

Some aspects of the work of the botanist Robert Brown (1773–1858) in Tasmania in 1804

D.T. Moore
c/o Botany Library
Natural History Museum
London SW7 5BD UK

Abstract

Robert Brown was one of the earliest botanists to visit Tasmania (Van Diemens Land) and the first to reside there. An outline of his travels and observations in Tasmania over an eight-month period in 1804 before there was any widespread European settlement or ecological disturbance is given below. His journeys in Tasmania made it possible for him to gather almost 700 dried plant specimens which survive today in the Natural History Museum in London, with duplicates in various Australian herbaria. This Tasmanian material became the basis of descriptions in Brown's Prodrromus of 1810.

Introduction

The name of Robert Brown is familiar to the botanical world but to few outside it. Botanists know him as the discoverer of the cell nucleus and the first to recognize the phenomenon of cytoplasmic streaming. Importantly, he was also the first to publish on these (Brown 1833) and other topics. The background, and an in-depth study of these activities, is dealt with elsewhere (Mabberley 1985). Less familiar are Brown's activities as naturalist and botanist on the *Investigator* expedition to Australia under Matthew Flinders (1774–1814), although Brown's (1810) *Prodrromus* was an important outcome of this. Again, this is in the process of being covered elsewhere (Vallance *et al.*, in press).

Various publications (Mabberley 1985; Mabberley and Moore 1999; Vallance *et al.*, in press) outline Brown's selection as naturalist for the *Investigator* voyage. However, with the possible exception of Brown's Timor work, the Tasmanian aspects of his Australian collecting trips are the least understood, and the present paper is an attempt to pierce this obscurity.



Photo 1. Robert Brown in his prime by an unknown artist with signature facsimile reproduced in Mabberley (1985: 211).

e-mail: genista@rockwells.freemove.co.uk

Some peripheral Tasmanian flora and fauna may have been encountered early on the voyage for, in the course of the run from King George Sound to Sydney of January to May 1802, the expedition was in Tasmanian waters (as understood today) in the King Island and Flinders Island areas. Observations were made and specimens collected there. Also, on this occasion, the natural history artist Ferdinand Bauer (1760–1826) was with Brown.

Following the circumnavigation of the Australian continent, and after *Investigator* was condemned as unseaworthy on 14 June 1803 (Vallance *et al.*, in press: Chapter 18), Brown remained in New South Wales botanising and collecting until an opportunity arose for him to sail south on the *Lady Nelson* on 28 November 1803 (Vallance *et al.*, in press: Chapter 20). Initially bound for Port Phillip, or so it was believed, a change of plans at the Kent Group, Bass Strait, made Van Diemens Land (Tasmania) the destination. It is this Tasmanian trip with which we are concerned.

Naturalists in Tasmania before Brown

The appreciation of the Tasmanian flora by the first Europeans was mixed. Abel Tasman (c. 1603–1659) in 1642 is reported (Kantvilas 1996: 1) to have been impressed by some Tasmanian *Eucalyptus* trees which he estimated to be some 2½ fathoms in thickness at ground level (?15 feet or 4.5 m diameter = some 14 m circumference). Tobias Furneaux (1735–1781), on Cook's second voyage, was ashore from *Adventure* at Louisa Bay and Adventure Bay in March 1773 and also commented on the trees (Kantvilas 1996: 1). Specimens of *Eucalyptus obliqua* were collected from Adventure Bay, Bruny Island (January 1777) by the plant collector David Nelson on Cook's third voyage (Kantvilas 1996: 1) and Charles L'Héritier de Brutelle (1746–1800) published the genus *Eucalyptus* and described *E. obliqua* from Nelson's material in 1788 (Reid and Potts 1999: 198). Again, the French Admiral Bruny d'Entrecasteaux (1739–1793) had been in Tasmanian waters in 1791–93 with his ships *La Recherche* and *L'Esperance* looking for the

missing navigator La Pérouse (1741–1788). His naturalist, J.J.H. La Billardière (1755–1834), in his turn, published botanical data on Tasmanian plants (La Billardière 1800). A copy of some of La Billardière's data was prepared by Richard Cunningham (1793–1835) in manuscript (*Icones Plantarum Novae-Hollandiae*). However, it seems La Billardière was rather unimpressed by the quality of the *Eucalyptus* wood he encountered. On the other hand, (Sir) John Hayes (1768–1831), in April 1793, was more favourably impressed by the trees (Kantvilas 1996: 3).

With these botanists active in Tasmania before him, Brown had some information to go on before he arrived on the island. In his turn, Brown noted that one tree near his hollow-tree camp on the slopes of Mount Wellington—a stringy bark (*Eucalyptus obliqua*)—was 44 feet (some 15 m) round at breast height. Brown's frequent companion in Tasmania, the mineralogist Adolarius Humphrey (1782?–1829), in his account (Vallance 1981: 137), indicates Brown knew of a hollow tree so large that a coach and six horses could be driven through it. The size of the trees in the virgin Tasmanian forest is noted by Reid and Potts (1999: 198) who indicate that Tasmanian specimens of *E. regnans* and *E. obliqua* were the tallest hardwood trees in the world and that even today in the Styx and Florentine valleys of Tasmania, *E. regnans* is known to reach a height of some 90–92 m.

Methods

Some problems with Brown's manuscript sources

Where the writer has felt compelled to reproduce Brown's writings in this account, and edit into this framework details of his surviving plant collection at the Natural History Museum, London (BM), Brown's text is given in italics and any details supplied by this author are in roman in square brackets. Where considerations of space saving make it desirable not to transcribe the whole document, the writer's omissions of text are marked '[...]'.

Problems with the manuscripts are very real because Robert Brown published his *Prodromus* (1810), before Flinders' (1814) account of the voyage appeared which gave the present-day geographical names for many of the collecting localities. Hence Brown (1810) used the locality code 'D' for his Tasmanian gatherings. This important point has been made by numerous authors over the last 50 years, beginning with the account of Burbidge (1956). Despite these accounts, the problem of the order of publication of botanical detail and geographical names continues to confer confusion on Brownian studies. Brown's botanical appendix in Flinders' two volumes of 1814 is more concerned with the broad Australian botanical picture than with specifics of collecting sites.

Brown's surviving writings from 1801 to 1805, for example his diary and other papers, were not written for publication but were committed to paper as memory aids and receptacles of locality and some basic ecological information for the sources of his dried plant collection. Unfortunately, Brown's Tasmanian writings are the most obscure of those made on his Australian stay. Many of them, in particular his diary writings, are written in faint pencil (e.g. B.1.f.258 to f.274) on herbarium drying paper, and the passage of 200 years has not improved them. Even the late Professor T.G. Vallance was unable to read some of them for the preparation of *Nature's Investigator* (Vallance *et al.*, in press). For the most part, these writings were unpunctuated. Where excerpts have been used in the present paper, some punctuation has been added to assist readability.

Numerous versions of Brown's Australian writings also exist. He appears to have made a rough draft; then, perhaps, a 'fair copy' or copies. Also, in December 1802 on the *Investigator* voyage proper (that is, before going to Tasmania), he was sometimes a day out in his chronology (Vallance *et al.*, in press: Chapter 14) compared with the more precise navigational account of Flinders (1814). Indeed, on occasions, his diary

editors (Vallance *et al.*, in press) were driven to the conclusion that in some cases he wrote up his diary at the end of the week. Copying variations between two (or more) versions of documents are also known, and it appears from comments made by the referee during the preparation of this paper that variant versions of Brown's Tasmanian writing exist in Australia, dating from the time before Brown's papers were catalogued. Fortunately, Brown's papers at the Natural History Museum, London, are now catalogued and the transcriptions given in this work are those of the numbered papers given by Moore and Beasley (1997).

Brown's diary and other sources

At best, Brown's diary is a somewhat basic affair and, in order to corroborate some of his statements and augment details of his collecting trips, it is necessary to use additional sources. Fortunately, these are now published. On the *Investigator* voyage and in mainland Australia, the accounts of Flinders (1814) and Good (Edwards 1981) can be used and, from 1803 onwards, the *Sydney Gazette*. However, in Tasmania, the diary (Nicholls 1977) of the Colonial Chaplain, Rev. R. Knopwood (1763–1838), and the letters of the mineralogist Adolarius Humphrey are the necessary supporting documents (Vallance 1981; Vallance 1990; Vallance *et al.*, in press: Chapters 21, 22).

There are 97 Robert Brown botanical manuscripts in the Botany Library of the Natural History Museum, London, which have been catalogued and numbered by Moore and Beasley (1997). There are other manuscripts in libraries of the Royal Botanic Gardens, Kew, and Edinburgh (Bridson *et al.* 1980). Brown's zoological manuscripts in the zoology library of the Natural History Museum, London, have also been catalogued by Wheeler (1993). In addition, there are some (unnumbered) manuscripts in the Mineralogy Library which were referred to by Vallance and Moore (1982). To some extent, all these manuscripts overlap in content.

