802	Port Jackson
30th July, 1802-10th March, 1803	East & North Coasts Gulf of Carpentaria
1st-8th April, 1803	Timor

Banks wrote to Brown commending him and Good on their attention to that particular part of their duty and adding that the Botany Bay house at Kew was arousing much public interest. Included among the Good manuscripts is the list of plants he had in his plant cabin when the *Investigator* left Port Jackson in 1802. There is also a later list of plants growing in the garden on board the *Investigator* 24th April 1803, in Brown's handwriting (BM Add Ms 32439:96-97). After Good's death Brown sent home collections of seed from Port Jackson. Banks in a letter to Brown dated 8th April 1803 informs Brown that the seeds he had sent have been planted at Kew and raise high hopes. (BM Add. MS. 32439. 95). In a later letter, 30th August 1804 he adds, "they have produced some curious plants". There is a manuscript list of plants in the Department of Botany, in Brown's handwriting, entitled 'Plantae Novae Hollandiae in Horto Regio Kewensis crescentes March 4, 1806' ff. 4. The collection of living plants in pots and boxes maintained by Good perished when the *Porpoise* was wrecked. Brown brought a valuable collection of seed from Tasmania when he returned home in 1805 and with George Caley's assistance made another, though different, collection of living specimens for the Royal Gardens at Kew. This collection of plants in pots and boxes was left in Caley's care to be sent to England at the earliest opportunity. Banks was most annoyed at Caley's delay in forwarding the plants. The collection arrived on 12th May 1810, brought in the plant cabin that went out on the *Porpoise*, by Caley himself, on his return in the *Hindustan*.

The landscape artist Westall, who left Australia with Flinders and who arrived home on 21st February 1805, brought home a small collection of specimens: plants, birds and shells. Some of the shell and bird specimens were not in Brown's collection. One bird specimen, in the Bird Section of the Department of Zoology, British Museum (Natural History) at its Tring Museum, is the type of *Columba lucomela*. Smith (1960) remarks that Westall's art appears to have been influenced by his companions' study of botany and geology. In the highly detailed rendering of the vegetation in Westall's Australian landscapes we have the result of his association with Brown and Bauer, and in the detailed study of terrain of Flinders's interest in geology and coastal survey.

Brown's zoological specimens included twenty three mammals, two hundred and seventeen birds, thirty nine fish, thirty three reptiles and batrachians, twenty nine invertebrates and a number of insects. The new species of insects in Brown's collection were described by Kirby in 1818. Brown selected seventy nine bird specimens for the national collection (British Museum); a set of eighty five specimens, mainly duplicates, he presented to the Linnean Society, who maintained a museum at the time. Many of these Linnean Society bird specimens were put on display; they were also the specimens used by Temminck (1822) and Vigors and Horsfield (1827). Brown's bird types are thus to be found among the Linnean Society collection which was presented to the British Museum by the Society in 1863. They are currently among the Museum's bird collection at Tring Museum. The following list of Brown bird types was compiled with the aid of the Bird Section's manuscript 'Bird skin register' and R. L. M. Warren's *Type specimens of birds in the British Museum (Natural History)*, London, 1966-1973. Dr Galbraith of the Bird Section, Tring Museum has provided me with the current names, which are given within brackets.

- Psittacus nasicus* (*Cacutua t. tenirostris* (K)) Port Philip, Victoria. 27th April, 1802.
Psittacus brownii (*Platycercus caledonicus* (Gmelin)) Derwent, Tasmania. Bauer water colour drawing folio 19.
Psittacus melanocephalus (*Barnardius z. zonarius* (Shaw)) Memory Cove, South Australia, February 1802. Bauer water colour drawings folios 20 and 21.
Psittacus multicolor (*Psephotus v. varius* Clark) Spencer's Gulf, S. Australia. 10th March, 1802.
Psittacus venustus (*Platycercus v. venustus* (K)) Arnheim Bay, Northern Territory. 6th February, 1803.
Columba scripta (*Petrophassa scripta* (T)) Shoalwater Bay 22°S., Queensland. Plate
Columba humeralis (*Geopelia h. humeralis* (T)) Broad Sound, Queensland, 26th September, 1802.
Hirundo pyrrhonata (*Petrochelidon n. nigricans* (Vieillot)) New South Wales (error, Western Gulf of Carpentaria) 9th December, 1802. Vide R. Br. Ms.
Dacelo leachii (*Dacelo l. leachii* V & H) Keppel Bay (near Rockhampton), Queensland, 24th October, 1802.
Falcunculus gutturalis (*Oreoica g. gutturalis* (V & H)) Kents Group, 1803.
Campephaga leucomela (*Lalage l. leucomela* (V & H)) Broad Sound, Queensland, 26th October, 1802.
Graucalus mentalis (*Coracina robusta* (Latham)) South Coast of Australia 1803 (error 1802 vide Brown Ms. as the species to which this specimen belongs occurs only marginally in South Australia, it is most likely that the holotype came from Port Philip Bay).



