Papers and Proceedings of the Royal Society of Tasmania, Volume 115, 1981

(ms. received 19.8.1980)

THE NATURAL HISTORY OBSERVATIONS AND COLLECTIONS MADE DURING FURNEAUX'S VISIT TO TASMANIA (VAN DIEMAN'S LAND) IN 1773, WITH SPECIAL REFERENCE TO BOTANY

by E. Charles Nelson
National Botanic Gardens, Glasnevin, Dublin 9, Ireland

ABSTRACT

NELSON, E. Charles, 1981 (30 ix): The natural history observations and collections made during Furneaux's visit to Tasmania (Van Diemen's Land) in 1773 with special reference to botany. *Pap. Proc. R. Soc. Tasm.*, 115, 77-84. https://doi.org/10.26749/rstpp.115.77 ISSN 0080-4703. National Botanical Gardens, Glasnevin, Dublin 9, Ireland.

During the visit of H.M.S. ADVENTURE to Tasmania in March 1773 a number of animals and birds were caught or observed; several of the birds were later drawn. As well, Tobias Furneaux, captain of ADVENTURE, collected seeds of at least two plants, *Eucalyptus obliqua* and *Leptospermum lanigerum*, and herbarium specimens of the latter, which were brought back to England. The seeds were germinated and plants were growing in London gardens in the late 1770's. The possible existence of other herbarium specimens is discussed, and the reasons for the small amount of scientific collection by ADVENTURE's complement are discussed.

INTRODUCTION

A year after returning from his momentous first expedition, during which the eastern seaboard of Australia was explored, Capt. James Cook set sail again for the southern hemisphere. On 13 July 1772, H.M.S. RESOLUTION, under Cook's command, and H.M.S. ADVENTURE, under the command of Capt. Tobias Furneaux, left Plymouth for the Cape of Good Hope, which they reached on 30 October. After several weeks at the Cape, the expedition set sail again on 22 November and headed south. On 17 January 1773, the ships made the first crossing of the Antarctic Circle, but while cruising in less southerly latitudes, on 8 February, they became separated in thick fog. The instructions for the voyage laid down that if this happened, the ships would rendezvous at Queen Charlotte Sound, New Zealand (see Beaglehole 1961, 1974).

When the fog lifted, Furneaux did his best to regain his position and to make contact with RESOLUTION, but after three days he decided to bear away for New Zealand. On 9 March 1773, ADVENTURE reached Van Dieman's Land (Tasmania), making landfall about South West Cape. This was only the third time that Europeans had visited Tasmania; apart from Abel Tasman who discovered the island in 1641, a French expedition commanded by Marion de Fresne had landed at Cape Frederick Hendrick on 4 March 1772, almost one year before Furneaux's arrival.

Accounts of the visit of Furneaux's expedition have survived, including Furneaux's own log(1) and an account of ADVENTURE's voyage (2) which Furneaux wrote. The journal of the astronomer, William Bayly, the only scientist on board ADVENTURE, is also extant(3), as are the journals of Arthur Kempe (first lieutenant)(4), James Burney (second lieutenant)(5), Love Constable(6), Richard Hergest(7), Henry Lightfoot (midshipman)(8), Robert Browne(9), John Wilby (able seaman)(10) and William Hawkey (master's mate)(11). These have all been used in preparing this paper.

The short visit of ADVENTURE to Tasmania produced more zoological than botanical results; indeed it was previously considered that there were no botanical collections made in Tasmania by Furneaux or his companions. None of the people on board ADVENTURE is listed as a botanical collector in works on the history of Australian botany, including J.D. Hooker's summary of botanical exploration in Tasmania (1859). The majority of the botanical and zoological results of the second voyage resulted from the works of Johann Reinhold Forster and his son Georg who were on board RESOLUTION and who did not visit Tasmania(12).

Biological observations, Furneaux's visit to Tasmania, 1773

THE LANDING PLACES AND GENERAL OBSERVATIONS

On Tuesday 9 March 1773(13), at about 9 a.m., land was sighted from ADVENTURE for the first time since leaving the Cape of Good Hope. At 1 p.m. on the following day, Furneaux ordered the cutter to be lowered and a party was dispatched to try to make a landing. Due to deteriorating weather, the cutter was soon ordered to return to ADVENTURE. At 9 a.m. on the following day, the cutter was again launched and sent " ... onshore with the second Lieutenant to find if there was any harbour or good bay ..."(2). Burney reported that he " ... saw a Sandy Beach but could not Land there for the Surf - however we found a good Landing place on some Rocks. The first thing we Saw when we climbed up was Some Wood Ashes the remains of a Fire which had been kindled there & a great Number of Scollop Shells..."(5). Although they found these indications of an aboriginal encampment, they did not see any of the native people, and as the weather was becoming stormy the cutter soon returned to ADVENTURE. The landing at Louisa Bay east of South West Cape did not reveal a suitable anchorage for the ship.

