Sir Joseph Banks

THE FATHER
OF AUSTRALIA

J. H. MAIDEN

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SIR JOSEPH BANKS:

THE "FATHER OF AUSTRALIA."

By

J. H. MAIDEN,

*Government Botanist of New South Wales and Director
of the Botanic Gardens, Sydney; sometime President
of the Australian Historical Society; Honorary
Secretary of the "Banks' Memorial Fund."*

"Gest thou forget."—DEUT. IV. 9.

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"A.D. MDCCLXX. Under the auspices of British science, these shores were discovered by James Cook and Joseph Banks, the Columbus and Maecenas of their time. This spot once saw them ardent in the pursuit of knowledge. Now to their memory this tablet is inscribed in the first year of the Philosophical Society of Australasia. Sir Thomas Brisbane, K.C.B., F.R.S.L., &c., Corresponding Member of the Institute of France, President. A.D. MDCCCXXI." See p. 224.

The Philosophical Society was the precursor of the Royal Society of New South Wales.

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See Hooker's Edition of Banks' Journal, xxxvi. For further particulars concerning this statue, see Weld ii, 302. From Curator, Australian Museum, Sydney. See p. 235.

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The original charts by Cook himself (now in the British Museum) are those published by Alexander Dalrymple, hydrographer to the Admiralty, and reproduced by Mr. Bladen in the Facsimiles of Charts accompanying vol. I, pt. 1, of the New South Wales Historical Records.

No. 1.—MR. JOSEPH BANKS. Painted by Sir Joshua Reynolds; Eng. by W. Dickinson. About 1771.

INTRODUCTORY.

BANKS has been called "the Father of Australia." This is an affectionate title, and I will endeavour to show that he is worthy of it.

His services have not been adequately recognised either by Britain or by Australia. This neglect is a reflection on Australians who, however, have the excuse that they err in very good company. He was happy to efface himself. His journal of the Australian voyage (Cook's First Voyage) he made over to Hawkesworth, who so arranged his narrative that Banks did not receive due credit, the compiler of the records of others receiving the major part of the kudos and the whole of the remuneration for the publication.

He likewise handed his journal of the Iceland trip to Dr. Troil, who incorporated it in his work, not giving deserved credit, so it is stated, to Banks.

He superintended the drawings of the plants collected in Cook's First Voyage, and bestowed great pains on the descriptive matter; but, after Solander's death, he allowed the duties of President of the Royal Society to wean him largely from botanical work, and so this fruit of his labours was not published until eighty years after his death.

Sir Joseph Banks was a patron of early Australian exploration and colonization. In the political changes which took place in England, Banks' particular friends were not, of course, continuously in power, and hence he was not always fully consulted by Ministers; but, as a very general rule, his advice was sought by Ministers without reference to his political bent, it being realised that he endeavoured to dissociate himself from the strife of parties, and was the impartial friend of all in seeking the welfare of Australia.

He was first of all a scientific man—a botanist mainly—and the advancement of science was the mainspring of his long career. But his tastes and inclinations were catholic, and his letters show his robust common-sense, sound judgment, and kindly disposition when applied to questions very diverse in character.

No subject was too unimportant, no correspondent too humble, to secure his attention, and his letters alone show him to be a broad-minded, courteous, cultured, philanthropic gentleman.

Prominence will be given to his work in botany and horticulture. I make no apology for this, since any life of Banks which did not emphasise his pursuits in these directions would simply not be a faithful portrait. I have not done this, however, at the expense of an account of his activities in other directions. Furthermore, the work being mainly intended for Australians, attention has been specially drawn to his connection with this continent.

At a time when it was considered a sign of patriotism to detest France and the French, he soared above national antipathies, and, actuated by the strongest feelings of fair-play and justice, he secured the respect, and even the affection, of all Frenchmen who had heard of his noble attitude, during the frequent and long-continued wars between Great Britain and France, towards her men of science.

During his life he spent the bulk of his fortune in the advancement of science and the amelioration of his fellow-men; at his death he took care that a large share of his wealth should be devoted to noble objects.

In Australia his name has been overshadowed by its association with that of Cook, but I feel sure that the more the life and work of Banks are studied, the more evident it will become that he was a great and a good man, worthy to be honoured by every Briton, whether Australian or not.

ACKNOWLEDGMENTS AND AN APPEAL.

THE Committee of the Banks' Memorial Fund feel that the memory of the greatest benefactor of early Australia is worthy of some enduring recognition, and a statue in Sydney, in the highest style of art, has been suggested. Botany Bay, the only place in modern New South Wales visited by Cook and Banks, is a suburb of Sydney.

My principal contribution to the Banks' Memorial Fund is the present work, which has been a labour of love for some years past, and I trust that the general ignorance which prevails in regard to Sir Joseph Banks may be dispelled to some extent by perusal of its pages.

I have spared no pains to verify statements, consulting original documents wherever possible. I have tried to be an impartial historian, and have adopted the plan of quoting my authorities literally, instead of translating them into a running commentary or essay of my own.

I am especially indebted to Bladen's "Historical Records of New South Wales," and acknowledgments of that and other works will be found throughout the text.

It is reasonable for people to say: "We know Sir Joseph Banks chiefly as a great name, but our knowledge of him is vague; we cannot be expected to contribute to a memorial of him without learning more about him."

To be quite frank, the work has only two objects—to disseminate information concerning Australia's greatest early friend, and to suggest that my readers may be pleased to open their purse-strings for the purpose of establishing a memorial to him. Bearing in mind Banks' active sympathies with those who were the reverse of rich, it is hoped that the small subscriptions of those who are not well-to-do may not be withheld.

The thanks of the Committee are due to the Honorable Charles Gregory Wade, K.C., Premier and Attorney-General, and the Honorable Thomas Waddell, Colonial Treasurer of New South Wales, for causing this volume to be printed at the public expense. It is confidently expected that the copies sold (none will be presented) will very considerably augment the Memorial Fund. From Sir Francis Suttor, President of the New South Wales Legislative Council (and of the Executive Committee of the Memorial Fund), and Sir Samuel Way, Chief Justice and Lieutenant-Governor of South Australia, both of them authorities on the early history of Australia, I have received the warmest encouragement.

No. 2.—MR. JOSEPH BANKS. Painted by Benjamin West; Eng. by J. R. Smith, 1771

BRIEF PERSONAL NOTES.

JOSEPH BANKS, who was born at Argyle-street, London, on 13th February, 1743 (2nd February, O.S.), was the only son of William Banks-Hodgkenson,* of Revesby Abbey, Lincolnshire, by his wife Sophia, daughter of William Bate. He was descendant of a Yorkshire family which was wont to write itself Banke, and was long settled at Banke-Newton in the wapentake of Staincliffe.

The second son of a certain Henry Banke, of Banke-Newton, acquired, by marriage, Beck Hall, in Giggleswick, and by his great grandson, the first Joseph Bankes. Revesby Abbey was purchased towards the close of the 17th Century. His son (also Joseph) sat in Parliament for Peterborough, and was Sheriff of Lincolnshire in 1736. The second (and eldest surviving) son of the member for Peterborough

* The following supplements the above statement somewhat:—

"His family is said to have been of noble Swedish extraction, and the first of whom we find any account was Simon Banks, who in the reign of Edward the Third married the daughter and heiress of Catterton, of Newton, Yorkshire. From him descended Robert Banks, who in the reigns of Elizabeth and James the First, was an eminent attorney at Giggleswick, and whose sons distinguished themselves on the King's side during the civil wars. Since that period Sir Joseph Banks' family has intermarried with the families of Frankland, Hancock, Whichcote, Hodgkinson, Cecil, and Pelham. The Hodgkinson's name was borne by his father, an estimable country gentleman, residing at his seat in Lincolnshire, Revesby Abbey, about 22 miles E.S.E. of Lincoln, and seated on high ground among fens, over which it has a most extensive prospect." ("Memoirs, Historical and Scientific, of the Right Hon. Sir Joseph Banks," by George Suttor, F.L.S., 1855, p. 26.)

The following note concerning Revesby Abbey is taken from the *Gen'lman's Magazine* of December, 1821, and was very kindly communicated to Mr. E. S. Smithurst, Honorary Secretary of the Flag Committee, British Empire League, Sydney, by the Revd. Paul Ogilvie Ashby, Vicar of Revesby:—

"The annexed engraving (*see* r. xx) is a view of Revesby Abbey, county Lincoln, lately the seat of the Right Honorable Sir Joseph Banks, of whom an interesting memoir is given in Vol. XC, Part I, p. 86. This seat was built by Craven Howard, Esq., nephew and heir of Henry Howard, Esq., but has been much enlarged by the family of Banks. Part of an ancient mansion, formerly the residence of the abbots of Revesby, now forms the offices.

"The parish of Revesby is situated in the west division of the Soke of Bolingbroke, and is about 6 miles from Horncastle. In the year 1142 William de Romara, Earl of Lincoln, founded an Abbey of Cistercian Monks, dedicated to the Virgin Mary and St. Laurence, and endowed, at the Suppression, with £287 2s. 4d. per annum. Besides the endowment of William de Romara, the monastery was enriched by numerous other benefactors. It is now entirely demolished. 30 Henry VIII the site was granted to Charles Brandon, Duke of Suffolk. On the division of his extensive possessions among his heirs general, Revesby fell to the lot of the Carsey family, who, after residing here several years, sold it to the Lord Treasurer Burleigh, from whom it descended to the Earl of Exeter. The second Earl settled it on his grandson, Henry Howard, the third son of the Earl of Berkshire. About a century ago it was sold by the Howards to Joseph Banks, Esq., the great grandfather of the late worthy Baronet. It was this same Mr. Joseph Banks who rebuilt the church, and by his will directed the building of ten almshouses for ten poor people, endowing the same with fifty pounds a year."

No. 3.—REVESBY PARISH CHURCH (ST. LAURENCE).

No. 4.—THE ALMSHOUSES, REVESBY.

took the name of Hodgkenson, as heir to his mother's ancestral estate of Overton, in Derbyshire, but on the death of his elder brother (and his consequent heirship) resumed the paternal name and resigned the Overton estate to his next brother, who became Robert Hodgkenson, of Overton.

Mr. Banks-Hodgkenson died in 1761, leaving one son, Joseph Banks. (Edward Edwards.)

He received his early education under a private tutor. At the age of 9 he was sent to Harrow, and was thence transferred to Eton when he was 13. He left that school in his eighteenth year, and then entered as a gentleman commoner at Christ Church College, Oxford, in December, 1760.

No. 5.—REVESBY ABBEY, LINCOLNSHIRE, Banks' country seat. From an old wood-engraving

No. 6.—WEDGWOOD MEDALLIONS. Said to have been modelled by John Flaxman, R.A.

NO. 7.—SIR JOSEPH BANKS. Wax Medallion, modelled by James Tassie, 1785.

His father died in 1761, during his first year at Oxford, leaving him an ample fortune and estate at Revesby.