Plate 3. *Columba gularis* Brown manuscript name, *Petrophassa scripta* (T) collected at Shoal Water Bay.

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- Malurus brownii* (*Malurus m. melanocephalus* (Latham)) Thirsty Sound, South Queensland, Sept., 1802. Specimen lost its tail
- Anthus australis* (*Anthus novaeseelandiae australis* Vieillot) South coast of Australia.
- Anthus fuliginosus* (*Calamanthus f. fuliginosus* (V & H)) Van Dieman's Land, 1804.
- Grallina bicolor* (*Petroica cucullata* (Latham)) Prospect Hill, New South Wales. Vigors and Horsfield, 1827. The specimen is not a *Grallina* but an example of *Petroica* (*Melanodryas*) *cucullata*. A specimen of *G. melanoleuca* from the Linnean Society was mistakenly referred to as the type of *G. bicolor*.
- Pachycephala fuliginosa* (*Pachycephala fuliginosa* (V & H)) South Coast of New Holland (Matthews *Birds of Australia*) 8, 221 = Port Lincoln, Eyer's Peninsula).
- Muscicapa goodenovii* (*Petroica goodenovii* (V & H)) Coast of South Australia, 1802.
- Rhipidura motacilloides* (*Rhipidura l. leucophrys* (Latham)) George River. The tip of bill is broken.
- Fringilla bichenovii* (*Poephila b. bichenovii* (V & H)) Shoal Water Bay, Broad Sound, Queensland, September 1802.
- Ptilonorhynchus smithii* (*Ailuroedus c. crassinotris* (Paykull)) Watham River, New South Wales, November 1804.
- Meliphaga indistincta* (*Lichmera i indistincta* (V & H)) King George's Sound. The bill is damaged.
- Meliphaga fulvifrons* (*Phylidonyris m. melanops* (Latham)) Sydney, August, 1803.
- Pomatorhinus temporalis* (*Pomatostomus t. temporalis* (V & H)) Shoal Water Bay, Queensland, August 1802.
- Pomatorhinus superciliosus* (*Pomatostomus s. superciliosus* (V & H)) South Coast of New Holland.

The Department of Zoology, British Museum (Natural History) has Brown's zoological manuscripts written on the voyage. These manuscripts show that Brown was a competent zoologist, and that he devoted as much zeal to the study of his zoological material as he did to his plant specimens. His descriptions of animal genera (ff. 1035) include those of animals he encountered or of which he acquired specimens on the voyage. There are further slips containing data on the following animal groups: Mammalia ff. 43; Reptilia ff. 38, Pisces ff. 40; Invertebrata ff. 50 and miscellaneous ff. 4. This data is mainly relating to species seen or acquired on the voyage. The other small manuscripts all relate to the voyage:

- "Catalogue of specimens of birds in deal packing boxes 1 & 2, February 4, 1805 ff. 32"
- "Catalogue of birds in deal box 1 ff. 6"
- "Memoranda Zoologica" ff. 9
- "Index descriptorum animalium Nova Hollandiae quae in fasciculis parvis continentur" ff. 3
- "New Holland birds given to the British Museum" ff. 3
- "Fragmenta fauna insularum Kents' Group" ff. 132-136.

The Linnean Society archives has the list of "New Holland Birds collected by R. B. given to Mr. Leadbeater to be set up for the Linnean Society's collections. August 15th, 1818" ff. 3.