**PART A. BROWN IN BASS STRAIT AND
NORTHERN TASMANIA**

On the voyage to Port Phillip (or so it was thought), the tiny *Lady Nelson* was compelled by bad weather to seek shelter at East Cove, Deal Island, in the Kent Group of islands, Bass Strait, on 11 December 1803 (Vallance 1990: 79). The bad weather continued and she did not finally leave until 31 December. The island had recently been visited by the American sealer *Charles* of Boston and had been set on fire and was still burning in places (Vallance *et al.*, in press: Chapter 20). This may have contributed to Brown collecting more marine algae here than was usual. The time at the island was well spent, with numerous marine algae, higher plants and even rock specimens being collected, although none of the latter survive (Vallance 1990: 79). A listing of the seaweeds gathered at this time, and extant in London, is given by Groves and Moore (1989). However, herbarium workers should

be aware that at the Kent Group in December 1803, Brown appears to have been muddled as to the year. Consequently, gatherings exist from the Kent Group variously dated '1803' and '1804'. The ambiguity of the Kent Group original plant labels is noted by Vallance (1990: 79). For example, of 89 plant specimens from this island group, 46 are dated 1803; 19 (mostly algae) are undated; 18 are dated 1804 and six are dated '1803-4'. There are also specimens from Port Dalrymple bearing the year '1805' in Brown's writing but these were probably given to him by William Paterson (?1755-1810) who commanded the Port Dalrymple settlers from 1804 to 1809.

By an accident of circumstances, another vessel put into Deal Island during this period to escape the bad weather. She was *Francis* on her way to Port Dalrymple to survey the area with the view to moving the Port Phillip settlers there. *Francis* had on board the official mineralogist to New South

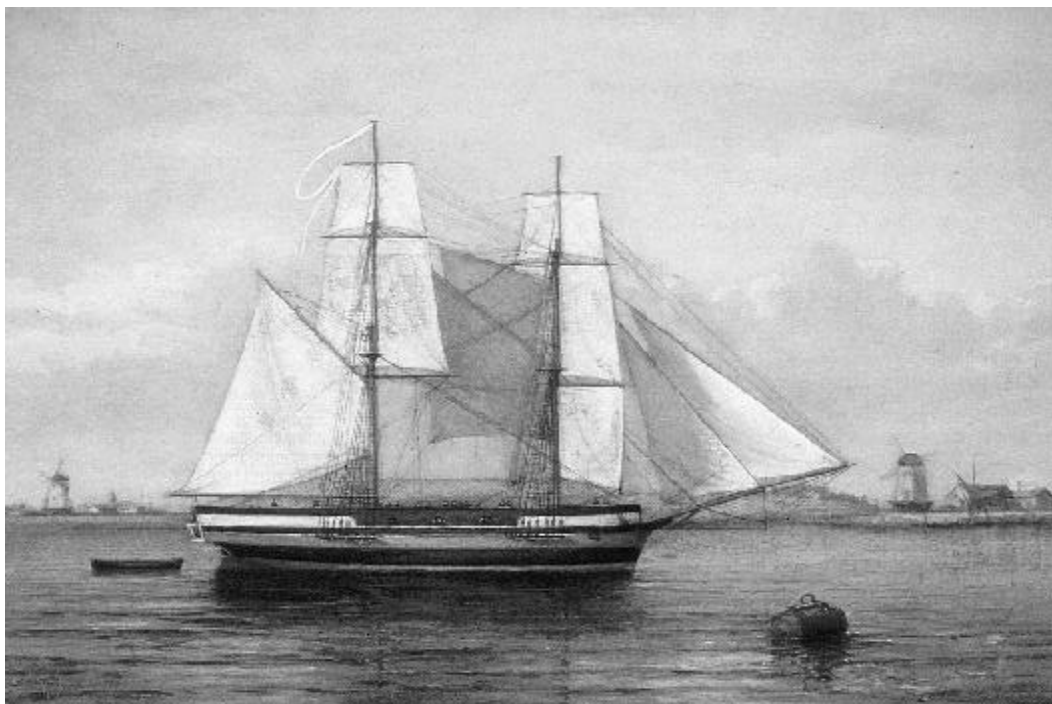


Photo 2. The Lady Nelson on which Robert Brown sailed to Tasmania in 1803, from an oil painting in the Mitchell Library (ML 86), reproduced with permission from the Mitchell Library, State Library of New South Wales.

Wales, Adolarus Humphrey (noted above). It was felt by the ship's captain that *Francis*, having suffered storm damage, was not fit to proceed, so Humphrey and others were transferred to Brown's vessel (Vallance 1990: 79) which took over the Port Dalrymple duty. Brown wrote to Colonel William Paterson from Kent Group, the letter being taken to Port Jackson by *Francis*. Extracts from the letter (BL.Add.Ms. 32439 ff.144r-145) are given below:

{At Anchor Kents Group Basses Strait
Dec^r: 30 1803

Dear Sir,

It is now upward of a month since I left Port Jackson in the Lady Nelson, intending to examine the neighbourhood of Port Phillip, and hoping also to have an opportunity of visiting Port Dalrymple & the Derwent River in Van Diemens Land; [... Brown goes on to state that Calcutta would take much of his plant collection, and the seeds rescued from the Porpoise at Wreck Reef, from Sydney back to England ...] If I am fortunate enough to return to Port Jackson before the departure of Calcutta I shall be able to give you some account also of this group of Islands and I trust also of Van Diemens Land [...]

The weather did not finally improve until 31 December 1803, allowing *Lady Nelson* to continue her now revised journey.

The Deal Island flora was little collected after Brown left, a point taken up by Stones and Curtis (1973: 278). Also, Ferdinand Bauer was not present with Brown on his Tasmanian trip so no Bauer watercolour drawings were made from Tasmania proper (excluding King Island and Flinders Island). However, two Kent Group plants, *Centrolepis pulvinata* (R.Br.) Roem. & Schult. (Bennett 5833*) (Centrolepidaceae) and *Pratia irrigua* (R.Br.) Benth. (Bennett 2621) (Campanulaceae: Lobelioideae), which were collected by

* The Bennett number is taken from a register of Brown's plant specimens (B.76) instituted by J.J. Bennett at the British Museum, London, after Brown's death in 1858 (see Groves and Moore 1989; Moore and Beasley 1997).

Brown at Deal Island, were illustrated in watercolour by Margaret Stones in the 1970s (Stones and Curtis 1973: 262, 278).

Brown's natural history comments (B.74 i (c)) on the Kent Group of islands, with details of the surviving plants in London (BM) are edited into the context of the Kent Group document below. Another transcription of the document set out below with small differences occurs in Mabberley (1985: 431-2 Appendix I). The two larger islands of the Kent Group are Deal Island and Dover Island to the west.

[B.74 (i) c. f.1r, side 1] *Two larger & contiguous Islands of Kents Group in Basses Strait are compos'd of granite. The surface in many places even towards the tops of the lower hills cover'd with arenaceous lime stone in which I did not observe any shells or marine exuviae neither did I find it anywhere forming a regular stratum or even rocks but generally scatter'd in small loose fragments.*

*The granite is mostly grey but not unfrequently red [-] it consists of Feldspar, quartz & mica which last is often in but small proportion [f.1v, side 2] most commonly colourless but sometimes black. Cubes & Rhombs of feldspar one or two inches in length frequently occur & here & there pretty large crystals of black schorl occur. [Today the name schorl is used in connection with the mineral tourmaline; in Brown's time, it meant a well-crystalline (euhedral) mineral, see Vallance *et al.*, in press: Chapter 2.]*

The Islands almost every where rise with a steep acivity from the shore & in many places present to the sea perpendicular rocks of several hundred feet in height. These rocks are rent in various directions & not uncommonly exhibit the appearance of rude vertical or variously inclin'd columns.

The greatest elevation & at the same time the most precipitous quarter is towards the W & SW.

The soil is either sandy mix'd more or less with vegetable mould or in hollows where a greater proportion of vegetable mould obtains is boggy.

[f.1v, side 3] *The grass which covers a considerable part of the surface is all of one kind*

{a species of *Poa*} which grows in tufts [*Poa laevis* R.Br. (Bennett 6289) and *P. australis* R.Br. (Bennett 6290)]. In some places the ground is thickly cover'd with a species of *Senecio* [*Senecio lautus* Willd. (Bennett 2299), *S. linearifolius* A. Rich. (Bennett 2296) and *S. minimus* Poir. (Bennett 2285)] or overrun with a *Nettle* the stimuli of which produce'd in some {but not all} a numbness & tingling which lasted upwards of 24 hours [*Urtica incisa* Poir. (Bennett 3093)].

The *Casuarina* {a species resembling the swamp oak but really diff^t} [Brown's specimen untraced; possibly *Allocasuarina littoralis* (Salisb.) L. Johnson was meant]; Middle harbour pine & a species of *Eucalyptus* not unlike the Blue Gum [*Eucalyptus globulus* Labill.?, see text. The only *Eucalyptus* traced in BM from this locality is *E. nitida* Hook.f. (Bennett 4800d).] tho much smaller, are the only trees that attain any size in the Islands.

Bursaria spinosa forms here a Tree much larger than I ever before observ'd it [A Brown gathering of *Bursaria spinosa* Cav. survives from northern Tasmania but not from the Kent Group] - *Styphelia* [f.1, side 4] *Styphelia acerosa* [*Cyathodes acerosa* Gaertner (unnumbered)] & *Ceanthoides rugosa* [untraced, Rhamnaceae affin.] form also small trees.