After taking on board the cutter, Furneaux continued to sail along the coast, eastwards towards South East Cape, and then northeastwards into Storm Bay. At 4 a.m. on Friday 12 March, the cutter was again lowered to go inshore and make soundings. It returned at 8 a.m. and the crew reported that they had found a good anchoring place suitable for taking on wood and water. By 6 p.m. that evening, Furneaux had brought his ship to anchor in the bay on the eastern side of Bruny Island, which he named Adventure Bay. ADVENTURE remained at anchor there until Tuesday 16 March, when the expedition departed for New Zealand.

Furneaux wrote that the country around Adventure Bay was "...very pleasant, the soil of a rich black, tho' thin one; the sides of the hills covered with large trees..."(2). Burney's account of the same place recorded that "...The Land is situated in a fine temperate & healthy Climate - the Country is exceeding pleasant, but it is almost impossible to penetrate into it on account of the Woods..."(5).

The ship was anchored for four days, during which time the crew was engaged in "...wooding and water[in]g ye ship..."(4). As well, according to Constable "...some of the Gentlemen went on shore in the Wood Saw several wigworms [wigwams] & fier places but non of the Inhabittance nor no kind of Annimaine [animal] ..."(6). Next day, Constable was "...Employd as Yesterday...(Wooding & Water & Stowing it away)...saw no kind of Annimails but one which was shot by one of our Gentlemen Like a Poolcat [sic.] ..."(6). Burney recorded that "...We Shot some Wild Ducks, Crows, Parroquets, a White Eagle and some Small birds...we found several tracks of wild Beasts, & the dung of Some which we took to be of the Deer kind - one of our gentlemen shot at Possown...-this was the only Animal we Saw here..."(5)

Wilby provided further information; with respect to the aboriginal people he noted that "...They have nothing to Live on but Shellfish, that we can Observe, for the Birds, what Few there are is so shy, That its difficult to get a Shot at them. To the SW of the First Watering place there is a Large Lagoon which I believe has Plenty of Fish in it for one of our Gentlemen caught upwards of 2 Dozen Trout and Shot a Possom, which was the only animal we saw..."(10).

After completing the stowing of wood and water, the vessel departed, and there was no other landing made in Tasmania. ADVENTURE sailed as far north as Bass Strait, which was thought by Furneaux to be a deep bay, and then "...shaped...Course to the E'ward for New Zealand..."(6). The ship anchored in Queen Charlotte Sound, as arranged, and on 18 May 1773, RESOLUTION rejoined ADVENTURE at the Sound.

ZOOLOGICAL OBSERVATIONS AND COLLECTIONS

The zoological results of the ADVENTURE's sojourn in Tasmania are summarised by Whitley (1970).

Burney reported, after returning from landing at Louisa Bay, that he had "... brought off Several Boughs of Trees - Some Shells & Some Burnt Wood..."(5). According to Furneaux, the party that landed at this bay "...saw several places where the Indians [sic] has been and one they lately had left, where they had a fire with a great number of pearl scollop shells round it; these shells they brought onboard..."(2). Similarly, William Hawkey noted that the cutter's crew had found "...a Number of Oister & other shells laying round...some which they brought on Board..."(11).

At Adventure Bay, as the quoted portions of journals show, other animals were encountered; fish and a snake were caught, birds and animals shot (see Beaglehole 1961, Reed 1969, Whitley 1970). The fish caught in the lagoon were called "trout"; these have been identified as either *Galaxias attenuatus* or *G. truttaceus* (see Beaglehole 1961, Whitley 1970). A "possom", identified by Whitley (1970) as the Tasmanian possum (*Pseudocheirus convoluter*) was shot by one of the gentlemen; Wilbey recorded that it "...has a false belly..."(10). Burney reported "...a great Number of very large Ants [probably *Myrmecia forficata*] about an Inch & a half long - they bite very sharp & are exceeding troublesome"(5).