There is no trace of Brown's mineral collection from the south coast of Australia; in all probability, it was on the ill fated *Porpoise* with his plant collection from this area. His collection from Queensland is in the Department of Mineralogy, British Museum (Natural

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History). These specimens have recently been sectioned and D. T. Moore of the Department has provided the following list of minerals and location data taken from the associated Brown label:

Muscovite rich quartzite	Mallison's Island, Arnheim Bay
Quartzite cut by quartz-iron oxide vein	Mallison's Island, Arnheim Bay, March, 1803.
Flagg shale (2 specimens)	English Island, English Company's Island, February 1803.
Pyroxene granophyre	English Company's Island
Fine grained sandstone	English Company's Island
Quartz bearing conglomerate (2 specimens)	Carpentaria Island & Groote Eylandt, January 1803.
Weathered sedimentary rock	Carpentaria Island & Thirsty Sound
Shale	Carpentaria Island
Sandstone	Carpentaria Island
Weathered shale, with manganese encrustation (2 specimens)	Carpentaria Island
Ironstone	Carpentaria Island
Chert	Carpentaria Island
Flaggy shale	Carpentaria Island
Muscovite-biotite grandioivite granite	Mt. Caledon, Carpentaria Island, February 1803.
Quartz porphyry (2 specimens)	S.E. Queensland & Broad Sound, Upper Head
Quartzite	Carpentaria, January 1803.
Quartz crystals	Island, N. Arnheim Bay (Plate 4)
Weathered granite	Island, N. Arnheim Bay
Limestone	Above Coopang, Timor
Weathered igneous rock (2 specimens)	East Coast Port Island & Northumberland Islands
Sedimentary rock cut by quartz vein	Keppal Bay
Quartz crystals on matrix	Keppal Bay
Quartz-biotite schist	Cape Townsend Islands
Hypersthene gabbro	Broad Sound, near its head
Biotite-muscovite granite	Broad Sound, Upper head
Quartz-hornblende microgranite (2 specimens)	West Peaked Hill, Broad Sound
Ignimbrite	Cumberland Islands, October, 1802.
Chlorite-biotite	Cumberland Islands, October, 1802.
Heamatite stained limestone	Northumberland Islands
Dacite porphyry	Shoal Water Bay
Greywacké	Shoal Water Bay
Pyroxene-hornblende grandioivite porphyry	2 miles from beach in the bed of the rivulet of Shoal Water Bay.
Highly weathered quartz porphyry	Shoal Water Passage, August 1802.
Banded sandstone	Thirsty Sound, Inner Entrance
Pyroxene granodiovite	Thirsty Sound, Inner Entrance
Lineated phyllite	Thirsty Sound, Inner Entrance