His liking for botany—which had shown itself during his boyhood—increased while at the University, and he warmly embraced other branches of natural history. Finding that no lectures were given in botany, he sought and obtained permission to procure a teacher, to be paid by the students. He then went by stage-coach to Cambridge, and brought back with him Mr. Israel Lyons, astronomer and botanist, who afterwards published a small book on the Cambridge Flora. Many years subsequently, Lyons, through the interest of Banks, was

No. 8.—WEDGWOOD MEDALLION (Flaxman).

appointed astronomer under Captain Phipps, afterwards Lord Mulgrave, on his voyage towards the North Pole*.

He left Oxford in December, 1763, after taking an honorary degree (M.A.). In February, 1764, he came of age and took possession of his paternal fortune. He received the degree of D.C.L. from his University in 1771, in honor of his voyage of circumnavigation with Cook.

In March, 1779, he married Dorothea, daughter of William Weston Hugessen, of Provender, in Kent, who survived him. He was created

* "Dict. Nat. Biogr." See also Weld, ii, 105; also Markham, "Life of Sir John Franklin," (1891), p. 85.

a Baronet in 1781, was invested with the Order of the Bath in July, 1795, and sworn of the Privy Council in March, 1797.

Flinders quotes the *Gentleman's Magazine* of March, 1809, for the statement that Banks was appointed Recorder of Boston, Lincolnshire, in place of the late Duke of Ancaster.*

No. 9.—LADY BANKS. Wax Medallion, modelled by James Tassie, 1785.

* *Hist. Rec.*, N.S.W. vii, 276.

PART I.

BANKS AS A TRAVELLER.

1. VOYAGE TO NEWFOUNDLAND (1766).
2. COOK'S FIRST VOYAGE (1768-1771); BANKS' JOURNAL.
- 2*a*. BANKS' JOURNAL CONTINUED; A MOMENTOUS DECISION;
DISCOVERY OF NEW SOUTH WALES.
3. THE BOTANY OF THE VOYAGE OF THE "ENDEAVOUR."
4. COOK'S SECOND VOYAGE (BANKS AND THE "RESOLUTION.")
5. VOYAGE TO ICELAND (1772).

1. Voyage to Newfoundland (1766).

IN May, 1766, Joseph Banks was elected a Fellow of the Royal Society, and in the summer of the same year he went to Newfoundland and Labrador, then *terræ incognitæ*, to collect plants with his friend, Lieutenant Phipps, commanding H.M.S. "Niger," whose mission it was to protect the fisheries. He returned to England the following winter by way of Lisbon, from whence he brought the first specimen of caoutchouc to England.*

In Banks the love of travel, with the view to the pursuit of natural history, early showed itself. Most young men of wealth and similar social standing contented themselves with a sojourn in Paris—this was considered good form—or the "grand tour," embracing other European countries, was undertaken. But Banks did not shrink from uncomfortable and out-of-the-way voyages—journeys which had no attraction for the ordinary traveller; he desired opportunities for cultivating his faculty of observation. And so he began with Newfoundland and Labrador.

The original of Banks' Newfoundland Journal is in the possession of Mr. S. W. Silver†, of 3 York Gate, S.W. It consists of two small quarto volumes, the first of which alone was transcribed by his sister, as noted on p. 84. It ends with a note on a severe storm encountered on the voyage to Lisbon:

"Among other things that suffered, my poor box of seeds was one, which was entirely demolished, as was my box of earth with plants in it, which stood upon deck"; so that it would seem that Banks did not bring home living plants as suggested on p. 85. The second volume has only nineteen pages of MS., beginning, "November 17, 1766. Arrived from Newfoundland in the River "Tagus": it contains nothing of interest.‡

The following manuscript is at Kew:—

"Banks, Rt. Hon. Sir Joseph, Bart. Journal of a voyage to Newfoundland and Labrador, commencing April ye 7th and ending November ye 17th, 1766. [Copy by W. J. Anderson.] 104 ff. fol."

* Weld, "History of the Royal Society," ii, 106.

† This journal has since been purchased, with the rest of the York Gate Library, by the South Australian Branch of the Royal Geographical Society of Australasia, Adelaide.

‡ James Britten, in *Journal of Botany*, xlii, 352 (1904).

"The present seems a suitable opportunity or calling attention to the Newfoundland material in the Banksian collection. Besides the large number of specimens scattered through the National Herbarium, (London), each sheet being written upon the back by Banks himself, we have a MS. list in his own hand of the plants observed, with localities, and a transcript made in 1772 by his sister, Sarah Sophia Banks, of his 'Journal of a Voyage to Newfoundland and Labrador: commencing April ye seventh, and ending November the 17th, 1766.' At this time Banks was in his twenty-fourth year; his journal, which it is hoped may some day be published, is full of notes upon the natural history of the island, especially on the plants, of which the following is an example:—

Croque, June 15, 1766. Weather to-day extremely hot: walk out in the Evening, find a kind of butter-bur with palmated leaves (*Petasites palmatus*): broad-leaved *Kalmia* (*K. glauca*), in prodigious abundance, scattered without distinction over bogs and hills, wherever it is not shaded by trees, but rather affecting dry soil: a kind of rush upon the highest and dryest tops of hills, one-blade (*Maianthemum bifolium*), everywhere in great abundance, most commonly with three leaves on each stalk, from the Luxuriance with which it grows; a kind of very small *Carex*; a kind of *Andromeda* (*Vaccinium macrocarpon*), whose calyx and corolla are both four-fid, growing always upon Bogs; a kind of Bilberry, growing on the most exposed sides of Rocks.

"On his return, Banks compiled the list already referred to—probably the earliest in existence for Newfoundland. It is in itself sufficient evidence of his botanical attainments.* He employed Ehret to make drawings of the more interesting of his plants: these, of which a list follows†, are most beautifully executed on vellum, each being signed 'G. D. Ehret, 1767.'

"Of these twenty-two‡, seventeen are bound together in a volume in the Department of Botany. The remaining five are in a volume containing the originals of the thirteen plates in Aiton's "*Hortus Kewensis*," there is no indication in the preface as to whence the plates were taken, and I do not think it is generally known that they were supplied from the Banksian collection. On the drawings of *Kalmia glauca*, *Vaccinium macrocarpon*, and *Potentilla tridentata*, is a note by Banks stating that they were taken from dry specimens from Newfoundland; the first of these and *Rhodora canadensis* are noted by Aiton as introduced to Kew Gardens in 1767 by Banks, which suggests that he also brought home living plants."§

* *Nota bene.*

† Not reproduced here.

‡ There is an enumeration of plants collected by Sir William Macgregor recently, in Labrador, in *Kew Bulletin*, March, 1907.

§ J. Britten, in *Journ. Bot.*, xli, 84-5.

2. Cook's First Voyage (1768-1771). Banks' Journal.

FOLLOWING is an account of the inception of the voyage of the "Endeavour," Lieutenant Cook, who was accompanied by Banks and Solander (of whom an account will be given presently), and memorable for the discovery of New South Wales, and other geographical discoveries, and for the contributions made to the natural history and ethnology of the countries visited.

The Council of the Royal Society, in February, 1768, addressed a memorial to the King, the first paragraph of which reads:

. That the passage of the Planet Venus over the disc of the sun,* which will happen on the 3rd of June, in the year 1769, is a phenomenon that must, if the same be accurately observed in proper places, contribute greatly to the improvement of astronomy, on which navigation so much depends.

Later on it states:

That the like appearance, after the 3rd of June, 1769, will not happen for more than one hundred years.

The observations of the Transit of Venus made in 1761 were, from several causes, unsatisfactory, and hence special interest attached to the Transit of 1769. Stations in different parts of the world were selected for the observations and one of the stations was in the South Pacific.

The Royal Society presented a memorial to the King, and "any place not exceeding 30 degrees of southern latitude, and between the 140th and 180th degrees of longitude, west from Greenwich," was indicated for making observations.

The expedition to the Pacific had for its main, but not exclusive object, the observation of the Transit by Mr. Green (formerly assistant to Dr. Bradley, Astronomer Royal), and this was placed under the command of Lieutenant James Cook.

The Council minutes of the Royal Society state that Cook was appointed one of the observers to act with Mr. Green. He had a conference in the Council-room, and accepted the appointment, agreeing to the remuneration of one hundred guineas. Mr. Green received two hundred guineas.†

It was at this time that the name of Mr. Banks first appears in the Council minutes. Having heard of the proposed expedition to the Pacific, he addressed a letter to the Council, requesting them to apply

* See also "Captain James Cook" (Arthur Kitson, 1907), p. 83.

† Weld, ii, 37.

to the Lords of the Admiralty to permit him to proceed with Lieutenant Cook in the "Endeavour." The Council complied with his request and in their official letter thus interceded in favour of Banks:

The Council have appointed Mr. Charles Green, and Captain Cook, who is commander of the vessel, to be their observers; besides whom, Joseph Banks, Esq., Fellow of this Society, a gentleman of large fortune, who is well versed in natural history, being desirous of undertaking the same voyage, the Council very earnestly request their Lordships, that in regard to Mr. Banks' great personal merit, and for the advancement of useful knowledge, he also, together with his suite, being seven persons more (that is eight in all), together with their baggage, be received on board of the ship in command of Captain Cook.

From the following passage it would appear that California was also thought of as an observing station (although it is not enumerated in Weld, ii, 34), and it is also interesting as showing how the "Endeavour," a name dear to Australians, came on the scene.

In the beginning of the year 1768, the British Ambassador at Madrid applied to the Court of Spain for the grant of a passport to a ship designed for California, to observe the Transit of Venus, which was promised, with a provision that the astronomer should be a member of the Romish Church, and an Italian gentleman was consequently engaged for the undertaking; but the passport, when demanded, was refused by the Spanish Ministry, who alleged that it was repugnant to the policy of government to admit foreigners into their American ports, unless driven there by necessity; but especially those who by their profession would be fitted to make such observations as might facilitate the approaches and descents of their enemies at any future war with Great Britain.

It was then determined to despatch the Italian gentleman to Hudson's Bay, and a ship of 400 tons burthen was purchased for the voyage by order of the Government. This ship was named the "Endeavour,"* and, according to the original plan, was to have been navigated by a master, a second master, a mate, two midshipmen, and thirty seamen, who were engaged for the service, and orders were at the same time issued from the navy office to equip her for the undertaking; and early in the month of May warrants were granted to the first and second masters, but recalled the following day—the plan of her voyage having been altered. But on the 27th of the same month the ship was again put in commission, and her complement augmented to seventy men; an application was likewise made for a number of marines, but without success.

On the 21st of July she fell down to Greenwich, and the next morning to the Galleons, where we received on board six guns, being four-pounders, together with twelve swivels, and gunners' stores, &c. On the evening of the 30th we anchored at Gravesend, and the next morning proceeded towards the Downs, where we arrived on the 3rd August, and on the same day sailed for Plymouth, where we came to anchor on the 14th, and were ordered to receive on board twelve marines, and three additional seamen, which, with Mr. Green, the observer, and his servant, together with Mr. Banks and Dr. Solander, and their attendants, who were considered as supernumeraries, increased our number to ninety-six souls.†

* For further particulars concerning the taking over of this vessel (368 tons) into the Navy, see "Kitson," p. 88.