In Furneaux's report of the visit to Tasmania, there are mentions of other animals, some of which can be identified: "...the Land birds we saw are a bird like a Raven [*Corvus coronoides*]; some of the Crow kind, black... [probably the black currawong or bell magpie, *Strepera arguta*] some Paroquets, and several kinds of small Birds [see below]. The Sea Fowl, are Duck, Teal and Sheldrake [mountain duck, *Tadorna tadornoides*]. I forgot to mention a large white bird that one of the gentlemen shot, about the size of a large Kite of the Eagle kind [see below]. As for Beasts we saw but one which was a Possum...The Fish in the Bay are very scarce; those we caught were mostly Sharks, Dog fish [*Flakeus megalops*] and a fish...like a dog fish only full of small white spots, [*Squalus kirkii*], and some small fish not unlike spratts [*Clupea bassensis*]. The Lagoons (which were breakish [sic]) abounds with trout and several other sort of Fish, of which we caught a few with lines ..."(2).

Furneaux recorded that he named Penguin Island, south-east of Adventure Bay "... from a curious one we caught there..." The captured penguin lived for several days after being caught, but died and later the preserved skin was given to J.R. Forster by "... the celebrated Captain Tobias Furneaux..." when the two ships were reunited (Whittell 1954). Georg Forster made a pencil sketch of it which is unfinished, and is now among other drawings made during Cook's second voyage, held in the British Museum (Natural History). The identity of this penguin has presented problems; Whitley (1970) and Hindwood (in Reed 1969) identified it as *Eudyptes cristatus*, but Falla (see Lysaght 1959) considered that the drawing made by Georg Forster represents the Royal penguin (*Eudyptes chrysolophus schlegii*). J.R. Forster described the penguin in his paper on these birds *Historia Apentodytae, generis avium orbi australi propii* (1781).

The "...white bird...of the Eagle kind..." was also sketched by the younger Forster; the drawing represents the white goshawk (*Accipter novaehollandiae novaehollandiae*). The goshawk was described by Latham (1781) who said it was "...communicated by Dr G.R. Forster [sic]..." and that he had relied on Forster's description (Whittell 1954, Whitley 1970, Lysaght 1959). As with the penguin the skin of the hawk would have been given to the Forsters sometime after RESOLUTION joined ADVENTURE at Queen Charlotte Sound in May 1773.

There is a third painting of a Tasmanian bird which was done by an artist on Cook's second voyage (see Lysaght 1959). Two copies of the painting exist, depicting the tawny-crowned honey-eater (*Glyciphila melanops*); Lysaght (1959) indicates that the Tasmanian race of the species is the one shown. The artist's name is unknown, and there is no reference in the extant accounts of any honeyeater being captured or shot at Adventure Bay, although Burney said that "...some small birds..."(5) were shot. The Forsters do not appear to have seen this species - it is not among Georg's illustrations. Two further paintings of Australian birds, possibly prepared from specimens collected in

Tasmania during ADVENTURE's visit, are noted by Medway (1979); these are a green rosella (*Platycercus caledonicus*) and the black-faced cuckoo-shrike (*Coracina novaeholiandiae*).

BOTANICAL OBSERVATIONS AND COLLECTIONS

The botanical results of the visit to Adventure Bay are less easily documented, as it seems that no substantial collection of plants was made, or at least, none has survived. However the report made by Furneaux, and the journals of the other members of ADVENTURE's complement clearly indicate that some plant specimens were collected.

At Louisa Bay, the landing party brought on board partly burnt fire wood as well as "...green boughs..."(2). Midshipman Hergest is more explicit in his journal, describing the specimens as "...several kinds of shrubs..."(7). The purpose of collecting the "shrubs" is not recorded, but Constable said that the "...several Green Boughs...was [sic] a pleasant Sight to us..."(6).