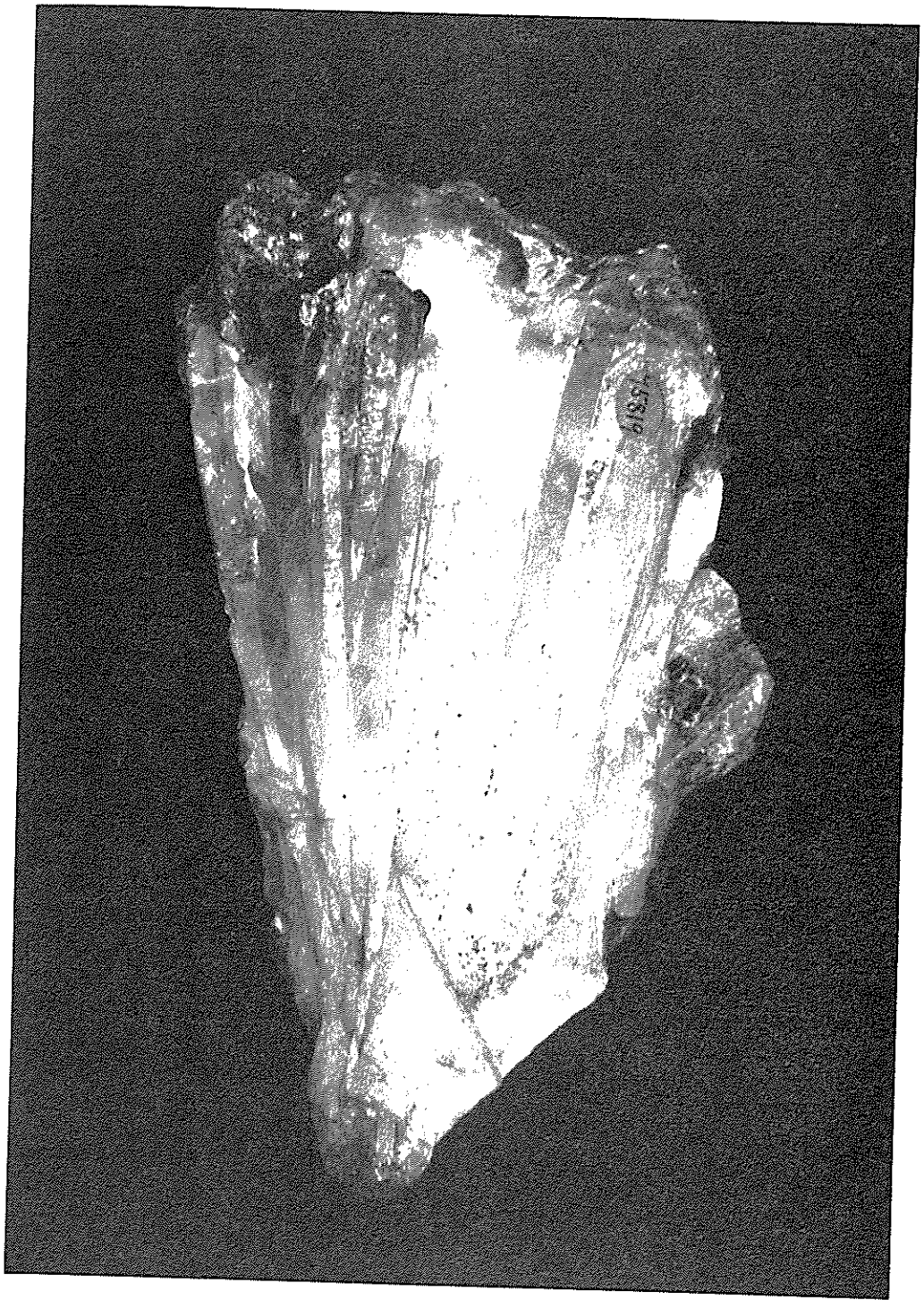


Plate 4. Quartz crystals collected at N. Arnheim Bay on the 16th Feb., 1803.

Ferruginous concretion	Thirsty Sound, Inner Entrance
Pyroxene micrograndioivite with calcite veins	East side of entrance to Thirsty Sound
Oolitic limestone	Low Island, Torres Straits

Brown's manuscripts relating to his collection of minerals are in the Department of Mineralogy, British Museum (Natural History). It was not uncommon for any specimen that was dug up to be referred to as a fossil hence the use of this word in Brown's two manuscript catalogues of minerals.

"Catalogue of fossils collected in the neighbourhood of King George III Sound West Coast of New Holland". December 9–28, 1801. ff. 6.

The other localities and their dates include:

10th–13th January	1802 Bay 1, 2, 3.
3rd February	1802 Bay 4, Anchorage 6
13th February	1802 Anchorage 7
23rd February	1802 Memory Cove, Bay 9
3rd March	1802 Bay 10, Anchorage 11
11th March	Inlet 12
	Kangaroo Island
	South Coast
[June, 1802]	Hawkesbury, near Paramatta

"Catalogue of fossils collected on the East Coast, 1802" ff. 21.

The localities and their dates include the following:

5th–8th August	1802 Port No. 1
9th–16th August	1802 Keppel Bay
21st–22nd August	1802 Port 2, Harvey's Islands
26th August	1802 Shoal Bay Passage
28th August	1802 Cape Townsend Islands
30th August–3rd September	1802 Shoal Bay, Thirsty Sound
2nd September	1802 Broad Sound
30th September	1802 Northumberland Islands
16th October	1802 Cumberland Islands
30th October	1802 Torres Straight Low Islands, Prince of Wales Islands
18th November	1802 Gulf of Carpentaria Islands incl. Bentinck Island
1st December	1802 Turtle Island
15th January	1803 Cape Maria
16th January	1803 Groote Eylandt, Cavern Islands
28th January	1803 Winchester, Bustard, Burneys, Morgans
28th January	1803 Point Blake, Arnheim South and North Bay
18th February	1803 North Coast Islands
March	1803 New Year's Island
1st–7th April	1803 Timor, Coopang Bay

"Minerals collected on the East Coast of New South Wales August 5–10. ff. 2. A manuscript probably in the hand of the miner, Milnes.

"Collection of minerals from the Kent's group, December, 1803" in the hand of Brown.
 "Mineralogy of the Kent's group" which is included in his [Plants from the] Kent's
 Islands ff. 137-138.