Apium graveolens grows on rocks of the Western island. [The name 'Apium graveolens' occurs on Brown's original label of *Apium prostratum* Labill. ex Vent., Umbelliferae (Bennett 4547).] of the two species of *Kangaroo* found on the islands the Bettong is the more common the Pattimelan was only observ'd in the Eastern island.

Two Pigs were seen by one of the people near the cove. They were probably left by some vessels employ'd in sealing.

The Black Snake was seen & a smaller species of a Greenish colour, but they are certainly far from common.

Brown and Humphrey arrived at Port Dalrymple on 1 January 1804 (Mabberley 1985: 115; Vallance 1990: 79). Brown landed that afternoon and started collecting in the Low Head area. On 3 January, *Lady Nelson* moved further up the Tamar estuary to York

Cove (Vallance 1990: 79). The Tamar was later to be so-called by William Paterson in December 1804 and an area at Western Arm was to become the (now defunct) settlement of York Town. Brown collected here, doubtless with settlement in mind, on 5 January. The Type of *Thelymitra longifolia*, given in Table 2, was probably one product of this day's collecting. Brown landed every day until 7 January, adding to his botanical collections and making zoological and ethnographic observations. Even at this stage, it seems to have been difficult to establish a friendly relationship with the Tasmanian Aborigines, although there were some favourable encounters. But geological observations were made as well as biological ones, probably due to the presence of Humphrey. Botanical collecting and shore excursions were the dominant pattern at Port Dalrymple until 7 January, when the ship moved further up the Tamar, visiting Egg Island (7 January) and Upper Island (now Tamar Island, 8 January) on the way. But the Tamar is brackish and the need to find fresh water increased as the days went by. So on 9 January two of the party, a seaman James Symons, with William Collins (?1760–1819), made a boat journey up river to find fresh water—they were evidently successful at what is now known as the South Esk River and returned with two filled casks.

Brown visited the place next day (10 January) and collected plants in the area (Vallance 1990: 80). The South Esk Gorge (Figure 1) is cut deep into an area of Jurassic dolerite and it is possible to find the exact place where the fresh water runs down over the rocks into the brackish water. Nowadays, the flow of the South Esk is controlled upstream by the Trevallyn Dam, but sufficient water still runs down the rapids into the South Esk Gorge to make it clear where the casks were filled with water (Photo 3). This is the 'Cataract River' of Brown's Tasmanian plant labels and other writings. For example, the *Flora of Australia* (Hill 1998: 586) gives the 'Cataract River' as the site of Brown's collection of *Callitris oblonga* Rich. (Bennett 3114). Today, the flora of the upper slopes of the South Esk

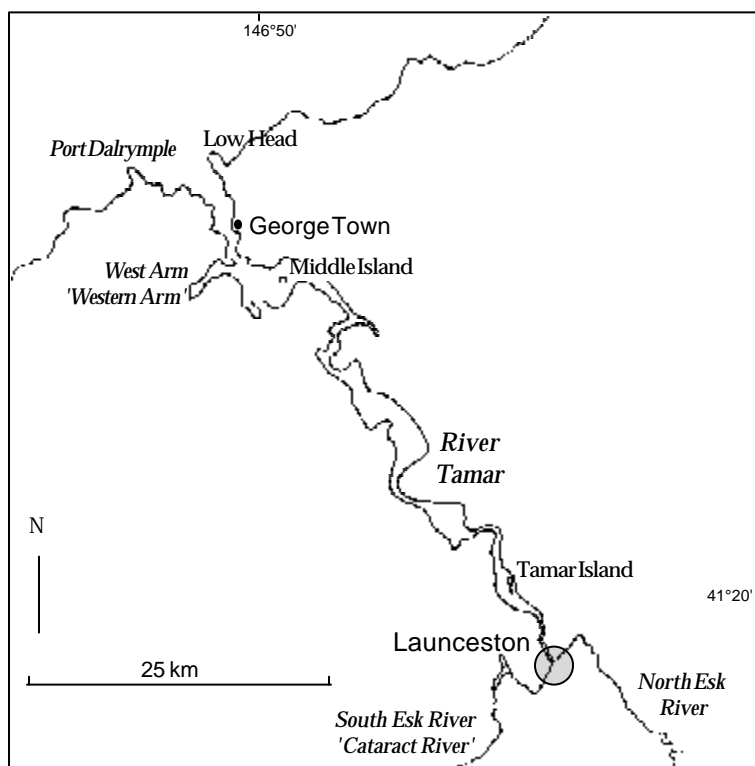


Figure 1. The Tamar River (northern Tasmania), where Brown's activities were centred in 1804.

Gorge—where the path runs—contains many *Allocasuarina* trees but these appear not to be represented in Brown's herbarium material. These gatherings may be lost or, as he came at sea level, perhaps he collected none. We know that there have been losses from Brown's original Australian plant collection, the best known example being the herbarium material lost with the *Porpoise* at Wreck Reef in August 1803 (Mabberley 1985: 113; Vallance *et al.*, in press: Chapter 19). Nowadays, the South Esk Gorge area is rather 'developed' and planted with exotic trees. As a result, the ecology is modified from that which would have been encountered in January 1804. A visitor from northern Europe, for example, will recognize some wayside plants here. American conifers are also present.

The journey back to the sea at Port Dalrymple started the following day and the river mouth was reached on 14 January. Aborigines came to the shore on 15 January and Brown went to meet them hoping to learn something of

their language, but was turned back by a shower of stones. Two shots were fired over their heads, at which they went back into the woodland and did not return. Brown botanised ashore that afternoon. *Lady Nelson* went down to the sea on 16 January and sailed for Port Phillip on 19 January to help embark the settlers under orders for Risdon Cove.

At some later stage, Brown appears to have prepared a manuscript list of his Port Dalrymple collection, now B.10. VII ff.19–22. Manuscripts survive (B.74 (i) (a & b), see below) which Brown prepared for Governor King when he was back in Sydney in September 1804, giving his impressions of Port Dalrymple, the Tamar and North and South Esk Rivers and recording details of soil, timber and the availability of fresh water, no doubt with settlement in mind. This manuscript (Brown MS B.74 (i) (a) starting at f.1r) appears below and presents the researcher with the usual problems



Photo 3. The South Esk Gorge and Brown's 'Cataract River' of his original plant labels in the gorge where the water casks were filled, 9 and 10 January 1804. (Photographed 24 November 1999)

encountered with Brown's papers. A discussion of these occurs in the Introduction to Brown's diary (Vallance *et al.*, in press). The draft is a particularly difficult manuscript to transcribe, with its many blots, corrections and bad writing. Below, the present author has attempted to edit in details of modern place names and surviving specimens (BM) from Brown's gatherings. However, the 'fair copy' is incomplete so the last section, 'Timber', is taken from the draft (B.74 (i) (b), side 3). Another version of this manuscript is published by Mabberley (1985: Appendix II).

[B.74 (i) (a) f.1r] *A few remarks of Port Dalrymple given to Governor King Sept 6th 1804*

Soil

From Low head to Outer Cove the soil is extremely poor in many places mere sands notwithstanding which it is pretty uniformly cover'd with verdure, the grass not growing in tufts, but no where luxuriant.

From Outer Cove to the base of the hills bearing E S E & distant about 1½ miles, the soil is very poor & sandy, and the land in general thinly

cover'd with wood here & there interspers'd with swamps, nearly dry in summer & with brushes of no great extant: the hills are stony & barren. Immediately above Western arm on the South West side the land is flat consisting either of a light sandy soil tolerably grass'd and wooded, or of swampy meadows cover'd with rushes & the coarser grasses.

From this tract of land to the chain of hills bearing W S W distant about 7 miles the soil was no where observ'd to be good, at best being an ash colour'd loam. The hills themselves are stony with no depth of soil.

Middle Island is in greater part tolerable pasture land.

The South shore opposite to Middle island is flat for a considerable extant, the soil tolerable but best adapted to pasturage, the hollows are in general rather swampy & mostly cover'd with rushes and very coarse grass.

The North shore about two miles above Middle Island where fresh water is mark'd in the charts [f.1v] is stony & barren. The land in the immediate neighbourhood of the rivulet opposite Egg Island is also poor & stony, but towards

Swan Point & for some way into the interior in that direction was reported by two of the people, whose judgement could in some measure be depended on, to be much better than any observ'd in the Port & compar'd with the generality of land in the neighbourhood of the R^r. Derwent was said to be superior. According to their report it was thickly cover'd with Fern or tall herbaceous plants—both indications of a good soil.

From Crescent Shore Upper Island the land as far as observ'd was very indifferent & fit only for pasturage.

Above Upper Island in the neighbourhood of the creek, abreast of which the brig anchored, both in her progress up the inlet [the Tamar] & on her return, small patches of arable land were seen.

The banks and immediate neighbourhood of Cataract River are rocky & barren [South Esk Gorge].

The larger or Northern river [North Esk River] flows thro' a flat country apparently for many miles. [Where the suburbs of Launceston now stand.] The soil as far as observ'd by M^r Collins was by his account good and probably liable to frequent inundation.