† Becket's ("Voyage of the Endeavour, 1768-1771," pp. 1-3). A journal of a voyage round the world in H.M.S. "Endeavour" in the years 1768-71, undertaken in pursuit of natural knowledge, at the desire of the Royal Society, &c., &c., London, printed for T. Becket and P. A. De Hondt, 1771. 4to, pp. 130 and three pages unnumbered. (Copy in library of Sydney Botanic Gardens.) No plates, no author given, but usually quoted as Thomas Becket. The Sydney Public Library edition is 12mo, Dublin, 1772.

No. 10.—Painted by W. Hodges. Eng. by J. Basire.
(Facing title-page of Vol. I of Cook's Voyages, 1777.)

The request of the Council of the Royal Society* having been approved, Banks equipped the "Endeavour" for natural history pursuits, and took with him Dr. Carl Solander, three draughtsmen—Mr. Alexander Buchan, for landscape and figure (died 17th April, 1769); Mr. Sydney Parkinson (died 26th January, 1771), for objects of natural history; and also Mr. John Reynolds (died 18th December, 1770); also Herman Sporing, assistant (died 24th January, 1771); James Roberts and Peter Briscoe, servants; also Thomas Richmond and George Dollin, negro servants, frozen to death, 16th January, 1769. The journal which he kept was largely utilised by Dr. Hawkesworth in his relation of the Voyages of Byron, Carteret, Wallis, and Cook.† Perusal of it and comparison with Banks' Journal will show how largely indebted Hawkesworth was to Banks, and yet what little prominence was given to Banks' work. The work is, indeed, known as "Hawkesworth's Voyages," and Hawkesworth probably never did more than cross the English Channel.‡

The following two letters of John Ellis to the great Linnæus are interesting:—

I must now inform you that Joseph Banks, Esq., a gentleman of £6,000 per annum estate, has prevailed on your pupil, Dr. Solander, to accompany him in the ship that carries the English astronomers to the new-discovered country in the South Sea, lat. about 20° south, and long. between 130° and 150° west from London, where they are to collect all the natural curiosities of the place; and, after the astronomers have finished their observations on the Transit of Venus, they are to proceed under the direction of Mr. Banks, by order of the Lords of the Admiralty, on further discoveries of the great Southern Continent.§ And again, "They have the several sorts of salts to surround the seeds, and wax, both beeswax and that of the *Myrica*; besides, there are many people whose sole business it is to attend them for this very purpose. They have two [three, J.H.M.] painters and draughtsmen, several volunteers who have a tolerable notion of natural history; in short, Solander assured me this expedition would cost Mr. Banks ten thousand pounds. All this is owing to you and your writings."||

Banks' journal of this voyage¶ teems with notes on marine biology and aquatic birds; when on land he gave attention to botany and did not neglect other branches of natural history.

He was entirely loyal to Cook, yet we find that, writing to Robert Brown,** he compares Cook with Flinders in regard to the opportunities given to the naturalist. Banks stated that he would have done more

* "Historical Records of New South Wales," edited by F. M. Bladen, i (I), 313.

† "An account of the voyages, &c., for making discoveries in the Southern Hemisphere, and successively performed by Commodore Byron, Captain Wallis, Captain Carteret, and Captain Cook, drawn up from the journals which were kept by the several commanders and from the papers of Sir Joseph Banks, Bart." By John Hawkesworth, LL.D. (1st ed., May, 1773; 2nd ed., August, 1773; 3rd ed., 1785.)

‡ See p. 32 for an account of Dr. Hawkesworth. Prof. E. E. Morris (*Vict. Nat.*, xvii, 149), quotes the *Gentleman's Magazine* for September, 1900, as giving the fullest account of him.

§ Sir J. E. Smith's "Selection of the Correspondence of Linnæus," vol. i, p. 230.

|| *Ib.*, p. 231.

¶ "Journal of the Right Hon. Sir Joseph Banks, Bart., K.B., P.R.S., during Captain Cook's First Voyage, &c." Edited by Sir Joseph D. Hooker (Macmillan, 1896).

** *Hist. Rec.*, v, 88.

had Cook given him more opportunities. Doubtless this refers to the cursory examination on land Cook felt himself able to give to his Australian discoveries.

Following is a brief sketch of the principal events of this voyage, since space will not permit me to abstract Banks' Journal at length. It is deeply interesting, and the original should be carefully read by every admirer of Banks.

On 25th August, 1768, the "Endeavour" left Plymouth Harbour, and from the 12th to the 18th September was at Madeira. Banks gives a very interesting account of the natural history (chiefly botany) of the island, and the occupations of its inhabitants. He listed 18 fish and 299 plants.

Leaving Madeira, Banks occupied himself, as was his wont at sea, with observations on the marine zoology and on the birds which visited the ship.

From the 13th November to the 7th December they were at Rio de Janeiro, and Banks listed 316 plants collected there. But the visit was not altogether a pleasant one, owing to their uncordial reception by the authorities.

The Portuguese Viceroy interposed various objections to the landing of the visitors, an excuse being that the "Endeavour" was not a King's ship. Nevertheless, Banks and Solander made botanical and zoological observations more or less surreptitiously, until finally they were absolutely forbidden to land. Through Dr. Solander and Mr. Monkhouse, the surgeon, Banks obtained information which enabled him to give an interesting account of Rio.

Leaving this place on the 8th December they went south, making for Tierra del Fuego. The manners of the times are shown in the following entry :—

"Christmas Day: all good Christians, that is to say, all good hands, got abominably drunk, so that all through the night there was scarce a sober man in the ship. Weather, thank God, very moderate, or the Lord knows what would have become of us."

Banks' observations at sea are very interesting, and on 11th January, 1769, they saw the land of Tierra del Fuego. On the 14th he and Solander landed near Cape St. Vincent (Staten Island), and found a hundred plants new to him in four hours. He describes the giant sea-weed and also Winter's bark. On the 15th they went ashore in the Bay of Good Success (Tierra del Fuego), and had their first interview with the natives, which was of a pleasant character. They made an excursion inland and nearly perished with the cold, staying out all night during a snow-storm. On the recovery of the travellers they did not venture so far in future, but Banks made some interesting observations in regard to the country, and listed 104 phanerogamic and 41 cryptogamic plants collected here.

On the 21st January they started on their long voyage to Otahite* (Tahiti). On the 4th April they were abreast of Lagoon Island, and Banks gives an account of the lemon-juice preparation he had brought to ward off the scurvy. During the whole of the cruise there was very little scurvy, and the greatest credit is due to Captain Cook (in which he was doubtless well supported by Banks) for the preventive arrangements which brought about so excellent a result.

They made the long stay from 13th April to 12th July at Otahite, partly to recuperate, but mainly to observe the Transit of Venus, which was one of the main objects of the voyage.

They found the natives exceedingly pleased to see them, a ceremonial reception took place, and Banks gives a very interesting account of the manners and customs of the natives, the harmony of the visitors' relations with them being chiefly disturbed by the propensity of the natives to steal. The latter became very friendly, and gave names to almost every man in the ship, that to Captain Cook being *Toote*, and that of Banks *Tapane*.

A temporary fort was erected here, and many articles brought ashore. The most active preparations were made for the Transit. On the 31st May Banks writes, "The day of observation now approaches In consequence of hints from Lord Morton, the captain resolved to send a party to the eastward and another to Imao (Eimeo, or Moorea), an island in sight of us, thinking that in case of thick weather one or the other might be more successful than those at the observatory. I resolved to go on the Imao expedition." (Sir J. D. Hooker's "Journal of Sir Joseph Banks," p. 94.)

On the fateful 3rd of June the sun rose bright and clear. Banks, not being an astronomer, did "the double service of examining the natural produce and buying provision for my companions who were engaged in so useful a work." On the 4th, Banks rejoined the party and found that the observation of the Transit had been made at the observatory "with as much success as Mr. Green and the captain could wish, the day having been perfectly clear, without so much as a cloud intervening."

The main object of the stay having been accomplished, Banks busied himself with natural history investigations and studying the customs of the natives, a very interesting account of whom he has handed down to us. He gives us the first account of the bread-fruit.

The somewhat luxurious visit at Otahite at length came to an end, and Banks took a native of the island, Tupia by name, with him on the ship.

*Spelt *Otaheite* by Hawkesworth. This island was discovered by Captain Wallis, R.N., in 1767, and named by him King George the Third's Island. It is the largest and most important of the Society Islands, and has been a French colony since 1842. A chart of this island, as also of Eimeo, by Cook, will be found in Hawkesworth.

NO. 11.—CAPTAIN JAMES COOK. (By N. Dance; Eng., T. K. Sherwin.)
Original in the "Painted Hall" of Greenwich Hospital.

On the 13th July they got under way, and on the 16th they were at the island of Huahine (one of another group of the Society Islands), and on the 20th came to anchor at Ulhietea (spelt also Urietea, or Ulitea,—the modern Raiatea), and here Captain Cook took possession of the three islands in sight—Huahine, Otahah (Tahaa), and Bola-Bola (Borabora)—for His Britannic Majesty. Banks gives an account of the natives, and specially details the method of constructing their boats.

No. 12.—HULL OF THE "ENDEAVOUR." (Attributed to Alexander Buchan.)

He then devotes a whole chapter to a general account of the South Sea Islands, many details of the people and their country being given, in a way that stamps the writer as a man gifted with great powers of observation. He deals with such subjects as tattooing, personal ornaments, food, the construction of boats (which seemed to specially interest him), the occupations of the people, their vocabulary and the structure of the language, their religion, social divisions, and many other matters.

On the 15th August they shaped a course for New Zealand, which they reached (Poverty Bay) on the 8th October, and were received by the New Zealanders in a hostile manner. The next day actual hostilities took place, and some of the natives were shot. On the

11th they took leave, having collected forty species of plants at this place. Then follows a description of the natives. On the 15th they were at Hawke's Bay. He gives an account of the use of the rhizome of the bracken fern as food by the natives.

On the 8th November Banks writes, "We botanised with our usual good success, which could not be doubted in a country so totally new." On the following day Mr. Green went ashore to observe the Transit of Mercury, at a place therefore called Mercury Bay, and his observations were quite successful, not a cloud intervening.

On the 12th, Banks first visited "an Indian fort or heppah," and gives an excellent account of a Maori pah. On the 20th they discovered a river "broad as the Thames at Greenwich," to which accordingly the name of the Thames was given. On the following day they got under way once more.

Then began the circumnavigation of New Zealand. On the 1st December, Banks records the practice of cannibalism. On the 9th they were abreast of Cape Maria van Diemen, and on the 24th at the Three Kings. On the 12th January, 1770, they were abreast of Mount Egmont, and here Banks notes that with their glasses they observed plants which "bore much resemblance to flocks of sheep;" these were the "vegetable sheep" (*Raoulia*, &c.).

On the 15th they were at Queen Charlotte's Sound. On the 6th February they entered those straits which were named Cook's Straits, and on the 9th at a cape, accordingly named Turnagain, they went south once more. On the 17th they were close to what was deemed to be an island, but it was afterwards found to be a peninsula, and was called after Banks.