"Stones collected at the Hawksbury in the Neighbourhood of Paramatta." folio.

Brown's mineral specimens were noted in publications by W. Buckland (1821) and
 W. H. Fitton (1827).

Brown provided Governor King with data on the soil of Port Dalrymple. The rough
 draft is headed "Port Dalrymple, soil" ff. 4; the final memorandum is headed "A few
 remarks of Port Dalrymple given to Governor King, September, 1804."

A correlation between the code names used by Brown with localities on modern maps
 for Western and South Australia, Victoria, Queensland, Cumberland Islands and the Gulf
 of Carpentaria is given in the introduction to the facsimile edition of Brown's *Prodromus*,
 published in 1960. The localities in Tasmania were not included; they were Port Dalrymple
 in the north of the island and Risdon Cove, Sullivan Cove, and Table Mountain in the
 south, in the Derwent River area. The Department of Botany has a more detailed
 manuscript list of localities arranged in date order, compiled from data given on Brown
 herbarium labels. Brown's zoological specimen labels are not always extant, as it was the
 practice, when a specimen was placed on display, to affix the label to the base of the
 stand.

Ferdinand Bauer, the natural history painter in 1786-1787, went with John Sibthorp
 (1758-1796) on a natural history expedition to the Levant, to act as his assistant, and to
 make a collection of drawings of animals and plants. Bauer was thus a knowledgeable
 naturalist as well as a superb draughtsman. While Brown was in Tasmania he had the
 opportunity to go to Norfolk Island where he made a substantial collection of specimens.
 Brown acquired a set of his Norfolk Island plants. Brown records in his manuscripts and
 on his labels the odd plant and animal specimen given him by Bauer, collected on the
 occasions when they did not explore together. I have been unable, however, to find any
 substantial number of Bauer specimens from Norfolk Island in the Department of Botany.
 It would thus appear that the Norfolk Island specimens that were sold in the 'Sale of
 dried plants, specimens and sections of wood', in August 1859 (*Gard. Chron.*, 1859: 676)
 included the majority of the specimens given to Brown by Bauer. An exception is
Cyathea brownii (*Alsophila excelsa* in Brown manuscript). Although there is no record
 that the Royal Botanic Gardens, Kew bought the Bauer collection in the 1859 sale, they
 do however have a number of Norfolk Island plants collected by him, labelled 'Bauer ex
 Herb R.Br.' Dr. Riedl (*in litt.*) states that the Naturhistorisches Museum, Vienna do not
 have a complete set of Bauer's Norfolk Island plants as recorded in Endlicher's *Prodromus
 florae Norfolkiae*, 1833. Bauer also made a collection of plants from Australia and Timor
 (Lanjouw and Stafleu, 1954.)

The artists, Bauer and Westall, probably worked on board the *Investigator* in Flinders'
 great cabin. Bauer's method of recording was different from that of Sydney Parkinson
 on Capt. Cook's first voyage of circumnavigation. Parkinson roughly sketched the whole
 plant and then coloured sufficient parts as a record for the finished drawing. Bauer, in
 contrast, made a detailed pencil sketch and kept a colour record. A number of these
 sketches are in the Naturhistorisches Museum, Vienna, some being filed with the specimens
 to which they relate. The total number of Bauer sketches was 2,073 comprising: New

Holland plants 1,542 and animals 263; Norfolk Island plants 80 and animals 40; Timor plants 60 and Cape plants 79 (*H.R.N.S.W.* 1898 618). Not all of these can be traced today. Dr. Riedl (*in lett.*) states there are thirty six sketches of Cape of Good Hope plants and one water colour drawing of a Norfolk Island plant, *Wikstroemia australis*, in Vienna. At some period it was intended to publish lithographs of a number of Norfolk Island plants, and these illustrations are referred to in Endlicher's *Prodromus*. Ten of these lithographs, slightly coloured, are in Vienna and another set in the Departments of Botany, British Museum (Natural History). This indicates that perhaps only ten lithographs were actually made. The plants illustrated are the following:— *Titania miniata*, *Araucaria excelsa*, *Wikstroemia australis*, *Achyranthus arborescens*, *Alyxia forsteri*, *Hybanthera biglandulosa*, *Busbeckea nobilis*, *Excoecaria agallocha* and *Streblorrhiza speciosa*. Bauer returned to England with Brown in 1805, and spent the next ten years with him making finished drawings of those plants and animals selected by Brown for such treatment. These drawings were eventually presented to the British Museum by the Lord Commissioner of the Admiralty, on 8th June, 1843. There is a list of Bauer's sketches, in Brown's hand, in the Department of Botany. Britten (1909) gives a list of the finished drawings and a further list of the works in which some of them were published. Ferdinand Bauer died in 1826 and bequeathed all his effects to his brother Franz Bauer, resident artist at the Royal Gardens, Kew. As Franz died in December 1840 a bankrupt, all his possessions were sold. I have naturally not had time to pursue the rather hopeless search for information regarding this sale.