At Adventure Bay, various observations were made on the local tree species; these observations arose directly from the fact that the crew cut down trees for wood for the ship. The gum was also noted by Burney who described the trees as "...mostly Evergreens, standing very thick and close together - many of the Small ones bore berries of a spicy flavour - the larger ones are in general quite Strait & Shoot up very high before they branch out. They are large enough for Masts for any Ship in the Navy, but are rather brittle and heavy - they have a Soft thick bark which many of them have been stripped of by the Natives - the Wood is of a reddish cast & has a great deal of gum in it..."(5). Wilby, noting the freely flowing gum, wrote that at Adventure Bay "...there are a great many Gum Trees and of a vast Thickness and Hight one of which measured 26 feet & ye Height under the Branches was 20 feet..."(11). Furneaux noted that the large trees grew "...to a great height before they branch off; they are all of them...of a different sort to any I ever saw; the wood is very brittle and easily split, there is a very little variety of sort, having seen but two, the leaves of one is long and Narrow, the seed (of which I got a few) was in the shape of a Button, and had a very agreeable small; the Leaves of the other are like a bay and has a seed like a white thorn, with an agreeable spicy taste and smell. Out of the trees we cut down for Fire wood there issued some Gum, which the Surgeon called Gum lac..."(2). Thus Furneaux explicitly noted that he collected seeds of one of the trees at Adventure Bay and from entries in William Aiton's catalogue of plant growing in the Royal Gardens at Kew in 1789 and other records, it must be concluded that Furneaux brought these seeds back to England (see Nelson in prep.). Aiton (1789) attributed to Furneaux the introduction of *Eucalyptus obliqua* from Van Dieman's Land in 1774, and also *Leptospermum lanigerum* (syn. *Philadelphus laniger*) at the same time. Beaglehole (1961) identified the tree with long, narrow leaves and a seed "...in the shape of a Button..." as *Eucalyptus globulus*, but the vague description could also apply to *Leptospermum lanigerum*. In the herbarium of the British Museum (Natural History), London (BM) there is a sheet bearing numerous pieces of *L. lanigerum*, which has inscribed on the back "Nova Cambria. Van Dieman's Land? Capt. Furneaux 1774" - the reason for, and the meaning of the question mark are uncertain. This sheet has only fruiting twigs of the species attached, but the capsules are full of seeds; this must represent the collection he noted in his journal. As well as this native collection, there are two specimens taken from cultivated plants growing at Kew in 1778 and in Sir Joseph Banks' own garden, Spring Grove, in 1779; both of these must have been raised from Furneaux's seed, as the only other collection of Tasmanian plants and seed, made by William Anderson and David Nelson, did not reach Great Britain until October 1780 (see Nelson in prep.) The identification by Beaglehole (1961) of the tree with leaves "...like the bay [*Laurus nobilis*] and...a seed like the white thorn..." as *Eucalyptus obliqua* is acceptable. In the British Museum (Natural History) herbarium is a specimen inscribed "Hort. Comte de Coventry 1775" (the original inscription "Hort. Malcolm 1775" was altered to this). Again this must have been raised from Furneaux's seed. *E. obliqua* was named by L'Héritier (1789) who had seen seedlings during a visit to Kew in 1786 and 1787. It is possible that plants raised from Furneaux's seed were not alive when L'Héritier was in London, for he does not mention Furneaux's name. In contrast Aiton (1789) makes no mention of Nelson

or Anderson, although Nelson also collected seed of *E. obliqua* at Adventure Bay in 1777 (see Nelson in prep.) It is remarkable that the only two introductions clearly attributed to Furneaux by Aiton can be related to plants mentioned in his account of the expedition's stay at Adventure Bay. The fact that *Eucalyptus obliqua* was listed in William Malcolm's catalogue of plants for sale in 1778, two years before 1780 when Nelson's seeds reached England, is also interesting; it suggests that Furneaux collected a large quantity of seeds (Nelson in prep.)

The journals and accounts written by Furneaux and his crew only indicate that haphazard collections were made in Tasmania; there is no indication of any systematic scientific study. It is unknown what happened to the "green boughs", but the fate of Furneaux's seeds is now clear. It is also evident that some small specimens collected in the wild were preserved. Is it possible that other specimens exist?

For other material to exist, requires that someone aboard H.M.S. ADVENTURE was sufficiently motivated to retain the "green boughs", fruits, bark and even "sticks" collected, and to hand over the preserved material to the proper authorities on returning to England, although they could have given specimens to the Forsters. The fact that at least two bird corpses were preserved long enough to be seen and drawn by Georg Forster, and that seeds and specimens of *Leptospermum lanigerum* reached England, is important. There is no mention in Johann Forster's own journal of any botanical specimens being handed over by Furneaux at Queen Charlotte Sound; all that is recorded is that on 19 May "...Capt. Furneaux breakfasted with us, & we heard many curious acc^{ts} of their going to Van Dieman's Land..."(14). But, Admiralty Minutes for 24 January 1775 note that curiosities" brought back by Furneaux were to be sent to the trustees of the British Museum (Beaglehole 1961, p. 951).