Fresh Water

The Lagoon behind Lagoon beach was dry but some ditches between it & the beach still contain'd a little water which tho' stagnant & warm, was neither ill tasted or brackish.

At Outer Cove water was procur'd by digging 2 or 3 feet within a few yards of the creek, & higher up in the bed of the small rivulet it was found in holes.

The South side of Western arm [York Town area] is probably well supplied with fresh water; one considerable stream was seen which terminates in a salt [f.2r] creek - not far from the mouth of the branch another rivulet was cross'd which probably discharges itself towards its head.

The bed of the rivulet mark'd fresh water in Capt Flinders's Chart about two miles above Middle Island on the N shore was quite dry.

The stream nearly abreast of Egg Island is considerable and no doubt constant.

Above this to Cataract River we were no where able to find [water] either in runs or by digging a few feet.

In Cataract River boats can water at all times, & from M^r Collins information in the largest branch about two miles above the division. [The 'fair copy' ends here.]

Timber

[B.74. draft (i) b, side 3] The trees are chiefly 3 species of *Eucalyptus* {Gum trees} [*Eucalyptus ovata* Labill. (Bennett 4759) and *E. amygdalina* Labill. (Bennett 4800b)] none of them exactly similar to those in the neighbourhood of Port Jackson tho 2 of them resemble in the external appearance of the trees the black butted Gum & box tree. ['Box tree' occurs on the original label of *Eucalyptus amygdalina*, above.] The *Casuarina* most common on the shores differs from any of the species about Sydney in appear[ance] nearly approaching to the Swamp oak another species w^{ch} grows on the plains a little remov'd from the shores resembles the she oak & may no doubt be substituted for it thro' a smaller tree. [The only *Casuarina* traced from Port Dalrymple is *Allocasuarina littoralis* (Salisb.) L.A.S. Johnson (Bennett 3135).]

The green wattle or Huon tree* attains a greater size than above P. Jackson [f.1 side 3] as does the Huon [?] *Lagarostrobos franklinii* (Hook.f.) Quinn (Bennett 3120)] w^{ch} here forms a small tree. A species of *Mimosa* [also] forming a small tree The wood of which is not unlike that call'd *Lignum vitae* by Col Paterson, is common on the plains & hills a little away from the shores.

The shrubs & plants likely to be useful which for economical or [related] Purposes are extremely few Hay is not uncommon & in some places was observ'd very luxuriant, a small kind of /*Wintera*/ the original species of w^{ch} produces the winters bark [*Drimys lanceolata* (Poir.) Baill. (Bennett 4918) / *Tasmannia lanceolata* (Poir.) A.C. Sm.] is not uncommon on the banks of rivulets. It is seldom more than a bush every part of w^{ch}, but especially the seed, is highly aromatic but accompanied with an exceedingly bitter & pungent taste.

* Unclear. The Huon tree is *Lagarostrobos franklinii* (Hook.f.) Quinn (Podocarpaceae) and an unlocalised Brown specimen exists at BM (Bennett 3120) but, from the context here, Brown could be writing about a wattle (*Acacia* sp.).

PART B. BROWN IN SOUTHERN TASMANIA

Sources for Brown's work in southern Tasmania

Before attempting to outline Brown's travels in southern Tasmania, it is as well to remember that Matthew Flinders and (Sir) John Hayes had both travelled in the area in the 1790s and Brown is thought to have had a copy, perhaps given to him by Flinders, of Hayes' map of 1794. Consequently, the names he uses in his narrative had a partial acceptance at the time and, more to the point for today's botanist, they appear on the original plant labels. The example of the 'Cataract River' in northern Tasmania is noted above; a little-known locality derived from Hayes in southern Tasmania is the 'Anna Maria River', nowadays thought to be Margate Rivulet (Vallance *et al.*, in press: Chapter 22). For example, a specimen of *Callistemon pallidus* (Bonpl.) DC. (Bennett 4667) is extant from this locality. Other Hayes' names still in use today include the Derwent River, Risdon Cove and Prince of Wales Cove.

As sources, we only have available to us Brown's manuscripts, his notes/'fair copies', dried plants with their original labels and his descriptive slips (B.65). The southern Tasmanian sections are among the least satisfactory of Brown's Australian diary. Many of the manuscript sources relating to this are poorly dated and there is one matter of particular concern with the Tasmanian manuscripts that has to be outlined here. Brown made copies of his writings, and the versions of the Huon trips of May 1804 (outlined below), and the diary transcription in Mabberley (1985: Appendix III), Vallance (1990: 81–2) and Vallance *et al.* (in press: Chapter 22) are different versions/copies of one account. In an attempt to clarify this, Brown's diary editors have traced 16 herbarium specimens labelled 'Huon' in Brown's gatherings but none is dated more accurately than 'Mai' or 'May', so it is not possible to undertake the same examination as was done above with the Kent Group plant labels.

Finally, from reading his diary (B.1) and correspondence (B.94), it is apparent that Brown was only interested in natural history—indeed his patron in England, Sir Joseph Banks (1743–1820), had instructed him in a letter to be so (Vallance and Moore 1982: 5). Perhaps as a result, political events were of little importance to him. At best, he is economical in his diary with details of all his activities in Tasmania—as anywhere else in Australia—botanical collections and plant descriptions being his sole concern.

Brown's travels in southern Tasmania

After the short voyages to and from Port Phillip to collect settlers, Brown arrived on *Lady Nelson* at Risdon Cove, in the Derwent estuary, on 9 February 1804 (Vallance 1990: 80). He was to spend almost six months in southern Tasmania, and he seems to have started collecting soon after arrival. On these excursions, Brown was one of the first Europeans, if not the first, to climb Mount Wellington and to penetrate the Derwent River above the New Norfolk rapids. Apart from botanical collecting, one of his first tasks (11 February) was to begin a vocabulary of the Tasmanian Aboriginal language for the Risdon area.

He resided on board *Lady Nelson* initially, then when she sailed, on *Ocean*. When she left in her turn, he moved to a house at Risdon and was mostly based here for the rest of his Tasmanian stay (Vallance 1990: 80). Exploration also started fairly straight away. Vallance (1990: 81) indicates he was a little way up-river at Herdsmans Cove on 12 February. The majority of the Risdon settlement moved to Sullivans Cove on 17 February as the water supply was considered to be better, making Brown an eyewitness of the founding of present-day Hobart (Mabberley 1985: 117; Vallance *et al.*, in press: Chapter 21). This gave Brown easier access to Mount Wellington (*Montis Tabularis* of his plant labels). He climbed it for the first time on 18 February (Mabberley 1985: 117; Vallance 1990: 81), noticing Mesozoic

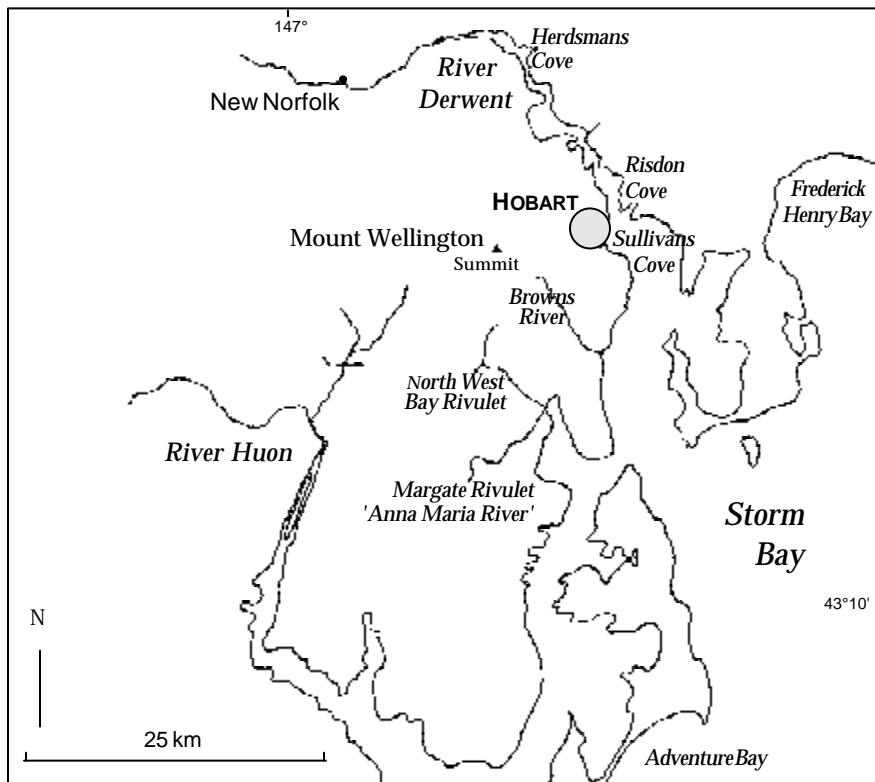


Figure 2. Southern Tasmania, showing the Derwent River and Mount Wellington (Table Mountain) where Brown's activities were centred in 1804.