Although the Flinders' voyage achieved its objectives the participants did not receive the acclaim they merited. This may have been, in part, due to the fact that they did not return together, Flinders himself remaining a prisoner in Mauritius till 1810, and in part, due to the fact that Brown and Bauer returned in 1805 to a London celebrating the Battle of Trafalgar.

Sir Joseph Banks in a letter to Sir John Barrow (1764–1848), Secretary to the Admiralty, dated 9th October 1805 states "The case of natural history objects sent home by the naturalists testify to their diligence and industry; there are 38 cases in all including eleven of drawings by Bauer, twelve of dried plants, the rest being animals, minerals etc." he considers they should be returned to the care of the naturalists to be fully worked out and that their salaries should be continued while they are so engaged. (BM Add Ms 32439. 185) In a letter to William Marsden, Secretary of the Admiralty dated 3rd January 1806 Banks gives Brown's rough estimate of his collection.

<i>Specimens of plants</i>	Species
From South coast of New Holland	700
From East coast of New Holland	500
From Northeast coast of New Holland	500
From Port Jackson and its neighbourhood	1,000
From Van Diemen's land	700
From Timor	200
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Total	3,600

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Dried skins of birds About 150

Quadrupeds Most of these have been damaged by insects or lost in the *Porpoise*

Insects One case

Minerals Three boxes

The arrangement of these birds, insects and minerals he wishes to transfer to persons more conversant in these branches of natural history than he considered himself to be (*H.R.N.S.W.* 1898 6: 17) Sir Joseph stipulated that Bauer should work at Soho Square, his London home, so that Brown and he could consult over a drawing and so avoid any discrepancy between description and illustration. The one tragic decision was that Brown's account of the flora was to be published at his expense (*H.R.N.S.W.* 1898 6: 19).

On 18th June, 1807 Brown stated in a memorandum to Banks that he and Dryander, Banks's Curator/Librarian, were spending two days a week selecting specimens for the public collection and had already gone through the first eight Linnean classes, exclusive of grasses and Gynandria (*H.R.N.S.W.* 1898 6: 268–269). Banks finally reported to the Board on 10th April, 1810 that Brown had been diligently employed into putting into scientific order the many plants collected and in making descriptions of the many new species discovered, adding that Brown was likely to continue long after the end of the year, the latter being a reference to the Navy Board's Agreement to only continue Brown and Bauer's salaries up to the end of 1810. Banks concluded that Brown would deliver to the Board the specimens properly named and arranged. Bauer during the five years completed the 290 drawings, held by the British Museum (Natural History) taking one to one and a half weeks to complete a single drawing. The majority of them were made for the Admiralty. Brown, however, bequeathed to the Museum (in 1858) two portfolios of Bauer drawings.

Brown maintained a working herbarium of the plants he examined in a fresh state (Hooker 1860), a collection which enabled him to work on the homeward journey. Brown's initial idea had been to publish an account of the new genera and species, but when he found that some existing genera needed redefining he decided to include generic descriptions and specific characteristics of all the plants known to be natives of New Holland. To assist Brown, Dryander compiled *Chloris Novae Hollandiae, or a catalogue of the plants of New Holland and Van Dieman's Island hitherto published*. This list was published in the *Annals of Botany*, Vol. 2, 504–532, in 1806. By 6th January, 1810 nearly a half of Brown's flora had been prepared for the press and of this rather more than a half actually printed. Early in April, 1810 the first and only volume of Brown's *Prodromus florae Novae Hollandiae et insulae van Diemen* was published. Two hundred and fifty copies were printed but only twenty six were sold. Later, in 1814, Brown supplemented his *Prodromus* with an important phytogeographic study, *General remarks geographical and systematic on the botany of Terra Australis*, published as a Appendix to Matthew Flinders' *Voyage to Terra Australis*, 1814. Bauer intended to publish a series of engravings to accompany Brown's *Prodromus*, but as he was unable to find artists capable of engraving and colouring the plates to his high standard, he was obliged to execute the work himself. For him too, the time (1806–1813), was inauspicious, and the first three parts comprising fifteen plates and entitled *Illustrationes florae Novae Hollandiae* sold only a few copies.