As well as the *Leptospermum lanigerum* specimens in the British Museum (Natural History), there is in the Academy of Natural Sciences, Philadelphia (PH) an herbarium specimen labelled "Daphne villosa New Holland (Forster)" (see Apfelbaum 1977). This came originally from A.B. Lambert's herbarium, and Ewan(15) suggested that it came not from Forster but from the French botanist Jacques J.H. de Labillardière, and that the insertion of the name "Forster" by Pickering was incorrect. Lambert did receive material from both Labillardière's and Forster's collections. The problem which arises is whether the annotation crediting Forster with the collection is accepted or rejected. As there now is evidence that Tasmanian collections were made during Furneaux's visit, and as botanical as well as zoological specimens could have been handed over by Furneaux to the Forster, it seems illogical to dismiss Pickering's annotation. The argument that Labillardière was the collector has no substance. The specimen is identified only as *Pimelea* sp. by Alfelbaum (1977); until a firm name is established, it is not certain that it is even a Tasmanian species.

I have shown above that botanical collections were made, albeit in a cursory way, during Furneaux's visit to Tasmania in 1773. His specimens of *Leptospermum lanigerum* are the earliest extant ones of any Tasmanian plant, and mean that his name, at least, should be added to the inventory of Australian botanical collectors, even though only a few species are concerned. Furneaux also introduced into cultivation in England at least two Tasmanian plants, including the first eucalypt, which was also the first Australian plant to become commercially available to English gardeners. It is possible that observant botanists will uncover other specimens from Tasmania collected during this expedition now that attention has been drawn to their probable existence.

SCIENCE ON ADVENTURE

In conclusion, it may be worthwhile considering the scientific milieu on ADVENTURE as there does not seem to have been any attempt by Furneaux or his companions to make scientific collections, despite the fact that they knew that they were the first Europeans to land there since Tasman (at that time Marion de Fresne's landfall would not have been known to Furneaux). Although three bird species were painted and seeds of two plants were returned to England, the impression gained is that these results were almost accidental.

Biological observations, Furneaux's visit to Tasmania, 1773

Most of the natural history observations made during Cook's second voyage came from the work of Johann Forster and his son, the "official naturalists", on board RESOLUTION; the botanist/physician, Anders Sparrman, who joined RESOLUTION at Cape Town, and the assistant surgeon on that vessel, William Anderson, were also interested in the natural history of places visited. The only scientist on ADVENTURE was the astronomer William Bayly, who made observations in Tasmania, but there is no record of him undertaking botanical or zoological research. The only other member of ADVENTURE's crew competent enough to have made scientific studies was the surgeon Thomas Andrews. Watts (1979) made some interesting observations on the physicians attached to the expedition; he described RESOLUTION's team as "serious and competent...educated medical men with the care of the ship's company at heart..." They were interested also in non-medical matters Patten, for example, amassed an ethnographical collection. Watts commented that ADVENTURE "...was by no means so fortunate in her surgeons. Thomas Andrews was a boisterous, hard-drinking type...John Kent, the surgeon's first mate...had odd friends (especially James Scott, lieutenant of marines), and we know nothing about the second mate James Young...It is little wonder, that in these hands, scurvy made rapid progress in the ADVENTURE..."especially after leaving New Zealand in 1773. It is not known if the surgeon and surgeon's mates on ADVENTURE made any scientific records, as their journals are not extant.

Apart from the personalities of the "scientific" gentlemen on ADVENTURE, which appear to have influenced the crew's health and probably the amount of scientific information gathered, Furneaux was under orders to reach Queen Charlotte Sound. Clearly he decided to get there as rapidly as possible, in the expectation of rejoining Cook. Cook however felt it necessary to remain for almost seven weeks at Dusky Sound, in the South Island of New Zealand; Watts (1979) suggested that this lengthy stay happened because "...not only had [Cook] been worried about the outbreak of scurvy, but also...the crew were much longer convalescing than he had anticipated." On arrival at Dusky Sound, Cook referred to "scorbutic people" on board RESOLUTION.