On the 23rd February they were near Otago Harbour, and on the 9th March were off Stewart Island, then supposed to be a peninsula. On the 24th they were at Cape Farewell, and on the 26th at Admiralty Bay.

Banks now gives a general account of New Zealand, beginning with a statement of its discovery by Tasman on the 13th December, 1642, and speaking most warmly of his merits. He says, "The sea coast, should it ever be examined, will probably be found to abound in good harbours." An account is given of the fish and plants, and special attention was devoted to New Zealand flax. The natives, —their tattooing, dress and ornaments, food and houses, canoes, fishing-nets and other manufactures, their weapons, musical instruments, language and customs, are described with considerable detail, considering the shortness of the time they were in New Zealand, and the few opportunities they had of intercourse, owing to the unfriendliness of the natives. Banks' account is of special interest to our good friends in the neighbouring Dominion.

2a. A Momentous Decision : Discovery of New South Wales.

Cook having "entirely circumnavigated New Zealand, and having found it, not as generally supposed, part of a continent, but two islands, and having not the least reason to imagine that any country larger than itself lay in its neighbourhood, it was resolved to leave it and proceed upon further discoveries on our return to England."

They found they had provisions for an extension of the cruise and that the ship was seaworthy, so a "consultation" was held, Banks being a member of this council or committee.

Three schemes were proposed. Firstly, "to return by Cape Horn, keeping all the way in the high latitudes, by which means we might with certainty determine whether or not a southern continent existed." Banks calls this scheme "much the most eligible," and the reference to a "southern continent" was to one near the Antarctic Circle. Later on Banks proceeds to say "that a southern continent really exists I firmly believe," and goes on to suggest and discuss a South Polar expedition, "promoted by the Royal Society," such as was undertaken in later years. The "Endeavour," however, was not equal to the expedition, owing to the state of her sails and rigging.

Then we have the second proposal, which was "to steer to the southward of Van Diemen's Land, and stand away directly for the Cape of Good Hope." This was rejected for an opposite reason to that which caused the rejection of the first proposal, namely, that their supplies were more than sufficient for such a voyage, and they were not going home with much in the larder. The third, therefore, was unanimously agreed to—"which was to stand immediately to the westward, fall in with the coast of New Holland as soon as possible, and after following that to the northward as far as seemed proper, to attempt to fall in with the lands seen by Quiros in 1606. In doing this we hoped to make discoveries more interesting to trade at least than any we had yet made. We were obliged, certainly, to give up our first grand object—the southern continent; this for my own part, I confess, I could not do without much regret."*

Thus was arrived at a decision which may fairly be described as momentous, for the result of it was the discovery of New South Wales, and later on, the settlement by the British of the Australian continent.

Banks' words show that a South Polar expedition was very near

* Sir J. D. Hooker's "Journal of Sir Joseph Banks." p 255.

A SKETCH
of
BOTANY BAY.
in
NEW SOUTH WALES

Latitude 34.00..S.

A Scale of one League.

THE ORIGINAL IS IN THE BRITISH MUSEUM

his heart, and, the expedition having reached its furthest from England, it would appear that the youthful and adventurous Banks did not relish the idea of going on a homeward track. Fruitful as the voyage had been so far, he longed for further discoveries.

At the same time, he gave his vote for the course which resulted in the discovery of New South Wales; and reading Banks' Journal carefully, as I have often done, I feel sure that his pet scheme of a South Polar expedition would not have excluded the third scheme, but it would have been undertaken on the way home.

A scheme worthy of the noblest inspiration of the most talented painter, or of the most divinely attuned poet, was thus propounded at that fateful council-meeting in the cramped cabin of the "Endeavour," when another continent was added to the world.

And so, under date 31st March, Banks, in his modest narrative, goes on to say; "Our route being settled in the manner above-mentioned, we this morning weighed, and sailed with a fair breeze of wind, inclined to fall in with Van Diemen's Land, as near as possible at the place where Tasman left it."*

On the 31st of March we left Admiralty Bay, and sailed south-westerly towards New Holland, taking our departure from a point which we named Cape Farewell. By instructions—opened here—we were directed to return home by Cape Hornor, and to stop at the the East Indies if necessary.

April the 18th, towards the evening, judging ourselves near the land, we handed topsails; and at night lying-to we sounded with 130 fathom of line, but found no ground. The next morning we made sail, and an hour after discovered the coast of New Holland, rising very high between N.E. by N. and W. by S., and distant 8 leagues, being in latitude 37° 50' S. and longitude 31° W. from Cape Farewell. We then steered N.N.E. along shore, at the distance of 4 leagues. Friday, the 20th, in the morning, we saw the appearance of an island at N.N.W. On Saturday we saw a smoke ashore, and afterwards a high hill, which we named Cape Dromedary, from its likeness to the back of that animal.†

19th April. First saw the Australian continent, Point Hicks, to the southward of Cape Howe.

28th April. "An opening appearing like a harbour was seen, and we stood directly in for it. . . . By noon we were within the mouth of the inlet" (Botany Bay). Thus happened one of the most fateful events in the history of any voyage—the re-discovery of another continent.

The history of Australia may now be said to commence.

Banks' narrative of what happened at Botany Bay from the arrival of the "Endeavour" on the 28th April‡ to its departure on 6th May

* *Op. cit.*, p. 258.

† Becket's "Voyage," p. 109.

‡ "Saturday morning, the 28th, we discovered a bay at N. by E. and stood towards it, sending the pinnace forwards to sound; and at half after one in the afternoon we anchored in 6 fathoms and a half, sandy ground. But on attempting to land in our boats, a few of the natives advanced towards the shore, and two of them, armed with shields and spears, resolutely opposed our disembarkation, until being wounded by our shot, and unsupported by any of their countrymen, they retreated slowly to their houses within the bushes, but constantly faced us the whole way." (Becket's "Voyage," p. 110.)

is not lengthy, and is of such deep interest to all Australians, and particularly New South Welshmen, that I venture to transcribe it:—

28th. An opening appearing like a harbour was seen, and we stood directly in for it: a small smoke arising from a very barren place directed our glasses that way, and we soon saw ten people, who, on our approach, left the fire and retired to a little eminence, whence they could conveniently see the ship. Soon after this, two canoes carrying two men each landed on the beach under them; the men hauled up their boats, and went to their fellows upon the hill. Our boat, which had been sent ahead to sound, now approached the place, and they all retired higher up the hill. We saw, however, that at the beach or landing-place one man at least was hidden among some rocks, and never, as far as we could see, left that place. Our boat proceeded along shore, and the Indians followed her at a distance; when she came back the officer who was in her told me that in a cove, a little within the harbour, they came down to the beach and invited our people to land, by many signs and words which he did not at all understand. All, however, were armed with long pikes and a wooden weapon made like a short scimitar (boomerang). During this time, a few of the Indians who had not followed the boat remained on the rocks opposite the ship, threatening and menacing with their pikes and swords; two in particular, who were painted with white, their faces seemingly only dusted over with it, their bodies painted with broad strokes drawn over their breasts and backs, resembling much a soldier's crossbelt, and their legs and thighs also with broad strokes drawn round them, like broad garters or bracelets. Each of these held in his hand a wooden weapon about 2½ feet long, in shape much resembling a scimitar [a boomerang, J.H.M.]; the blades of these

NO. 14.—COOK AND BANKS FIRST SETTING FOOT ASHORE AT BOTANY BAY
(Original by Emanuel Phillips Fox.)

looked whitish, and some thought shining, insomuch that they were almost of opinion that they were made of some kind of metal; but I thought they were only wood smeared over with the white pigment with which they paint their bodies. These two seemed to talk earnestly together, at times brandishing their crooked weapons at us, in token of defiance. By noon we were within the mouth of the inlet,* which appeared to be very good. Under the south head of it were four small canoes, each containing one man, who held in his hand a long pole, with which he struck fish, venturing with his little embarkation almost into the surf. These people seemed to be totally engaged in what they were about; the ship passed within a quarter of a mile of them, and yet they scarcely lifted their eyes from their employment. I was almost inclined to think that, attentive to their business and deafened by the noise of the surf, they neither saw nor heard her go past.

We came to an anchor abreast of a small village consisting of six or eight houses. Soon after this an old woman, followed by three children, came out of the wood; she carried several pieces of stick, and the children also had their little burthens. When she came to the houses, three younger children came out of one of them to meet her. She often looked at the ship, but expressed neither surprise nor concern; she then lighted a fire, and the four canoes came in from fishing, the people landed, hauled up their boats, and began to dress their dinner, to all appearances totally unmoved by us, though we were within little more than half a mile of them. On all these people whom we had seen so distinctly through our glasses, we had been unable to observe the least signs of clothing; myself, to the best of my judgment, plainly discerned that the women did not copy our mother Eve even in the fig-leaf.

After dinner the boats were manned, and we set out from the ship, intending to land at the place where we saw these people, hoping that as they regarded the ship's coming into the bay so little, they would as little regard our landing. We were in this, however, mistaken; for as soon as we approached the rocks two of the men came down, each armed with a lance about 10 feet long, and a short stick, which he seemed to handle as though it were a machine to throw a lance. They called to us very loudly in a harsh sounding language, of which neither we nor Tupia† understood a word, shaking their lances and menacing; in all appearance resolved to dispute our landing to the utmost, though they were but two, and we thirty or forty at least. In this manner we parleyed with them for about a quarter of an hour, they waving to us to be gone; we again signing that we wanted water, and that we meant them no harm. They remained resolute, so a musket was fired on them, the effect of which was that the younger of the two dropped a bundle of lances on the rock the instant he heard the report. He, however, snatched them up again, and both renewed their threats and opposition. A musket loaded with small shot was now fired at the elder of the two, who was about 40 yards from the boat; it struck him on the legs, but he minded it very little, so another was immediately fired at him. On this he ran up to the house, about a hundred yards distant, and soon returned with a shield. In the meantime we had landed on the rock. The man immediately threw a lance at us and the young man another, which fell among the thickest of us, but hurt nobody; two more muskets with small shot were then fired at them, whereupon the elder threw one more lance and ran away, as did the other. We went up to the houses, in one of which we found the children hidden behind the shield, and a piece of bark.

We were conscious, from the distance the people had been from us when we fired, that the shot could have done them no material harm; we, therefore, resolved

* Botany Bay. It was Banks who, on his return to England, recommended the Government to form a penal settlement at this spot. (Hooker's note).

† The native of Tahiti who came on board the "Endeavour" and completed the voyage at Banks' expense. See Banks' Journal, pp. 96, 108, &c.

to leave the children upon the spot without even opening their shelter; we, therefore, threw into the house to them some beads, ribbons, cloth, &c., as presents, and went away. We, however, thought it no improper measure to take away with us all the lances which we could find about the houses, amounting in number to forty or fifty. They varied in length from 6 to 15 feet. Both those which were thrown at us, and all we found, except one, had four prongs headed with very sharp fish bones, which were besmeared with a greenish-coloured gum, that at first gave me some suspicion of poison.