invertebrate fossils on the way. His specimen of *Baekea utilis* Miq. probably dates from this trip. He spent the night of 18–19 February on the summit, making air temperature records at 10 p.m. (51°F = 10.5°C), midnight (40°F = 4.5°C), 1 a.m. (39°F = 4°C), 2 a.m. (36°F = 2°C), and sunrise (34°F = 1°C). At 7 a.m., a little after dawn, there was a shower of sleet and hail. Despite this uncomfortable night, he climbed the mountain again on 27 February and he records on that day the water temperature in what is known today as the Hobart Rivulet as 58°F (14°C). He seems to have been at Risdon Cove for the period 29 February to early March 1804, but was probably at Sullivan's Cove on 4 March as he wrote to William Paterson that day. An extract from this letter (BL.Add.Ms. 32439 ff.146–7) is given below:

{Sullivan's Cove R. Derwent March 4th 1804

My Dear Sir,

It is now about two months since I wrote you by the Francis Schooner from Kent Group [...] Port

Dalrymple which we reach'd on first of Jan^y; there we remained until 18th [f.146v]. The whole number of Plants observed in this Port did not much exceed 300, of which about 40 were new to me, and I believe non descript ... [Brown outlines the Port Phillip episode and that Collins moved the settlement to Sullivan's Cove. Resuming at f.146v:] You may believe I am anxiously waiting for an opportunity to carry me to Port Jackson: for the season is so far advanced & the ground in the vallies [sic] & even hills is so much burnt, that without ascending the more distant mountains I cannot hope to make many botanical acquisitions: [...] Both at Port Dalrymple & here I have found the tree which produces the Winters bark [*Drimys lanceolata*/Tasmannia lanceolata, as earlier, but not Bennett 4918][...]

On 5 March, Brown, with Humphrey, Knopwood and John Methro (commander of *Ocean*), started up the Derwent by boat, calling first at Risdon Cove to dine with the surgeon Jacob Mountgarrett (1773?–1828) who was to accompany them (Vallance 1981:



Photo 4. The rapids on the River Derwent, above present-day New Norfolk, where the party was compelled to leave the boat. (Photo by G. Kantvilas)



Photo 5. The summit of Mount Wellington, Montis Tabularis of Brown's original plant labels. (Photographed 23 November 1999)

136 and 1990: 81). The combined party reached a short distance above Herdsmans Cove that night. The following day (6th), the party were at the rapids above present-day New Norfolk (Photo 4) where the boat was left and they continued up the bank on foot (Vallance 1981: 136). Knopwood (in Vallance 1990: 81) indicates Brown collected plants hereabouts. They turned back on 8 March, arriving back at Herdsmans Cove the same day, later proceeding back to Sullivans Cove.

Mount Wellington appears to have been the next centre of collecting activity beginning 12 March (Humphrey in Vallance 1981: 137 and Vallance 1990: 81). Brown and Humphrey had with them three men on this trip (probably trusted convicts) and provisions for four days.

On the lower slopes on their climb of Mount Wellington on 12 March (*cf.* Humphrey's account in Vallance 1981: 137), they found a hollow tree, some 11 feet (3.4 m) in diameter which provided shelter and served as a temporary base for forays to the summit on this and future occasions. Forays to the more exposed summit area from Brown's hollow tree took place on 13 and 14 March. Brown records (B.1.f.228v, Vallance *et al.*, in press: Chapter 21) that flexible sandstone was seen on this trip. Humphrey (*cf.* Vallance 1981: 138) clearly knew of the Brazilian occurrence of this remarkable rock (itacolumite). Fossiliferous rocks were again seen on 14 March as well as columnar basalt, which Brown knew from Antrim in Ireland. Also seen were *Eucalyptus globulus* Labill. (although the original label is undated) and Tasmanian Blue gum (see below).

Humphrey the mineralogist commented (Vallance 1981: 137) 'On the sides of the Mountain are some of the largest trees in the world ...' (*cf.* Reid & Potts, 1999: 198) and it is known (S. Harris and G. Kantvilas, pers. comm.; *cf.* Dombrovskis *et al.* 1996: 119–144) that this area has been badly affected by destructive fires, most notably in 1898, 1914, 1939, 1947 and 1967, and the indications are that the trees were more mature and much larger in 1804.

Here perhaps we should consider Brown's usage of common names. Chippendale (1988: 538) lists 26 stringy barks. However, 'Stringy bark' occurs on the original label of Brown's specimen housed in London (BM) as *Eucalyptus obliqua* L'Hérit. (Bennett 4800g, see below). 'Blue gum' is another name which needs qualification for the purposes of this account. Chippendale (1988: 352–353) gives the Tasmanian blue gum as *Eucalyptus globulus* Labill. subsp. *globulus*, whereas Brown used this name on the original labels of *E. pulchella* Desf. (Bennett 4800b bis), *E. ovata* Labill. (Bennett 4760) and *E. viminalis* Sm. subsp. *viminalis* (Bennett 4740).

Brown was back at Sullivans Cove on 15 March and seems to have remained thereabouts until 24 March, collecting plants locally. A second boat trip up the Derwent took place between 27 March and 5 April in the company of surgeon Mountgarrett and Humphrey (Mabberley 1985: 118; Vallance 1990: 81 agrees) with ten days provisions. Above the New Norfolk rapids, the party is thought (Vallance *et al.*, in press: Chapter 21) to have reached the present-day Clarendon area, west of Gretna. By 29 March, Brown is considered to have been at the junction of the Rivers Ouse or Clyde and Derwent and by 30 March to have reached the approximate area of the present-day Catagunya Dam. Brown's editors (Vallance *et al.*, in press: Chapter 21) believe the party started back down river on Easter Day (1 April 1804), arriving at the first fall on 4 April (Mabberley 1985: 118; Vallance 1990: 81; Vallance *et al.*, in press: Chapter 21). On the return trip, the party captured kangaroos and bandicoots and a green rosella. They also fired at what was probably a water rat, but it escaped. His diary records that he was back at Risdon Cove on 5 April and at Sullivans Cove on 7 April.

In mid April, Brown was again on the slopes of Mount Wellington, attempting to reach the headwaters of the River Huon. Unfortunately this episode is poorly covered in the diary, but in wooded country on the upper slopes of the mountain, Brown seems



Photo 6. The monument at the mouth of Browns River commemorating Robert Brown's journey of April 1804. (Photographed 23 November 1999)

to have started down what must have seemed a likely valley and probably reached the mouth of what is known today as Browns River on 20 April 1804. A small garden and plaque (Photo 6) stand today at the mouth of the river commemorating the event. From the dated original label, his specimen of *Eucalyptus linearis* (= *E. pulchella* Desf., see below) was collected on this trip. Vallance (1990: 81, based on Knopwood) gives Brown as being back at the Hobart area later that day.

Another attempt to reach the River Huon began with a climb of Mount Wellington on 2 May in the company of Humphrey (Vallance 1990: 81). Brown records (diary B.1.f.244r, Vallance *et al.*, in press: Chapter 21) that on 3 May they breakfasted at the hollow tree (noted above) before going on over the shoulder of the mountain. Hereafter, Brown's diary account is poorly dated; for example, the entry for 4 May is dated simply 'Friday' and that for 6 May 'Sunday'. On 7 May, the party are thought (Vallance 1990: 81) to have been in the vicinity of present-day Huonville. This Huon journey was to prove an exhausting excursion through rough country, during which they suffered considerably from lack of sleep due to heavy

rain, and they did not reach the Huon until 8 May (simply dated 'Tuesday'). Mabberley (1985: 118) mentions the rain on this trip. Humphrey records (Vallance 1981: 139) '... *It [the Huon River] is a charming stream, with much good Ground on its Banks, and Timber of an emense size ...*'. The return trip is again dated only with the day of the week and we must turn to Knopwood (in Vallance 1990: 81) to confirm that Brown and Humphrey arrived back at Sullivans Cove camp in the late afternoon of 16 May 1804.

A version of events for Tuesday 8 May on the outward trip is given as in the diary manuscript and a version of this excursion from that source is given in Mabberley (1985: Appendix III). The version below is a later fair copy on paper watermarked '1808' and is set under 8 May 1804 in the version of Vallance *et al.* (in press: Chapter 22).

[B.1.f.255r] *Course from top of Table Mountain to the Banks of the Huon.*

Having slept on the banks of the torrent (w^{ch} empties itself into the Baye du Nord Owest of the French) a little, perhaps 1/4 mile, below the summit of the mountain. Struck thro' the woods in a direction SW b[y] S w^{ch} would have brought us to the ridge between the 2 round hills on the Slope of the mountain but from the extreme difficulty of proceeding we deviated somewhat from our course and about an hour before sunset arriv'd upon the larger & more western of the 2 hills w^{ch} being towards the Huon nearly perpendicular we descended it towards the Double Peakd Mountain from w^{ch} and the Table Mountain the River, afterwards follow'd till it joins the Huon, has its source. After turning the hill on the left already mentioned, the course of this river is nearly South or S. by W.; for a few miles the descent is rapid and the adjoining country cover'd with a thick brush; for the last 12 miles the country is more open & may be call'd forest land.