The problem of scurvy is interesting, for its presence among a ship's crew should have been sufficient in itself to stimulate botanical studies. It was known at this time that fresh green vegetables could prevent and eliminate scurvy, and while on shore, ship's captains could have instructed members of the crew knowledgable about botany to search for suitable plants - in unexplored regions, like Tasmania, plants had to be treated with care, as they could prove poisonous. While the search for antiscorbutics was not the only impetus to botanical research, it should have had some effect, but in Tasmania, Furneaux seems to have been much more concerned to take on wood and water, and depart, than to allow botanical investigations which might have supplemented the diet of his crew and improved their well-being.

This lack of concern about fresh food is demonstrated by later events and clearly disturbed Cook. After leaving Queen Charlotte Sound in June 1773, the progress of scurvy on ADVENTURE was rapid; the "dirty and indolent" cook died of it, and was replaced by a cook from RESOLUTION. At the same time, late July 1773, Cook gave Furneaux precise instructions regarding the collection of local green vegetables. Cook reported to the Admiralty Secretary on his return to England (see Beaglehole 1961, Badger 1970) that "...we came to few places w[h]ere either ye art of Man or Nature had not provided some sort of refreshment or other, either in ye Animal or Vegitable way, & it was [my] first care to procure them...& Oblig'd ye people to make use of them, both by example & authority. It is from these kinds of refreshment I can only Account for the Resolution having few or no Scorbutic people on board on our passage from New Zealand to Otahiete [Tahiti] the first time, when at the same time ye Adventure had many of her best men far gorne [sic] in that disease; for except Fish they had hardly any refreshments from ye time we left ye Cape [of Good Hope] till I join'd them in Queen Charlotte's Sound, which was about Six Months; they were unacquainted with the method of making Spruce Beer & Strangers to many of ye Vegitables with which the place abounds..."(16).

This report indicates that Furneaux was complacent about instructing his crew to collect native plants, and also that he and his colleagues were not well-informed

botanically. Even though Furneaux had had gardens planted at Queen Charlotte Sound, he appears to have made little use of them. Perhaps they were not mature enough. Yet, on the arrival of RESOLUTION at the Sound "...Mr. Kemp went out to her with fish and Sallad from the Garden..."(5), and Cook later inspected "...the different Gardens Captain Furneaux and his officers had planted with garden seeds roots &ca all of which were in flourishing condition..."(17) Burney noted that "...Every thing we Set in the garden is in a fair way - nothing has faild..."(5). Certainly Cook's report to the Admiralty and his excursions to collect local native plants imply that the gardens Furneaux planted were insufficient for both crews' needs.

Furneaux placed his confidence in cider as an antiscorbutic (see e.g. Badger 1970, Beaglehole 1961, Watts 1979). Cook favoured fresh food. Beaglehole (1970) commented that although sea captains knew all about the efficacy of fresh food in preventing and curing scurvy, and tried to get fresh food when they could, "...they did not think about it enough...Tobias Furneaux, a very competent sailor, is a beautiful example..." of such a captain. Cook thought about it constantly, and would often row many miles each day in search of likely native plants; for example the day after RESOLUTION and ADVENTURE were reunited at Queen Charlotte Sound, Cook wrote in his log that "...Knowing that sellery [sic] and Scurvey grass and other vegetables were to be found in this Sound... which is [sic] extreemly beneficial in cureing and preventing Scurvey, I went my self at day light in the Morn in search of some and returned by breakfast with a boat load..."(18).

In none of the journals for the period ADVENTURE was in Tasmania is there any mention of greens being collected, apart from the enigmatic "green boughs"; no one emulated Cook! Furneaux and his colleagues were disinterested, or botanically ignorant, even though scurvy was the most serious problem they faced on long sea passages. This lack of concern as well as Furneaux's desire to reach New Zealand as quickly as possible, and his obvious reluctance to allow scientific studies - he refused Bayly a boat to make studies of tidal irregularities in Adventure Bay - all combined to limit the amount of scientific work that could be done, and the collections that could be made.

ACKNOWLEDGEMENTS

My thanks are due to Dr J. Ewan, Mr D. Medway, Dr P. Whitehead and Mr E. Groves for helpful comments on this paper. I am grateful for the help given by the Public Records Office, London, and Staatsbibliothek Preussischer Kulturbesitz, Berlin, in obtaining copies of manuscript journals in their archives.

NOTES

This paper is based mainly on documents transcribed by J.C. Beaglehole (1961), THE JOURNALS OF CAPTAIN JAMES COOK. II. THE VOYAGES OF THE RESOLUTION AND ADVENTURE 1772-1775. However Beaglehole did not transcribe fully the journals of ADVENTURE's crew; I have consulted the original journals for several of these people.