The people were blacker than any we have seen on the voyage, though by no means negroes; their beards were thick and bushy, and they seemed to have a redundancy of hair upon those parts of the body where it commonly grows. The hair of their heads was bushy and thick, but by no means woolly like that of a negro. They were of a common size, lean, and seemed active and nimble; their voices were coarse and strong. Upon examining the lances we had taken from them we found that most of them had been used for striking fish; at least we concluded so from the seaweed which we found stuck in among the four prongs.

At night many moving lights were seen at different parts of the bay; such as we had been used to see at the Islands, from hence we supposed that the people here strike fish in the same manner.

29th. The fishing fires, as we supposed them to be, were seen during the greater part of the night. In the morning we went ashore at the houses, but found not the least good effect from our presents yesterday. No signs of people were to be seen; and in the house where the children were yesterday, was left everything which we had thrown to them.

1st May. The captain, Dr. Solander, and myself, and some of the people, making in all ten muskets, resolved to make an excursion into the country. We accordingly did so, and walked till we completely tired ourselves, which was in the evening; seeing by the way only one Indian, who ran from us as soon as he saw us. The soil, whenever we saw it, consisted of either swamps or light sandy soil, on which grew very few species of trees—one,* which was large, yielding a gum much like *Sanguis draconis*—but every place was covered with vast quantities of grass. We saw many Indian houses, and places where they had slept upon the grass without the least shelter. In these we left beads, ribbons, &c. We saw one quadruped about the size of a rabbit. My greyhound just got sight of him, and instantly lamed himself against a stump which lay concealed in the long grass. We saw also the dung of a large animal that had fed on grass, much resembling that of a stag; also the footprints of an animal clawed like a dog or wolf, and as large as the latter, and of a small animal whose feet were like those of a polecat or weasel. The trees overhead abounded very much with loryquets and cockatoos, of which we shot several.

2nd. The morning was rainy, and we had already so many plants that we were well contented to find an excuse for staying on board to examine them a little. In the afternoon, however, it cleared up, and we returned to our old occupation of collecting, in which we had our usual good success. Tupia, who strayed from us in pursuit of parrots, of which we shot several, told us on his return that he had seen nine Indians, who ran from him as soon as they perceived him.

3rd. Our collections of plants† was now grown so immensely large that it was necessary that some extraordinary care should be taken of them, lest they should

* A species of *Eucalyptus* or gum-tree.

† Many of the identical plants collected by Banks and Solander were presented by the Trustees of the British Museum to the National Herbarium, Botanic Gardens, Sydney, in 1904. See my Annual Report of the Botanic Gardens for that year for a list. The Collector of the Botanic Gardens, Sydney, and I are engaged in making a collection of plants from Kurnell ("Captain Cook's Landing-place") from the place where Banks and Solander collected. I was amused to find that around Kurnell the grass, *Andropogon refractus*, is known as "Banks' Orchid"!

No. 15.—OFFICIAL LANDING OF COOK AND BANKS AT BOTANY BAY. (Original by Gillilan.)

spoil in the books; I, therefore, devoted this day to that business, and carried ashore all the drying paper, nearly 200 quires, of which the larger part was full, and spreading them upon a sail in the sun, kept them in this manner exposed the whole day, often turning them, and sometimes turning the quires in which were plants inside out. By this means they came on board at night in very good condition. During this time eleven canoes, in each of which was one Indian, came towards us. we soon saw that the people in them were employed in striking fish. They came within about half a mile of us, intent upon their own employments, and not at all regarding us. Opposite the place where they were several of our people were shooting: one Indian, prompted may be by curiosity, landed, hauled up his canoe, and went towards them. He stayed about a quarter of an hour, and then launched his boat and went off. Probably that time had been spent behind the trees in watching to see what our people did. I could not find, however, that he was seen by anybody.

When the damp of the evening made it necessary to send my plants and books on board, I made a short excursion to shoot anything I could meet with, and found a large quantity of quails, much resembling our English ones, of which I might have killed as many almost as I pleased, had I given my time up to it; but my business was to kill variety, and not too many individuals of any one species. The captain and Dr. Solander employed the day in going in the pinnace into various parts of the harbour. They saw fires at several places, and people who all ran away at their approach with the greatest precipitation, leaving behind the shell-fish which they were cooking. Of this our gentlemen took advantage, eating what they found, and leaving behind beads, ribands, &c., in return. They found also several trees which bore a fruit of the *Jambosa* kind, in colour and shape much resembling cherries. Of these they ate plentifully, and brought home also abundance, which we ate with pleasure, though they had little to recommend them but a slight acid.

4th. Myself in the woods, botanising as usual; now quite devoid of fear, as our neighbours have turned out such rank cowards. One of our midshipmen, straying by himself a long way from anyone else, met by accident with a very old man and woman and some children. They were sitting under a tree, and neither party saw the other till they were close together. They showed signs of fear, but did not attempt to run away. The midshipman had nothing with him to give them but some parrots which he had shot. These they refused, drawing away when he offered them, in token either of extreme fear or disgust. The people were very old and grayheaded, the children young. The hair of the man was bushy about his head, and his beard long and rough; the woman's hair was cropped short round her head. They were very dark-coloured, but not black, nor was their hair woolly.

On our return to the ship we found also that our second lieutenant, who had gone out striking, had met with great success. He had observed that the large sting-rays, of which there are abundance in the bay, followed the flowing tide into very shallow water; he, therefore, took the opportunity, and struck several in not more than two or three feet of water. One that was larger than the rest weighed, when his guts were taken out, 239 lb.

Our surgeon, who strayed a long way from the others, with one man in his company, in coming out of a thicket observed six Indians standing about sixty yards from him. One of these gave a signal by a word, whereupon a lance was thrown out of the wood at him, which, however, did not come very near him. The six Indians, on seeing that it had not taken effect, ran away in an instant, but on turning about towards the place from whence the lance came, he saw a young lad, who undoubtedly had thrown it, come down from a tree where he had been stationed, probably for that purpose. He descended, however, and ran away so quickly that it was impossible even to attempt to pursue him.

No. 16.—OBELISK ERECTED IN 1870 AT COOK'S LANDING PLACE, by Hon. Thomas Holt, to commemorate the Centenary of the landing of Cook and Banks.

6th. Went to sea this morning with a fair breeze of wind. The land we sailed past during the whole forenoon appeared broken and likely for harbours.*

And having procured a sufficient supply of wood and water, on Sunday, the 6th of August, in the morning, we sailed from the bay, which we named Sting-ray Bay, from the great quantity of those fish which it contained.†

17th May. About ten we were abreast of a large bay (Moreton Bay). Banks then goes on to remark: "The sea here suddenly changed from its usual transparency to a dirty clay colour, appearing much as if charged with freshes; from which I was led to conclude that the bottom of the bay might open into a large river." (This surmise was quite correct—the Brisbane River.)

On the northern side there were some remarkable conical hills (the Glasshouse Mountains).

22nd. We plainly saw with our glasses that the land was covered with palm-nut trees, *Pandanus tectorius*, which we had not seen since we left the islands within the tropics.

23rd. We landed near the mouth of a large lagoon (Bustard Bay).‡ Here we found a great variety of plants, several, however, the same as those we ourselves had before seen in the islands between the tropics and others known to be natives of the East Indies. . . . In these (swamps), and upon the sides of the lagoons, grew many mangrove trees. . . . Upon the sides of the hills were many of the trees yielding a gum like *Sanguis draconis* (Eucalyptus).

At sea they found in the fruit of a Fig (*Ficus*) they had found at Bustard Bay a *Cynips*, "very like, if not exactly the same species as *Cynips sycomori*, Linn."

Banks was a student of natural history in its broadest sense, and when at sea he made observations concerning birds, marine animals of various kinds belonging to lower or higher orders, while on land he discusses in a most interesting manner insects and animals, the appliances and habits of the natives, and so forth.

In another species of tree, *Xanthoxyloides mite*, a small sort of black ant had bored all the twigs, and lived in quantities in the hollow part where the pith should be; the tree, nevertheless flourishing and bearing leaves and flowers upon those very branches as freely and well as upon others that were sound. . . .

29th May. We went ashore and found several plants which we had not before seen; among them, however, were still more East Indian plants than in the last harbour; one kind of grass which we had also seen there was very troublesome to us.§ Its sharp seeds were bearded backwards, and whenever they stuck into our clothes were by these beards pushed forward till they got into the flesh. This grass was so plentiful that it was scarcely possible to avoid it, and, with the mosquitoes that were likewise innumerable, made walking almost intolerable.

10th June|| (apparently should be 11th). The "Endeavour" struck on a rock (Cape Tribulation). A most anxious time ensued, the ship being in the most imminent danger of foundering.

* In this connection Cook's private log, written while at Botany Bay, should be referred to. See *Hist. Rec., N.S.W.*, i (I), 19. See also Pickersgill's Journal, *ib.*, p. 214; Wilkinson's Journal, *ib.*, p. 238. Cook on landing buried Forby Sutherland, a sailor who had died of consumption, probably the first white man buried in Australia. See a poem "Sutherland's Grave," by Henry Kendall, in his collected works.

† See Becket's "Voyage," p. 116. Now called Botany Bay.

‡ See note on Bustard Bay, *Hist. Rec., N.S.W.*, i (I), 164.

§ The grass that so punished them was, I take it, *Heteropogon contortus*. "The gum-tree, were like those in the last bay." This seems to me the first occasion in which the "gum-tree" was applied to Eucalypts, and the name given by Banks has been universally adopted in Australia.

|| 10th June, off Trinity Bay. See *Hist. Rec., N.S.W.*, i (I), 54, 168.

No. 17.—Cook's Landing Place, showing Botany Bay.

14th June. The captain (Cook) and I went ashore to view a harbour, to beach the "Endeavour" in, and found it indeed beyond our most sanguine wishes. It was the mouth of a river (called Endeavour River, after the name of the ship).

17th June. In the meantime Dr. Solander and I began our plant gathering.

The dangerous accident which had happened to the "Endeavour" was a blessing in disguise to Banks, as the time the ship was laid up enabled him to collect and make observations, for near the Endeavour River he stayed longer than at any other place in Australia.*

No. 18.—POINT DANGER (named by Cook), just north of Tweed Heads.

21st June. Began to-day to lay plants in sand (to dry them for herbarium purposes).

22nd June. Myself employed all day in laying in plants.

Some of the people "saw an animal as large as a greyhound, of a mouse colour, and very swift."

24th. Gathering plants and hearing descriptions of the animal, which is now seen by everybody.

* Captain Cook Cairn—an interesting discovery.—A Cooktown telegram states that for many years a rough stone cairn has been known to exist on an almost inaccessible summit of Mount Saunders, situated on the north-west side of the bay. Last Sunday Messrs. H. Trelyar and E. Seagreen climbed the peak and found the cairn, which was 4 feet high, with room in the centre for a flagstaff. The stones were charred black, evidently due to bush fires. The visitors overturned one stone 20 inches long by 7 inches thick, and found on the bottom side the word "Cook," plainly visible, the letters having been cut into the stone with a chisel. Underneath the word "Cook" was a heart-shaped device, which, however, was almost obliterated.—(*Sydney Morning Herald*, 21st September, 1904.)

No. 19.—GLASS-HOUSE MOUNTAIN (named by Cook). Near Brisbane.