About a mile & half before it joins the [blank] we left it & made what we suppos'd to be the Huon w^{ch} we found here about 40 yards wide deep and still course nearly South. About 200 yards below this point the river was computed to

be about 80 or 90 yards wide of apparently considerable depth & nearly still.

[B.1.f.255v] A little way below this the river bends running from WNW to ESE the course above the bend being nearly due N to South. (From the side of a hill opposite to this bend Double Peakd Mountain bears N by E.)

In nearly the same course we followed the river w^{ch} in a very few miles & immediately opposite to the lower end of the long Island expands to about $\frac{3}{4}$ or at least $\frac{1}{2}$ a mile in breadth. The tide flows up here & the water is slightly sweet.

From the information of one of the servants who climb'd a tree the river about 2 miles down expands to at least twice its breadth at this point & about 4 miles down it bends to the left in probably a SSE direction.

Ascended the Huon from the junction with the Table land river in a direction nearly W. About $\frac{2}{3}$ of a mile above this point the Huon is perfectly fresh. It appears to be deep & in the night the tide fell about $5\frac{1}{2}$ or 6 feet. The breadth was not computed.

From this place we ascended the banks of the Huon a few miles at first nearly in a W direction then W by N. Here it receives a considerable creek; X [refers to Brown's note below] beyond w^{ch} it runs first from NE about $\frac{1}{4}$ mile then W by N on the left bank of w^{ch} reach is a round wooded hill of no great height beyond w^{ch} is a reach of nearly a mile in length from WSW. Here there is a creek running nearly parallel to the [B.1.f.256r] river.

The next reach is short & SW b[y] S. In it there is a small Island on the right side of w^{ch} is a rapid. The opposite side may be still navigable for small boats. Scarce $\frac{1}{4}$ mile above this is a rapid nearly across & immediately above it 2 islands Here & there for a little way above it runs from S b[y] W its breadth not diminish'd But independent of its probable shallowness its increase rapidly renders it no longer navigable.

From this part of the Huon I struck across the country in a direction of N 40 E expecting to arrive on the shore of Storm bay near Anna Maria's River. [See Figure 2] In this direction we walk'd about 7 miles to the foot of a hill w^{ch} on the following day [f.256v] we ascended NE b[y]

E. Descended a little way on its opposite side & then inclin'd along its ridge to the South till opposite to a higher & thickly wooded mountain from the top of w^{ch} Port du N[ord] bore due E distant about 9 or 10 miles The Shoal below the lower island in the Huon S.S.W. distance at least double that of Port du N[ord]. Extremity of Table Mountain N 20 E.

[Brown's note referring to X above] Obs. The suppos'd creek mentioned near the bottom of page 4th [= f.255v] on my return from the fall of the Huon was cross'd further up where it was a more considerable stream of some rapidity but of no great depth. This must be the river of the Table & Double Peakd mountains w^{ch} we had traced to within a mile of its junction with the Huon for the creek below this, cross'd on our way to the upper part of the Huon from our first hut on its banks was ascertain'd on our return to the same hut by going a little further up to terminate in a mere swamp. [The note apparently ends here.]

The indications are (see discussion in Vallance *et al.*, in press: Chapter 22) that the party were back in the Hobart/Sullivans camp area late on 16 May, and Brown called on Rev. R. Knopwood at Risdon Cove on 21 May.

If this part of the diary is to be believed on face value, Brown and his servant John William Porter (apparently without Humphrey) were in this area to the southwest of Mount Wellington again from 28 to 30 May 1804 (Vallance 1990: 82), but Porter became ill and was taken back to the river and put on a passing boat for Hobart. An extract from Brown's diary (Vallance *et al.*, in press: Chapter 22) for Monday, 28 May 1804, is given below:

[B.1.f.259v] Left Risdon Cove. Landed in the NW branch of Prince of Wales' Cove. Walk'd across to the rivulet about a mile to NW [Humphrey Rivulet]. Land in general good [and] pretty level, uncommonly free of timber. Well grass'd mould black depth not ascertained probably not very great. The land in the hollows in general seems as if occasionally cover'd with water.

On the banks of the rivulet a little above where it terminates in a swamp [Soil] tolerable but inferior to that to [sic] on the banks of the cove.

Walk'd up along the banks of the rivulet about 3 or 3½ miles. The level land is well timber'd near the rivulet. The hills stony & barren but the trees chiefly Stringy bark [Eucalyptus obliqua L'Hérit] & E: globulus [Eucalyptus globulus Labill.] of a moderate size -

*About 2½ or 3 miles up the rivulet receives a small branch from SW [...] In the bed of the river Sassafras [Only one Brown specimen has been traced bearing the name Sassafras—and that as a specific epithet for a New South Wales specimen. Mabberley (1993: 522) discusses this genus (Lauraceae), one American species being medicinal. Vallance et al. (in press) considered the Tasmanian specimen mentioned by Brown was possibly *Atherosperma moschatum* Labill., Monimiaceae] *Dicksonia australis* &c frequent ...[*Dicksonia antarctica* Labill.]*

After seeing to Porter's well-being, Brown was back on the mountain on 31 May (Vallance et al., in press: Chapter 22) but this time he badly sprained his ankle (cf. Mabberley 1985: 119; Vallance 1990: 82) and was compelled to spend a night in the open. He bound it up as best he could and made a rough shelter of boughs and a fire. Despite this, he suffered from the cold. He finally hobbled painfully into Sullivans Cove with his plant collection on 1 June. He seems to have been confined to camp now for some eleven days following.

Prince of Wales Bay (about 42° 50'S, 147° 18'E) mentioned in the above diary extract is situated on the west side of the Derwent, opposite Risdon Cove. Humphrey Rivulet is named for the mineralogist, sometimes Brown's companion. Brown's usage of the word Stringy bark is noted above. It seems too, from the original label, that his specimen of *Eucalyptus coccifera* Hook.f. was collected on this Huon trip, but here Brown has written 'Feb: Mai' so there is a possibility the specimen may have been gathered at the time he took the temperatures (see above).

The next trip was by boat from Risdon with Jacob Mountgarrett and John Bowen (1780–1827) (Vallance 1990: 82) but in the opposite direction; that is, down the Derwent to Storm Bay, D'Entercasteaux Channel and Bruny Island, which they reached on 15 June. On 16 June, the party was at the mouth of the Huon and by 17 June at the Esperance River. They were back at Risdon on 20 June. There are now almost no records until *Ocean* came into Hobart on 25 June. We can surmise that Brown probably collected locally in the Risdon area and started his *Florula Montis Tabularis* during this time. Brown finally left Tasmania on *Ocean*, with his collections, on 9 August 1804. He and Mountgarret arrived back at Sydney on 24 August (*Sydney Gazette*, 26 August 1804; Vallance 1990: 82).

Brown's Tasmanian herbarium specimens in London (BM)

Brown collected in excess of 540 species in Tasmania (letter of 12 December 1804 summarised below cf. Mabberley 1985: 121). On Brown's return to Liverpool, England, in October 1805, his natural history specimens went initially to Sir Joseph Banks' house in Soho Square, London. From there they went to the British Museum in 1829, when Brown became first Keeper of Botany there. The background to this is outlined by Mabberley (1985: Chapter 15). They were officially incorporated into the Museum's collection in the late 19th century (Mabberley 1985: Chapter 8; Groves and Moore 1989; Vallance et al., in press: Introduction). The natural history collections of the original British Museum (of 1753) are today housed in its daughter institution, the Natural History Museum, London, and the writer has a record of 692 surviving Brownian plant specimens in this herbarium from Tasmania. The herbarium (BM) is arranged taxonomically; consequently many sheets contain specimens from both northern and southern Tasmania. Nevertheless, these dried plants can be allocated probable localities as shown in Table 1.

Table 1. A summary of probable localities for the specimens collected from Tasmania by Robert Brown, and today housed in the Natural History Museum in London (BM). Some of the main plant groups are also included.

Probable localities for Brown's Tasmanian specimens

King Island, Bass Strait	Some 32 plant specimens (dating from the <i>Investigator</i> voyage, April 1802)
Kent Group, Bass Strait	86 total specimens. See Groves & Moore (1989) for a list of the lower plants.
Port Dalrymple area	230 specimens
Cataract River (South Esk River)	23 specimens
River Derwent and Mount Wellington	248 specimens

The balance is made up of specimens with labels indicating they were gathered at 'Anna Maria River' (see text), Risdon Cove, Herdsmans Cove, Stainsforth Cove and specimens with names derived from the French explorers, etc.