1. Log of Tobias Furneaux, captain of H.M.S. ADVENTURE, see Beaglehole, *op. cit.*, pp.149-153. (original not seen).
2. Account of ADVENTURE's voyage written by Furneaux, see Beaglehole, *op.cit.*, pp.729-736. (original not seen).
3. Journal of William Bayly, astronomer on ADVENTURE, transcribed extracts in Beaglehole, *op.cit.*, pp.149-153 (footnotes) (original not seen).
4. Log of Arthur Kempe, ms. in Public Record Office (P.R.O.), London Adm 51/4520/1-3.
5. Log of James Burney, transcribed extracts in Beaglehole, *op.cit.*, pp/746-749 (original not seen).
6. Journal of Love Constable, ms. in P.R.O., Adm 51/5420/7-8.
7. Journal of Richard Hergest, ms. in P.R.O., Adm 51/4522/13.
8. Log of Henry Lightfoot, ms. in P.R.O. Adm 51/4523/5.
9. Journal of Robert Browne, ms. in P.R.O. Adm 51/4521/9-10.
10. Journal of John Wilby, ms. in P.R.O., Adm 51/4522/14.
11. Log of William Hawkey, ms. in P.R.O., Adm 55/4521/11

12. In a previous paper (*Pap. Proc. R. Soc. Tasm.*, 108 (1974) : 160) I stated incorrectly that the Forsters had collected in Tasmania.
13. The dates and times are those used in journals and logs; dates have not been altered to allow for the difference between the civil and nautical day (the latter begins at noon).
14. Journal of Johann R. Forster, ms. in Staatsbibliothek Preussischer Kulturbesitz, Berlin (ms germ quart 222-227) entry for 19 May 1773.
15. annotation on specimen in PH, see Apfelbaum (1977).
16. Letter from James Cook to Admiralty Secretary, see Beaglehole, *op.cit.*, pp.954-955 (original not seen).
17. Journal of James Cook, see Beaglehole, *op.cit.*, pp.166-167.
18. ibid., p.165.

REFERENCES

Aiton, W., 1789: HORTUS KEWENSIS. London.

Apfelbaum, J., 1977: Australian collections of Labillardière in the herbarium of the Academy of Natural Sciences of Philadelphia. *Taxon*, 26: 541-548.

Badger, G.M., 1970: Cook the scientist in CAPTAIN COOK, NAVIGATOR AND SCIENTIST. pp.30-49. Canberra.

Beaglehole, J.C., 1961: THE JOURNALS OF CAPTAIN JAMES COOK. II. THE VOYAGES OF THE RESOLUTION AND ADVENTURE 1772-1775. London.

_____., 1974: THE LIFE OF CAPTAIN JAMES COOK. London.

Hooker, J.D., 1859: Introductory essay to Flora Tasmaniae, in THE BOTANY OF THE ANTARCTIC VOYAGE OF H.M. DISCOVERY SHIPS EREBUS AND TERROR. 3: pp. cxii-cxxviii. London.

Latham, J., 1781: A GENERAL SYNOPSIS OF BIRDS. London.

L'Héritier de Brutelle, C.L., 1789: SERTUM ANGLICUM. Paris (Facsimile edition with introductory notes. Pittsburg, 1963).

Lysaght, A., 1959: Some eighteenth century bird paintings in the library of Sir Joseph Banks (1743-1820). *Bull. Br. Mus. (Nat. Hist.) Hist. Ser.*, 1(6).

Medway, D., 1979: Some ornithological results of Cook's third voyage. *J. Soc. Bibphy. Nat. Hist.*, 9: 315-351.

Nelson, E.C., in prep: Australian plants cultivated in England before 1788.

Reed, A.W., (Ed.), 1969: CAPTAIN COOK IN AUSTRALIA. Wellington.

Watts, J., 1979: Medical aspects and consequences of Cook's voyage. In R. Fisher and H. Johnston (Eds): CAPTAIN JAMES COOK AND HIS TIMES., 129-157. Vancouver and London.

Whittell, H.M., 1954: THE LITERATURE OF AUSTRALIAN BIRDS: A HISTORY AND A BIBLIOGRAPHY OF AUSTRALIAN ORNITHOLOGY. Perth.

Whitley, G.P. 1970: EARLY HISTORY OF AUSTRALIAN ZOOLOGY. Royal Zoological Society of N.S.W. Sydney.