25th. In gathering plants to-day I had the good fortune to see the beast so much talked of, though but imperfectly; he was not only like a greyhound in size and running, but had a tail as long as any greyhound's; what to liken him to I could not tell, nothing that I have seen at all resembles him.

This was the first time a kangaroo was seen.

26th. On this day Banks discovered that some of his precious herbarium specimens had become wet through the accident to the "Endeavour." Following are his words:—

Since the ship has been hauled ashore, the water has, of course, all gone backwards: and my plants, which for safety had been stowed in the bread-room, were this day found under water. Nobody had warned me of this danger, which never once entered my head. The mischief, however, was now done, so I set to work to remedy it to the best of my power. The day was scarcely long enough to get them all shifted, &c., many were saved, but some were entirely spoiled.

2nd July. The wild plantain trees, though their fruit does not serve for food are to us a most material benefit. We made baskets of their stalks (a thing we had learned from the Islanders), in which our plants, which would not otherwise keep, have remained fresh for two or three days; indeed, in a hot climate it is hardly practicable to manage without such baskets, which we call by the island name of *papa mija*. Our plants dry better in paper books than in sand, with the precaution that one person is entirely employed in attending them. He shifts them all once a day, exposes the quires in which they are to the greatest heat of the sun, and at night covers them most carefully up from any damp, always being careful, also, not to bring them out too soon in the morning, or to leave them out too late in the evening. . . .

No. 20.—WHITSUNDAY PASSAGE (named by Cook). Near Bowen, Queensland.

No. 21.—MAGNETIC ISLAND (named by Cook). Near Townsville, Queensland.

6th. We went for about 3 leagues among mangroves; then we got into the country, which differed very little from what we had already seen. The river higher up contracted much, and lost most of its mangroves; the banks were steep and covered with trees of a beautiful verdure, particularly what is called in the West Indies *mohoe* or bark tree (*Hibiscus tiliaceus*).

16th. As the ship was now ready for her departure, Dr. Solander and I employed ourselves in winding up our botanical bottoms (*i.e.*, affairs), examining what we wanted and making up our complement of specimens of as many species as possible.

24th. While travelling in a deep valley, the sides of which were steep almost as a wall, but covered with trees and plenty of brushwood, we found marking-nuts (*Anacardium orientale*) lying on the ground.

28th. Botanising with no kind of success, the plants were now entirely completed, and nothing new to be found, so that sailing is all we wish for, if the wind would but allow us.

This long stay in the Endeavour River was fully occupied by Banks and his scientific associates chiefly in botanising, but also in the study

of zoology by gun and seine. At one time the camp was in danger, because of their refusal to give the blacks a turtle they had caught. The blacks thereupon fired the long grass, and the ship's property and the specimens were only saved by using the most active measures.*

10th August. Sailed out of the Endeavour River.

The point we went on (Cape Flattery) was sandy and very barren, so it afforded very few plants or anything else worth observation. . . . We had the satisfaction, however, to see that what was taken for land round us proved only a number of islands.

11th. The captain went to-day to one of the islands (Lizard Island), which proved to be 5 leagues from the ship.†

NO. 22.—VIEW OF THE ENDEAVOUR RIVER, WITH THE “ENDEAVOUR” BEACHED.
(Hawkesworth's “Voyages.”)

12th. Searching the island. On it I found some few plants which I had not before seen. The island itself was small and barren: there was, however, one small tract of woodland which abounded very much with large lizards, some of which I took.

. . . . On our return we went ashore on a low island (Eagle Island), where we shot many birds; on it was the nest of an eagle, the young ones of which we killed.

13th. Ship stood out for the opening (Cook's Passage) we had seen in the reef, and about two o'clock passed through it; it was about half a mile wide.

14th. For the first time these three months we were out of sight of land, to our no small satisfaction. A reef such as we have just passed is a thing scarcely known in Europe, or indeed anywhere but in these seas.

16th. They re-entered the Barrier Reef.

* For other accounts of Banks at the Endeavour River, see *Hist. Rec., N.S.W.*, i, (I), 142 (Cook's Log); 206 (Gunner Forwood's Journal); 225 (Pickersgill's Journal); 249 (Wilkinson's Journal); 263 (Bootie's Journal); 283 (Anonymous Journal).

† For notes on Banks at Lizard Island, see *Hist. Rec., N.S.W.*, i, (I), 169, 208.

No. 23.—THE ENDEAVOUR RIVER; MOUNT COOK IN THE DISTANCE.
(Compare with No. 22.)

No. 24.—ENTRANCE TO THE ENDEAVOUR RIVER. Tradition says that the "Endeavour" was hauled up at the dead tree.

21st. We observed both last night and this morning that the main looked very narrow (Cape York), so we began to look out for the passage we expected to find between New Holland and New Guinea. . . . The anchor was dropped and we went ashore (on Possession Island).

Banks' final date record on leaving Australia is:—

26th. Fine weather and clear fresh trade; stood to the W. and deepened our water from 13 to 27 fathoms.

Then follows a chapter entitled "Some account of that part of New Holland now called New South Wales."

No. 25.—THE ENDEAVOUR RIVER: part of Cooktown.

He describes, in general terms, the plants, animals, human beings, their implements and customs, their language, and the climate. It must be borne in mind that Banks was in Australia at a time which he believes "to have been in the very height of the dry season." The coast strip we know to be sandy and sterile, and it is not to be surprised at that Banks' opinion of the fertility of the country was not very favourable. "This drought is probably owing to the dryness of a soil almost entirely composed of sand, in which high hills are scarce."

Then Banks goes on to speak of the poorness of the indigenous vegetables and fruits. We know, indeed, that most of the vegetables and fruits in these temperate climates are the product of selection and cultivation extending over many (sometimes hundreds of) years.

Banks' trip was purely coastal. He hardly went more than a few miles from the beach in any place, so that the true nature of the country could not have been known to him from personal experience. The richness of the soil of a country is not usually evident from the sea. In spite, however, of the limitations of his own knowledge of the country, it is remarkable how persistently and consistently Banks spoke, in terms of cheery optimism, of the future that lay before "New Holland."

No. 26.—THE COOK MONUMENT, COOKTOWN, QUEENSLAND.

Besides collecting a very large number of plants and vegetable products, Banks gave special attention to the economic botany of the country, chiefly from the point of view of esculents.

Thus he notes various plants the crew of the "Endeavour" ate as substitutes for spinach or cabbage as "Indian Kale" (*Colocasia*), "Red-flowered purslane" (*Sesuvium*), "Beans" (probably *Canavalia*), "Parsley" (*Apium*), "Spinach" (*Tetragonia*). Amongst the fruits he notices a native cherry (*Eugenia*), a native fig (*Ficus*), a plum (*Spondias*), and wild plantains. Then he makes observations on certain palms and cycads, and a few on timbers.

No. 27.

DR. HAWKESWORTH.

OF Dr. John Hawkesworth, one of our most amiable moral writers, few particulars are known. He was a native of London, and born in the memorable year 1715. There seems good reason to believe that his birth was humble; and that, though his native genius, and insatiable thirst of knowledge, supplied every want, he had received but a very slender education, when he was placed as an apprentice to a watchmaker. How long he remained in this situation cannot now be ascertained; we may, however, conclude that he soon forsook this business, to pursue more congenial occupations.

Having bettered his circumstances by marriage, he resided at Bromley in Kent; and, aided by the friendship of a gentlewoman of large fortune, rose to a Directorship of the Honourable East India Company.

His first literary efforts, we believe, appeared in the *Gentleman's Magazine*; of which publication he was for some time editor.

The great work of Dr. Hawkesworth was his *Adventurer*; and a great work it is! In purity of moral, in entertainment, and elegance of diction, it may rank with the first of our periodical works. It was completed March 4, 1754; and procured our author the degree of Doctor of Laws.

On the accession of his present Majesty, Dr. Hawkesworth produced the charming oriental tale of *Almorán and Hamet*, dedicated by permission to the King. He also wrote the beautiful little musical entertainment of *Edgar and Emmeline*, which is still occasionally performed.

Dr. Hawkesworth's translation of *Telemachus* is the best we possess. It is splendid, but redundant. No man has yet reached the dignified simplicity of the original. Perhaps it is unattainable.

His *Narrative of the Discoveries in the great South Sea*, compiled from the original papers of Capt. Cooke, by the command of his Majesty, was a long and laborious undertaking, for which he received 500*l.* besides the copyright. But no sum of money can compensate the literary credit which he on this occasion cruelly lost; and, indeed, the mortification he felt, from the illiberality it met with, is supposed, by many, to have shortened his days. He died, soon after the publication, November 16, 1773; and was buried at Bromley, where a handsome monument has been erected to his memory, on which is inscribed part of the very pathetick close of his admirable *Adventurer*.

Dr. Hawkesworth has given us few verses, but they are such as lead us to wish that he had produced more. Yet he was, perhaps, unwilling to be considered merely as a pleasing poet, and felt no consciousness of possessing the powers of a great one. As a moral author, he must ever rank high in the estimation of every feeling and cultivated mind.

Eucalyptus kino and grass-tree gum were duly noted.

Of plants in general the country affords a far larger variety than its barren appearance seemed to promise; many of these no doubt possess properties which might be useful for physical and economic properties which we were not able to investigate.

Indeed we know that the interesting nature of the Australian flora impressed itself very strongly on Banks, and he spent much of his time and a considerable portion of his fortune in the investigation of it.

Turning to zoology—the study of this science also was prompted in a measure by the necessities of their hungry stomachs.

For quadrupeds, birds, fish, &c., I shall say no more than that we had some time ago learned to eat every single species that came in our way; a hawk or a crow was to us as delicate, and, perhaps, a better relished meal than a partridge or a pheasant to those who have plenty of dainties.

This gives a little side-light on the hardships of these early voyages. We must remember that Banks was a young and wealthy gentleman, and yet, in the pursuit of science, he entered on a costly, lengthy, and dangerous voyage, with cramped accommodation, often unhealthy surroundings, and always inferior food.

His observations on insects and marine animals are always interesting, while his account of the aborigines is remarkably full and accurate, considering his limited opportunities for investigation. Thus he discusses their food and their methods of cooking it, their appliances, their method of obtaining fire, their language, &c.

1770. 27th August. The “*Endeavour*” left Australia and shaped for New Guinea. Departing thence they went to Batavia, and much fever resulted—Cook, Banks, and Solander being all attacked. “We buried here eight people.” Banks takes the opportunity of giving a very interesting account of Batavia and its inhabitants.

Then sail was made for the Cape of Good Hope. On the way more of the officers and crew died, and the ship arrived at Capetown on 14th March, 1771.

An interesting account of the country in the vicinity follows, and then home *viâ* St. Helena and Ascension, the good ship “*Endeavour*” arriving at Deal on 12th July, 1771, after an absence from England of nearly three years.

(APPENDIX.)

A RELIC OF COOK'S “*ENDEAVOUR*.”

To the Editor of “The Sydney Morning Herald,” (5th January, 1906).