Some of the plant groups represented among Brown's Tasmanian material

Lichens	28 specimens, the majority of these being from Mount Wellington
Ferns	40 specimens, including sheets of <i>Dicksonia antarctica</i> Labill. from both King Island and the Derwent area
Conifers	One specimen of <i>Callitris oblonga</i> Rich.
Casuarinaceae	Four specimens, including <i>Casuarina rigida</i> Miq. (King Island) and <i>Allocasuarina littoralis</i> (Salisb.) L.A.S. Johnson (Port Dalrymple or the Tamar area)
Leguminosae	55 specimens, of which 20 are <i>Acacia</i> species
Fagaceae	One specimen of <i>Nothofagus cunninghamii</i> (Hook.) Oerst.
Myrtaceae	17 specimens
Asteraceae	100 specimens
Grasses	22 specimens

The original plant labels for Kent Group mention a *Manuscript Kent Group*. This is a complicated manuscript of 38 folios, now B.10.IV, and cannot be discussed here. A manuscript plant list *Florula Montis Tabularis* (B.1.f.269v) is given at the conclusion of Chapter 22 of Vallance *et al.* (in press). This important document, in its turn, is not without dating problems which are discussed by Vallance *et al.* (in press). At the time of writing, the final editing of this list by the Australian Biological Resources Study is incomplete, but this document is the first informed account of the Mount Wellington and Derwent area flora before any disturbance of the 19th and 20th centuries. Another complicated manuscript of 46

folios, now B.10.V, is also concerned with Brown's Tasmanian gatherings.

Robert Brown Type specimens from Tasmania in the Herbarium of the Natural History Museum, London (BM)

Table 2 provides a list of Type specimens originating from Brown's Tasmanian collections. The labels transcribed in Table 2 are in Brown's handwriting and, for the most part, original. However, because Brown was Banks' librarian and described material in the *Prodromus* (Brown 1810), labels also exist in his hand relating to what is almost certainly William Paterson material.

Table 2. Type specimens from Robert Brown's Tasmanian material in the Herbarium of the Natural History Museum (BM) in London.

***Bellenden montana* R.Br.**, Bennett 3311, Proteaceae.

[Original label is missing: but Bentham & von Mueller (1870, 5:378–9) give *Bellendonia montana* as coming from Mt. Wellington, Tasmania. Their source, Brown's descriptive slip (B.65 52/522) for 'Bellendonia alpina' (in pencil), has 'In saxosis ad summitatem Montis Tabularis Feb. 1804'. The place of publication (*Transactions of the Linnean Society of London* (1811) 10: 166) for 'Bellendena montanum' gives the locality as 'In summitis montibus'. Type material.

***Bellenden montana* R.Br.**, Dryander duplicate (see below: p. 142 in text).

'Van Diemens Land'. Type material.

***Caladenia deformis* R.Br.**, Bennett 5588 (2 labels), Orchidaceae.

[1] 'Caladenia cfr C. deformen Port Dalrymple Coll'l Paterson'.

[2] '4 Caladenia deformis prodr 324 Port Dalrymple'. Lectotype, det. M.A. Clements 16.9.1987.

***Caladenia dilatata* R.Br.**, Bennett 5582.

'13 Caladenia dilatata prodr 325 Port Dalrymple'. Lectotype, det. M.A. Clements 2.4.1992.

***Caladenia filamentosa* R.Br.**, Bennett 5581.

'11 Caladenia filamentosa prodr 324 Port Dalrymple'. The slip (B.65. 59/237) confirms the locality. Syntype, det. M.A. Clements 1983.

***Caladenia latifolia* R.Br.**, Bennett 5586.

'7 Caladenia latifolia prodr 324 Port Dalrymple'. Iso-lectotype material.

***Callitris oblonga* Rich.**, Bennett 3114, Cupressaceae.

'Genus Coniferar: adripas saxosus fluvii Cataract River Port Dalrymple Jan 10 1804 [...] *Callitris australis*'. Isotype material, det. K.H. Hill, *Flora of Australia* 48: 585 (1998).

***Hymenantha dentata* R.Br. ex DC.**, Bennett 5480, Violaceae.

'In insulis Upper Island & Egg Island Port Dalrymple Jan 7–11 1804 [...] desc No31 Mscr P Dalrymple *Hymenantha lycioides*'. Slip (B.65. 5/91) confirms the locality and Vallance (1990: 80) confirms the collection date. *Flora of Australia* 8: 109 (1982). Lectotype, det. B.P.J. Molloy, 12.6.1991.

***Hymenantha dentata* DC.**, Dryander duplicate.

'Tasmania'. Lectotype, det. B.P.J. Molloy, 12.6.1991.

***Myoporum insulare* R.Br.**, Bennett 2795 (2 labels), also Dryander duplicate, Myoporaceae.

[1] 'Myoporum serratum Kents Islands Bases Strait'.

[2] 'Myoporum subserratum In Insulis Kent Group In freta [?] Bass: Decr: 1804 [sic = 1803] Myoporum insulare prodr 516'. Lectotype, det. R. Chinnock (in press).

***Pterostylis curta* R.Br.**, Bennett 5522 (2 labels), Orchidaceae.

[1] 'Druocephalum muticum 1803 Port Jackson'¹.

[2] 'Druocephalum muticum Port Dalrymple Nov^r 1804 *Pterostylis curta* B Prodr 326'. Syntype material. [A Paterson specimen?, unfortunately the slip (B.65. 59/126) is unlocalised.]

***Pterostylis pedunculata* R.Br.**, Bennett 5524, Orchidaceae.

'5 *Pterostylis pedunculata* prodr 327 Port Dalrymple [...]'. Lectotype, det. M.A. Clements 24.9.1987.

***Ranunculus collinus* DC.**, Bennett 5256, Ranunculaceae.

'Ranunculus No58 desc. mscr. fluv. Montis Tabularis Mar–May 1804'. Type material.

***Scleranthus diander* R.Br.**, Bennett 3087 (3 labels), Caryophyllaceae/Illecebraceae.

[1] 'Ditocoides diandra Ad ripas saxosus fluvii Cataract River am Ditoca cresus rarus desc: Jan: 10 1804'.

Table 2. Continued.

[2] 'Ditica diandra No2 desc Ad ripas saxosus fluvii Cataract River [...] Jan 10 1804 desc'.

[3] 'Scleranthus diandrus Port Dalrymple [and] Cataract River Jan^y 1804'. Type material, det. J.G. West, 6.1988.

Scleranthus diander R.Br., Dryander duplicate.

'Van Diemens Land'. Type material, det. J.G. West, 6.1988.

Scleranthus fasciculatus (R.Br.) Hook.f., Bennett 3089 (2 labels).

[1] 'Mniarum fasciculatum Prodr 412 Risdon on the river Derwent Mar–Apr 1803'. [sic = 1804]

[2] 'Ditoca fasciculata Nob: var D muscosa? [sic] In campis prope fluv: Derwent ad Risdon Cove &c Mar: Apr: 1804 [...]' Type material, det. J.G. West, 6.1988.

Scleranthus fasciculatus (R.Br.) Hook.f., Dryander duplicate.

'Van Diemens Land'. Type material, det. J.G. West, 6.1988.

Thelymitra longifolia J. & G. Forst., Bennett 5570 (2 labels), Orchidaceae.

[1] '5 Thelymitra nuda prodr 314 In pratis depressus prope Western Arm, Port Dalrymple Jan: 5 1804'. Slip (B.65. 59/324) confirms the locality. Lectotype of *Thelymitra nuda* R.Br., det. M.A. Clements 11.9.1987.

[2] 'Thelymitra nuda prodr 314 Port Dalrymple 1805' [A Paterson gathering?] Isotype of *Thelymitra nuda* R.Br., det. J.Z. Weber, 12.1989.

¹ Non-Tasmanian label.

A summary of Brown's Tasmanian work taken from his letter of 12 December 1804

When back in Sydney, Brown wrote to Sir Joseph Banks summarising his Tasmanian activities; this letter is reproduced below for the same purpose. Brown's original letter to Banks of 12 December 1804 is now bound as BL.Add.Ms.32439 ff.157–158. There are two copies, that set in *Historical Records of New South Wales* 5: 509–11 and that in the *Dawson Turner Copies* 15: ff.185–8. Both differ slightly from each other and the original; the version given below is an edited version based on the British Library letter.

Sydney, New S Wales,
[Wednesday] Dec^r 12th 1804.

Dear Sir,

Since I writ to you I have had the pleasure of receiving your Letter by HMS Calcutta, & was made happy to find that I had your approbation of my proceedings & that the seeds sent by the Speedy whaler had arriv'd in good condition. Long ere now the collection, consisting of twelve

puncheons of specimens of plants and four boxes of seeds, sent by the Calcutta, must have arriv'd I sincerely hope in safety, tho' not being on the spot myself I am under some apprehension for it. The manner in which the specimens are arrang'd, & still more the want of names, stand in need of repeated apologies. In our situation however it was really impracticable to dispose them in any other manner, nor could the names {many of which are merely temporary} have been added without a very great loss of time. I hope too that ere long I shall have it in my power in person to supply both these wants, which even without me can very easily be done from the small arrang'd and named collection which I still retain for the purpose of finishing my observations & giving them a better chance of reaching England in safety. [...]

As to the seeds, I fear many may have suffer'd by delay, and in some degree, too, from dampness acquir'd in their removal from the wreck of the Porpoise.

The two additional Boxes mentioned in my last letter containing seed vessels, &c., I have retain'd.