Brown's Australian plants, some 3,900 species, yielded a complete new range of plant form additional to that hitherto known, and included 140 new genera and 1,700 new species. From the detailed analysis of these plants both during the voyage and over the succeeding years Brown formulated new concepts regarding orders, genera and species, concepts which greatly advanced systematic botany. Unlike Banks, Brown did not allow free access to his collection; this was still true even when it came into the possession of his colleague and successor at the British Museum, J. J. Bennett (1801–76). The chief exception was George Bentham (1800–1884) who consulted it when preparing his *Flora Australia*, 1863–1878. The will of Bennett gave instructions for the selection of a complete set of specimens for the British Museum, a second set for the Royal Botanic Gardens, Kew, and a third set for the Royal Botanic Garden, Edinburgh. The statement in Stearn, (1970) that this selection began in Bennett's lifetime does not appear to be correct. It was at this stage that Britten compiled a manuscript list of the species; these were arranged by the number allotted to each species by Britten, and not Bennett, as given in Stearn in 1970 and in Burbidge, 1956. This list is in the hand of James Britten (1846–1924) and Henry Trimen (1843–96). These numbers were, when relevant, (and not all the species inferred by Burbidge and Stearn) related to the names of species in the *Prodromus* rather than to individual specimens. Consequently, for species in the *Prodromus* a number can relate to the same species from two or more localities and also to what are now considered to be two or more different taxa. Burbidge states that it is these duplicates which are usually quoted as "types", and it is from the meagre details recorded on their labels that identification as to locality has generally been derived. Stearn (1970) considers that as all the specimens in Brown's herbarium are authentic specimens (syntypes), and as Brown re-examined his material before publishing, the *Prodromus*, it seems wise to select as the lectotype of a Brownian species, the most complete individual specimen in the British Museum annotated by Brown which displays the characters stated in his diagnosis. As the result of the work of my colleague J. B. Marshall, on Brown herbarium specimens, it is possible to distinguish clearly the various sequences. This information, it is hoped, will be published in a forthcoming paper in *Taxon*. The specimens selected by Dryander and Brown between 1805–1810, and designated for the national collection, were mounted in Bennett's lifetime.

Brown gave Sir Joseph Banks some specimens, which are mounted on Banksian herbarium paper, and bear on the reverse 'New South Wales [& locality]' but no indication that they were collected by Brown. A substantial number of duplicates were also sent to the Royal Botanic Gardens, Melbourne, who in their turn, passed a small number of specimens to the Royal Botanic Gardens, Sydney and to the Commonwealth (now National) Museum, in Wellington. Subsequent to this distribution of duplicates, a further large quantity was discovered in the stores of the British Museum, and forwarded to the Royal Botanic Gardens, Kew to be divided between that establishment and the Royal Botanic Garden, Edinburgh (*Gard. Chron. August 27th 1881: 277*). The specimens in this latter collection bear original Brown labels and my colleague J. B. Marshall suggests that these particular specimens once formed Brown's study set.

H. B. Carter is preparing a definitive account of the Flinders voyage based on all the documents available and he will also attempt a transcription of Brown's diary of the voyage. I am preparing a transcription of the Peter Good diary, with notes and an introduction. The Basilisk Press published on the 23rd February, 1976 twenty five of Ferdinand Bauer's drawings in a volume entitled *The Australian paintings of Ferdinand*

Bauer, with an introduction by Wilfrid Blunt and botanical text by W. T. Stearn. D. H. Mabberly of the Department of Botany, Oxford is writing a biographical account of Brown and his achievements.

ABBREVIATIONS

B.M. Add. MSS	British Museum Additional Manuscripts
DTC	The collection of copies of the correspondence of Sir Joseph Banks made for Dawson Turner, F. R.S. of Great Yarmouth, in 1833–34. 20 Vols. In the Department of Botany, British Museum (Natural History).
H.R.N.S.W.	Historical Records New South Wales
P.R.O. Adm	Public Records Office Administrative Documents

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