Sir,—In reading recently a work entitled “*Transatlantic Tracings; or Sketches of Persons and Scenes in America*,” by the author of “*Lions; Living and Dead*” (? John Ross Dix), London, Tweedie, 1853, I came across (pp. 96-7) a passage relating to the ship of the great navigator, Cook: “I [the author] was one day conversing with an English gentleman, on one of the wharfs at Newport (Rhode

Island), when he surprised me by stating that a very interesting naval relic was standing in a store hard by. My friend then led me into the counting-house of an oil merchant, and directed my attention to a large post which was fastened against the wall. This piece of wood was a part of the stern of the "Endeavour," the identical vessel in which the celebrated Captain Cook circumnavigated the globe. It appeared that the ship, after her long voyage, was sold, at Dunkirk, to an American merchant, who meant to convert her into a whaler, and for that purpose sent her to Newport for the necessary repairs. Before these could be effected, she was broken up by the equinoctial gales, and this was the sole relic of the famous vessel. The proprietor of the fragment very politely presented me with a bit of the wood."

W. CLINTON.

January 4.

Sir,

(9 January, 1906.)

The writer of the letter in your issue of Friday last on the above interesting subject is not the first person to call attention to the fact that the remains of this historic vessel were left by a gale on the shores of the harbour of Newport, Rhode Island. But others have from time to time interested themselves in the matter. Mr. John W. Deering* traced the history of this vessel for Professor Morris, and Mr. Patrick Boyle, Mayor of Newport, supplied the information. Many relics were preserved by private individuals. They included a box made from her keel, and presented to Fenimore Cooper in 1828. And he regrets that "there are no remains of the 'Endeavour' in any public institution out of which a relic could be sent to the Australian Museum." This "post," "part of the stern" of the "Endcavour," was, therefore, not the only portion preserved, and some day it may be the good fortune of the Australian Museum to become possessed of some carefully preserved relic, the value of which to the present possessor is unknown.

January 8.

JAMES H. WATSON.

* The letters of Mr. Deering and of Mr. Boyle are published in the "Herald" of 8th April, 1899 (J.H.M.)

3. The Botany of the Voyage of the “Endeavour.”

THE “Introduction” by Mr. James Britten of the “Illustrations of the Botany of Captain Cook’s Voyage round the World in H.M.S. ‘Endeavour,’” is a valuable contribution to our knowledge of Banks’ botanical work.

It may be well to give some description of the various MSS. connected with the voyage, as the published accounts are incomplete or inaccurate. The earliest is a catalogue, for the most part in Banks’ hand, of the plants collected, “in the order in which they were loosely placed in the drying books in which they were brought home”; in the earliest part of this the number of specimens of each plant is indicated. This list has been annotated by Solander (who wrote the portion relating to New Holland) and Dryander, and is of great service in correlating the names temporarily bestowed upon the plants (which are often transcribed on the sheets in the Banksian Herbarium) with those under which they were subsequently published.

During the voyage, the more interesting of the plants were roughly described by Solander, whose MSS. are now bound in six small quarto volumes—“*Plantæ Terræ del Fuego*,” (January, 1769), with which is bound “*Plantæ Insulæ Sanctæ Helenæ*,” (May, 1771); “*Plantæ Otaheitenses et aliarum ins. Oceani Pacifici*,” (April to July, 1769); “*Plantæ Australiæ (N. Zealandia)*” (October, 1769, to March, 1770); “*Plantæ Novæ Hollandiæ*,” (April to August, 1770), in two volumes; “*Plantæ Javanenses*,” (October, 1770, to January, 1771). A transcript of the *Tierra del Fuego* descriptions, systematically arranged and prepared for press, is bound in a folio volume with similarly prepared enumerations of the plants collected in Madeira (September, 1768) and Brazil, “*circa Rio de Janeiro*” (November, December, 1768), of which no rough MSS. remain; a second folio volume contains the prepared transcript of the Pacific Islands collection, and a third (paged continuously with the preceding), the “*Primitiæ Floræ Novæ Zealandiæ*.” A similar enumeration of the Java plants was begun, but extended only to twenty-eight pages.

The Australian plants, which formed the most important portion of the collection, were never arranged for press in the manner of the foregoing, but a transcript of the rough MSS. was made, apparently by someone imperfectly acquainted with botanical terminology or unable to read the draft, as it contains numerous errors; this is bound in two small quarto volumes, and is the basis of the present publication, for which it has been collated with the original draft. It has been thought advisable to print the descriptions in full as a specimen of Solander’s work and as giving details omitted from published accounts of the plants; occasionally a word has been supplied or an unpublished synonym suppressed, but these alterations are indicated by the use of the square brackets. The MS. includes a large number of descriptions besides those of the plants figured, but only the portion relating to these is now printed. It was evidently, however, not finally prepared for publication, as the arrangement is not systematic, and only the plants considered as new are included. (Britten, *op. cit.*, *Introd.*, p. 2.)

Hooker's account supplements the above somewhat.

In July, 1771, the travellers (Banks and party from voyage in "Endeavour") returned with an immense amount of material, the botanical part of which was for the most part already described, and needed but little to prepare it for the press. The descriptive tickets, which had been drawn up by Solander, were arranged in systematic order in what are still known as "Solander cases," and transcribed fairly by an amanuensis for publication. About 700 plates were engraved on copper in folio at Banks' expense, and a few prints or proofs were taken, but they were never published. Five folio books of neat manuscript, and the coppers, rest in the hands of the Trustees of the British Museum. The question arises, why they were never utilised? The descriptions were ready long before Solander's death, although the plants collected in Australia do not seem to have been added to the fair copies, and the plates were mainly outlines.* This has always been regarded as an insoluble problem, but the following extracts from a letter written by Banks very shortly before Solander died, may be accepted as evidence of his intention to publish. The letter from which the extract is taken is undated, and takes the shape of a draft without any name, but it is a reply to a letter addressed to Banks by Hasted, who was then collecting materials for the second edition of his history of the county of Kent.

Botany has been my favourite science since my childhood; and the reason I have not published the account of my travels is that the first, from want of time necessarily brought on by the many preparations for my second voyage, was entrusted to Dr. Hawkesworth, and since that I have been engaged in a botanical work, which I hope soon to publish, as I have near 700 folio plates prepared: it is to give an account of all such new plants discovered in my voyage round the world, somewhat above 800.

Hasted's letter, to which this is an answer, was dated 25th February, 1782, little more than two months before Solander's death, an event which has generally been accepted as determining the fate of the intended publication. ("Banks' Journal" Hooker, xxv.)

Besides the drawings executed by various artists for the original sketches made by Sydney Parkinson during Cook's First Voyage, which were engraved on copper and are now being issued by the British Museum, there are several which were not engraved. Some of these are merely sketches by Parkinson; of others there are also finished drawings, many of equal interest with those engraved. The Museum publication, save in one or two cases of exceptional importance, only reproduces the engraved plates; but among those of which only the drawings exist are some which are well worth publishing, as they represent species which have not been met with since Banks' time, and of which no other figures exist; one such, *Drosera Banksii*.† was reproduced last year in this journal (t. 410 B, fig. B.).

Among them are five finished drawings of figs, made by F. P. Nodder from Parkinson's sketches, to which Mr. Britten directed my attention while I was elaborating the *Moraceæ* of the Welwitsch collection. The specimens collected by Banks and Solander are in the National Herbarium, and as two out of the five apparently have not been described, it may be worth while to publish some account of the series. Of the two in question, I have drawn up descriptions, based upon the specimens and figures, in which I have availed myself of certain details from Solander's MSS.; of the three previously known species I have quoted Solander's description, in accordance with the plan adopted by Mr. Britten in the "Illustrations of the Botany of Cook's Voyage." ("Banks and Solander's Australian Figs," by W. P. Hiern, in *Journ. Bot.*, xxxix, 1901, p. 1).

* A statement made from memory and not correct.

† See "On *Drosera Banksii*," R. Br., by Dr. A. Morrison. *Trans.*: and *Proc. Bot. Soc., Edin.* xxiil, 114-8 (1905).

1. Hiern then describes a *Ficus Parkinsoni*,* using Parkinson's drawing. This plant was collected by Banks, 23rd August, 1770, at Booby Island, Torres Straits.

2. *F. virginea*, Banks and Sol. MSS., Booby Island. The "species (*Ficus virginea*) was also collected by R. Brown, n. 3,231, at the banks of the Hunter's and Paterson's rivers below their junction, on Ash Island,† &c., in October and November, 1804. He identified his specimens with those of Banks. (Hiern, *op. cit.* p. 3.)

The other species are:—

3. *F. platypoda*, A. Cunn., from Bustard Bay and Northumberland Island.
4. *F. opposita*, Miq., Labyrinth Bay, Palm Island, and Rocky Point, Endeavour Careening Place. (The *F. radula* of Banks' Journal.)
5. *F. glomerata*, Roxb., Endeavour River. This is the *F. caudici-flora* of Banks' Journal.

In my Presidential Address, read before the Linnean Society of New South Wales, 1902, at pp. 711-716, *Proc. Linn. Soc., N.S.W.*, I review Parts I and II of Britten's "Illustrations of the Botany of Cook's Voyage," comparing the names on the plates with those in the "Flora Australiensis."

On the publication of the third‡ and concluding Part of the work, I wrote a paper entitled "Observations on the Illustrations of the Banks and Solander Plants," (*Proc. Roy. Soc.*, 1905 p. 34), which I print almost *in extenso* in order that the interesting discussion arising from it may be understood:—

"The issue of the third and final volume of the Illustrations contemporaneously prepared by Banks' artists, is an event which assuredly demands the most marked emphasis that we Australians can give it. It is, to us at least, an important historical event. New South Wales was settled seventeen years later as a consequence of Cook's voyage, and the only place (Botany Bay—called by Cook, Stingray Harbour) in modern New South Wales, visited by the expedition, is a suburb of Sydney. This voyage, therefore, has special interest for us, and it would be regrettable if the appearance of this work were ignored by Australian scientific men.

"Through the good offices of Mr. Britten, the Trustees of the British Museum recently presented nearly 600 specimens collected by Banks and Solander to the National Herbarium, Sydney.§ Many of them are depicted in the work before us.

* I suggested to Mr. Britten that this might be *F. Henneana*, but he states that it is not that species.

† This new species puzzles me, and I know the locality well. The type is in the British Museum, and no herbarium specimen of it is in Australia as far as I know.

‡ For a review of Part I, by Prof. E. E. Morris, Melbourne, see *Vict. Nat.*, xvii, 148.

§ See footnote, p. 18.

“Mr. Britten’s ‘Introduction’ is very interesting. It describes what preparations had been made by Banks for an extensive work, to be illustrated by many hundreds of plates, and how the issue of it fell through, partly because of Solander’s death in 1782, and partly on account of Banks’ devotion to his duties as President of the Royal Society. Then follows some description of the various MSS. connected with the voyage, including Solander’s notes on ‘Plantæ Novæ Hollandiæ,’ which are in two volumes (small quarto) and are in the British Museum.