About the end of Nov^r 1803, I left Port Jackson in the Colonial tender, Lady Nelson, hoping to

be able to add largely to my collection in Van Dieman's Land, but not expecting to be absent more than 8 or 10 weeks. From various unavoidable circumstances however my stay was protracted to nine months, of which time a very great part was entirely lost. [f.157v] In this unfortunate expedition I had an opportunity of examining Kent's Islands in Bass's Strait, of revisiting Port Phillip, and of examining both extremities of Van Dieman's Land, viz., Port Dalrymple and the neighbourhood of the River Derwent. At this last place, to which I went on the removal of Col. Collins's establishment from Port Phillip, I was detain'd nearly six months, there occurring in that time no opportunity of getting back to Port Jackson. [Untrue. Brown could have gone back to Sydney on *Lady Nelson*, in March 1804 (Vallance in Vallance et al., in press: Chapter 22).] This detention was the more unfortunate, as without such assistance as I could hardly expect in an Infant Colony but little was to be done, for without having a Boat at my disposal I found it impossible to get to any great distance from the settlement and its neighbourhood was soon exhausted [Again untrue. As Vallance points out in Vallance et al. (in press: Chapter 21), Brown's journey up the Derwent of 27 March to 5 April 1804 was a considerable achievement; see Conclusions.]

My researches were consequently confin'd in great measure to the nearest chain of mountains and the Rivers which descend from them. Table Mountain {The plateau of the French charts}, which in appearance and height much resembles the tableland of the Cape of Good Hope, I ascended ten times and found it uncommonly productive. Most of the new species of plants acquired in Van Dieman's Land belonging to it.

Van Diemen's Land is by no means so rich in plants as I expected to have found it, My Florula [Florula Montis Tabularis transcribed by Vallance et al., in press: Chapter 22], exclusive of cryptogamic plants, not containing more than 540 species, of which little more than one hundred are non descript, and of these I can hardly suppose that a great proportion have escaped the French in their repeated visits to this quarter.

*The collection of this expedition is the only thing for which I could procure accommodation on board the Lady Barlow. In one of the packing cases is enclosed a small box of seeds, chiefly of Van Diemen's Land, with a very few from Kent's Islands, Port Phillip and Hunter's River. Many of them are of very interesting plants, and all are at present in good condition. There is also in the same box a small bag containing the fruit of a suppos'd species of Wintera {perhaps *W. axillaris*}, [*Drimys lanceolata*/*Tasmannia lanceolata*, see above] the flowers of w^{ch} I have not seen, w^{ch} I sent for your opinion of it. As a spice it is perhaps too pungent, every part of the shrub possesses the same quality, tho' in rather an inferior degree. It seems to me [f.158r] upon the whole, superior to the original Wintera of South America.*

Since my return from Van Dieman's Land I have visited Hunter's River [...]

Discussion

One point to come out of the above letter is the mention of ships such as the *Calcutta* and *Lady Barlow* which took some of Brown's earlier plant collection back to England. These dried plants had a somewhat different history from the ones that went back with Brown on the patched-up *Investigator* in 1805. Banks gave them to his librarian Jonas Dryander (1748–1810) who filed them away in his herbarium. Consequently their labels have Dryander's handwriting and are the 'Dryander duplicates' among the Types listed in Table 2. They became part of the British Museum herbarium much earlier in the 19th century than the main set. But, being duplicates, they can be from the same gathering as Brown's 'top set'.

The less than ideal nature of many of Brown's original Tasmanian writings is noted earlier and as an example, the differences in dating of the Kent Group specimens is outlined. Brown's phrase 'About the end of Nov^r 1803...' (above) touches on the same problem. This has contributed to variations in understanding of his itinerary and travels (Vallance 1990: 79). Therefore, the problem

now is how to reconcile these accounts. All agree that Brown sailed for Tasmania on *Lady Nelson* on 28 November 1803. However, Mabberley (1985: 121) gives the impression that he returned there again on the same ship 28 November 1804. Mabberley (1985: 121) indicates that Brown was again in Port Dalrymple on 4 January 1805, whereas Vallance *et al.* (in press: Chapter 25 based on Brown Papers B.3. IV f.214v) outline his collecting in the Grose River valley of New South Wales at this time. But, as is noted earlier, Tasmanian plants labelled '1805' in Brown's hand are probably derived from William Paterson's gatherings.

Vallance *et al.* (in press: Chapter 25, based on the Whiteford Index, B.17) indicate Brown was collecting in New South Wales on 28 November of 1804*. Further, he wrote to both Sir Joseph Banks (given above) and Charles Greville (1749–1809) (BL.Add Ms. 32439 ff.159–60) from Sydney on 12 December of that year (some of which is reproduced below) and he was with Sir Joseph Banks' collector George Caley (1770–1829) at Parramatta on 16 December 1804 (B.3.IV f.166, in Vallance *et al.*, in press: Chapter 25) and he was collecting in the Grose valley of New South Wales on 21 December 1804 (B.3. IV ff.194 in Vallance *et al.*, in press: Chapter 25). He remained there, based at Badgery's Farm, until 7 January 1805.

Robert Brown left disappointingly few general comments on Tasmania. Political events such as the deterioration of relations between the European settlers and the Tasmanian Aboriginals are not mentioned. Only botany interested him, and even here he is matter-of-fact. Yet in company with other early visitors to Tasmania he was impressed by the size of the Mount Wellington trees. Unfortunately, he did not write up Myrtaceae for the *Prodromus* (Brown 1810), and relatively few eucalypts in other publications. Of four *Eucalyptus* names associated with Brown, *Eucalyptus brownii*, *E. calophylla*, *E. rugosa* and

E. tetragona (Hall 1978: 28), none is Tasmanian (*Flora of Australia* Vol.19, 1988). Many of his Tasmanian eucalypts remained in London, while it fell to others like J.D. Hooker (1817–1911) to describe material collected by, for example, the Tasmanian resident R.C. Gunn (1808–1881).

In his letter of 12 December 1804 (above), which summarises much of his Tasmanian work, Brown gives this impression that he did not go far from Hobart. Yet his Derwent journey of 27 March to 5 April 1804 was a very considerable overland achievement (Vallance in Vallance *et al.*, in press: Chapter 25). Again, he gives the impression that no ships called at Hobart during his stay in the area. This, too, is incorrect (Vallance in Vallance *et al.*, in press: Chapter 25).

It would be easy to adopt a critical tone with Brown's Tasmanian work, especially the written sources, but we can surmise that conditions in the early settlement were far from comfortable and he was very short of resources, especially paper. He was without doubt one of the first Europeans to climb Mount Wellington and penetrate inland—in some cases alone, as on the occasion when he twisted his ankle. This has been recognised by J.D. Hooker in the eponymy of the Tasmanian endemic *Centropappus brunonis* Hook.f. = *Brachyglottis brunonis* Hook.f. (Asteraceae), the type area of which is Mount Wellington. But probably another less obvious memorial of Brown's travels and his dogged hard work in Tasmania is to be found in the 692 surviving plant specimens which he collected in 1804 and their associated descriptive slips. Many of these plants were described in his *Prodromus* (Brown 1810) with the general locality annotation 'D', and in other publications.

Conclusions

Despite its admitted inadequacies, Brown's diary—as understood by Vallance (1990) and Vallance *et al.* (in press) supported by

* Professor Mabberley is aware if this.

Table 3. Robert Brown's Tasmanian itinerary.

1803

- 28 November Brown left Sydney on the *Lady Nelson*.
11 December At Deal Island, Kent Group, Bass Strait.

1804

- 1 January At Port Dalrymple, northern Tasmania.
7 January Start of a voyage up the River Tamar on *Lady Nelson*.
9 January Water casks filled to the South Esk rapids by William Collins and a sailor.
10 January Brown at the South Esk rapids, the 'Cataract River'.
11 January Sailing north on the Tamar.
14 January Back at Port Dalrymple.
18 January Left Port Dalrymple on *Lady Nelson*.
21 January Arrival at Port Phillip, Victoria.
30 January Sailed on *Lady Nelson* from Port Phillip for southern Tasmania.
9 February Brown arrived at Risdon Cove.
12–17 February Collecting in the Derwent area, upstream from Risdon.
18 February Mount Wellington (Table Mountain) climbed.
27 February Another ascent of Mount Wellington.
5 March Start of journey up the River Derwent.
9 March At Sullivans Cove (Hobart).
12 March Another ascent of Mount Wellington, with Humphrey.
15 March Back at Sullivans Cove.
27 March Start of another journey up the Derwent.
5 April Brown back at Risdon Cove.
11 April Brown and Humphrey collect on Mount Wellington.
20 April At mouth of Browns River, then back at Sullivans Cove.
2 May Brown and Humphrey leave for the River Huon.
8 May The Huon reached.
16 May Brown and Humphrey back at Sullivans Cove area.
21 May Brown at Risdon Cove.
28 May Journey to the west of Mount Wellington, Porter became ill and was sent home.
1 June Brown at Sullivan's Cove.
12 June Start of boat journey to Storm Bay.
15 June Brown ashore on Bruny Island.
16 June Brown at the mouth of the Huon.
17 June Brown at the mouth of the Esperance River.
20 June Brown resident at Risdon Cove again.
9 August Brown leaves Tasmania on the *Ocean*.
24 August *Ocean* arrives at Sydney.
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the accounts of Adolarius Humphrey and Rev. Knopwood—makes it possible to put together an approximate itinerary of his Tasmanian explorations and collecting trips. This is the basis of the summary in Table 3.

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