The Australasian collections are represented by 412 sketches; from these 362 finished drawings were prepared, of which 340 were engraved. From the copper plates of these, the plates illustrating this volume have been lithographed; they represent 328 of the engravings, most of the remainder being unfinished or imperfect representations. Three of the drawings of which no plates exist—*Tribulus Solandri*, *Pleiogygium Solandri*, and *Myrmecodia Beccarii*—being of special interest, were drawn on stone by the late Robert Morgan, and raise the number of plants represented to 331.

“That the copper plates of the present work should have remained in the British Museum unpublished for nearly 130 years is a remarkable occurrence, and shows how leisurely the progress of British science can be. While grateful for its belated appearance it seems difficult to believe that this most regrettable delay has been unavoidable.

“The excellent illustrations are from contemporary copperplates, engraved from drawings executed by (a) Frederick Polydore Nodder, ‘Botanic painter to Queen Caroline,’ whose drawings date from 1777–1783; 173 drawings are from his pencil. (b) John Cleveley’s drawings date from 1773–1775, and he is represented by 13 in the present work. (c) James Miller’s drawings date from 1773–1775, and there are 47 of them. (d) John Frederick Miller’s drawings were also executed from 1773–1775, and are 61 in number.

“Useful notes are given of the engravers, D. Mackenzie (‘who probably did most of the work’) and G. Sibelius. Information is given in regard to Mackenzie’s other botanical work. But few of the plates are marked by the engraver’s name. The value of the work is enhanced by the fact that it includes representations of many plants which have not been hitherto figured, so far as I am aware.

“Mr. Britten gives for each plate a Latin description of each plant depicted (this is the work of Solander), also notes on the localities whence the specimens were obtained, and critical notes. We are informed that descriptions of other plants by Solander are extant, but only those are printed of which there are plates.

“The work contains a reduction of Captain Cook’s original chart of East Australian coast-line (1770), from originals in the British Museum. This is in a North Sheet and South Sheet. Also a chart of the coast-line of East Australia, as determined by recent surveys to 1890 (inserted for comparison with Cook’s coast-line). Also a chart of New Zealand

explored in 1769 and 1770, by Lieutenant J. Cook, Commander of His Majesty's Bark 'Endeavour,' engraved by J. Bayly. These maps, which render reference to the localities whence Banks and Solander collected exceedingly easy, are reproductions of those which were issued with Wharton's 'Captain Cook's Journal' (1893).

(Then follow some notes on the synonymy adopted by Mr. Britten).

"As I write, (1905) the International Botanical Congress (adjourned from Paris, 1900), is meeting at Vienna, and, as the result of its deliberations, it is to be hoped that we shall have the authority of such an influential Congress for a settled nomenclature. When this Congress reports, the names proposed in the present work will be passed in review.*

"Mr. Britten throughout the work, doubtless rightly, attributes to Banks and Solander plants for which in many instances Solander was originally quoted. He says:

A careful study of the various memoranda and MSS. preserved in the Department of Botany makes it clear that Banks, who had come to be regarded as a patron of science rather than as a man of scientific attainments, had much more botanical knowledge than was at one time supposed.

"In conclusion, the publication of these fine folio volumes simply whets the appetites of Australians for more. We yearn for the publication of Solander's and Brown's manuscripts, and trust that they will not be kept back from any considerations of nomenclature of species. Such a reason, if advanced, seems to us inadequate in the case of priceless historical documents of the deepest interest to Australians. We would have liked our fathers to have had the privilege of seeing them; shall the privilege be denied to the living, and only be bestowed on a generation yet to be born? With all respect to the eminent specialists forming the scientific staff of the British Museum, we feel sure that these manuscripts must contain observations which can only be fully interpreted and appreciated by Australians."

Mr. James Britten comments on this paper in the following words:—

My attention has been called to a notice by Mr. J. H. Maiden (*Journ. Proc. Roy. Soc. N.S. Wales*, xxxix, 34-39) of the "Illustrations of Australian Plants," which, perhaps, calls for some comment. Mr. Maiden speaks appreciatively of the importance of the work, and kindly of my share in its publication; he not unreasonably takes exception to certain proposed changes of nomenclature, some of which would not have been suggested had the decisions of the Vienna Congress been arrived at at the time the "Illustrations" was issued.

I think, however, that some of Mr. Maiden's remarks show a somewhat imperfect appreciation of the facts of the case. For example, he says:—

"That the copper plates of the present work should have remained in the British Museum unpublished for nearly 130 years is a remarkable occurrence, and shows how leisurely the progress of British science can be. While grateful for its belated appearance it seems difficult to believe that this most regrettable delay has been unavoidable."

* This promise was carried out in *Journ. Roy. Soc., N.S.W.*, 1906, in a paper entitled "The International Rules of Botanical Nomenclature."

Mr. Maiden does not seem to have realised that, as I have explained in the introduction to the work (reproduced in this Journal for 1905, pp. 284-290) the preparation of the plates was a private undertaking on the part of Banks, who spent upon them large sums of money. "British science" officially was in no way responsible for the delay during Banks' lifetime, and when the plates became the property of the British Museum, no condition as to publication was attached to their acquisition. The plates only came into the possession of the British Museum in 1820, so that the period named by Mr. Maiden must be reduced by at least fifty years. Mr. Carruthers, during his keepership of the Department of Botany, more than once urged upon the trustees the desirability of publishing the plates, but financial considerations prevented the undertaking until 1900. And, although I am probably the last person to depreciate the value of a work in which I have taken the greatest interest, it seems to me that on many grounds it may be doubted whether the actual scientific value of the book, apart from its historical interest, is equivalent to the expense necessary to its production; and this reason has so far weighed with the trustees that the remainder of the plates of the plants of Cook's Voyage will not be proceeded with.

Mr. Maiden ends his notice with the following paragraph:—

"In conclusion, the publication of these fine folio volumes simply whets the appetites of Australians for more. We yearn for the publication of Solander's and Brown's manuscripts, and trust that they will not be kept back from any considerations of nomenclature of species. Such a reason, if advanced, seems to us inadequate in the case of priceless historical documents of the deepest interest to Australians. We would have liked our fathers to have had the privilege of seeing them; shall the privilege be denied to the living and only be bestowed on a generation yet to be born? With all respect to the eminent specialists forming the scientific staff of the British Museum, we feel sure that these manuscripts must contain observations which can only be fully interpreted and appreciated by Australians."

It would seem that our Australian friends have an exaggerated estimate of the MSS. in the possession of the Museum, both as to their value and extent; the note as to Solander's supposed Journal (see *Journ. Bot.* 1906, p. 71) illustrates what I mean. So far as Solander's MSS. are concerned, they consist solely of descriptions of plants in terms, as shown by those already published—the greater number—largely obsolete, and it is difficult to see who would benefit by their publication. It is a straining of language to call these technical descriptions "priceless historical documents," and I am at a loss to understand what Mr. Maiden means by the suggestion that "any considerations of nomenclature of species" could be "advanced" as a reason for "keeping them back." With regard to Robert Brown's MSS. again, it seems doubtful whether at the present time there would be adequate gain in publishing descriptions a hundred years old of plants most if not all of which must be familiar to botanists. It would certainly be undesirable to print the large number of unpublished names which occur in both Solander's and Brown's MSS., and I am sorry to see that Mr. Maiden defends the practice.* When distributing Brown's herbarium we were most careful not to send out any unpublished names, and the same plan was adopted with the set of Banks and Solander plants sent to Sydney.

I am the more surprised that Mr. Maiden should refer again to the supposed "keeping back" of the Brown MSS., because in this Journal for 1903 (p. 252) I dealt with the similar complaint contained in his "Revision of *Eucalyptus*" (Part I, p. 20), where he assumes the "suppression of these descriptions," and expresses a doubt "whether this suppression eventually met with the acquiescence of Robert Brown himself or whether he was controlled in this respect by superior authority." I am unable even to guess at what Mr. Maiden intends to suggest by his references

* *Proc. Linn. Soc., N. S. Wales*, xxvii, 700.

to "suppression" and to Brown's being "controlled by superior authority"; but there is, as I said before, absolutely no ground for supposing that anyone but Brown himself was responsible for the non-publication of his MSS.

The value and bearing of the Solander and Brown MSS. can only be fully appreciated if they are correlated with the specimens to which they refer, and this can only be done at the National Herbarium. Would it not be possible for some competent Australian botanist to come over and see for himself what material exists, and how it can best be employed? It must, I think, rest with the colony to decide whether "the privilege [shall] be denied to the living and only bestowed on a generation yet to be born." (*Journal of Botany*, xlv. 68. 1903.)

To this paper the following reply was sent to Mr. Britten, the Editor of the *Journal of Botany*, but it was not published:—

19th March, 1907.

REFERRING to your notes at p. 68-70 of the *Journal*, I realise that the preparation of the plates (Illustrations of Cook's Voyage) was a private undertaking on the part of Banks, and that they must have cost him large sums of money.

Banks was a Trustee of the British Museum, and he took the liveliest interest in the welfare of that institution, but the plates did not belong to the museum until 1820, so that the delay on the part of the museum was only eighty years.

The Banksian Herbarium appears to have been the repository of many collections which really belonged to the State. Sir Joseph was himself a public institution, and there is no doubt, in my mind, that his taking possession of certain plants ensured their safety during critical periods. If he had handed them over to Kew one shudders to think what the younger Aiton would probably have done with them when he left that establishment in 1840.

But those plants not collected nor purchased by him nor presented to him by private individuals stand in a different category to those which were placed in his care on behalf of the nation.

One may say that these plants were presented to Sir Joseph Banks, but they really were, it seems to me, the property of Sir Joseph only in trust, and this trust was carried out by him honorably.

Let me specifically refer to the Australian collections made by Robert Brown.

Brown was appointed naturalist to the "Investigator" by Banks, who acted, in this respect, on behalf of the Admiralty. His pay was £400 per annum. He left Spithead on 18th July, 1801, and reported himself to Banks from Liverpool, on his return, 13th October, 1805.

Brown's appointment under the Admiralty thereupon came to an end, but Banks, in January, 1806, proposed to the Admiralty that Brown and Bauer should be continued in their employment, the former to work up the plants and the latter to finish his drawings and make others.

The Admiralty requested Banks to supervise Brown's work and receive his reports. The last progress report of Brown to Banks that I have seen is dated 6th January, 1810, but he continued in his employment until the publication of his "Prodromus." About this time Dryander was in failing health (he died in October), and Brown succeeded him. His salary having ceased to be a charge against the Admiralty, Sir Joseph Banks took him into his employment.

The Brownian Australian plants were, therefore, the property of the nation. Robert Brown apparently looked upon them as his private property, and so, it would appear, did Mr. J. J. Bennett. Mr. Bennett in 1876 distributed* these plants to herbaria throughout the world, and I was shocked to learn, during my visit to Europe in 1900, that a set had been offered to my predecessor, and that the offer had not even been acknowledged. Chiefly through the kindness of Prof.

* It is more correct to say that they were distributed under his will. He died in February.

MacOwan, of the Cape, and also the Directors of the Royal Gardens of Kew and Edinburgh, I have been able to obtain a number of these Brownian plants (of special interest to us in Sydney, Brown's headquarters for so long), but the opportunity given to Sydney in 1876 has gone, never to return.

I am the founder of the National Herbarium of New South Wales, and the herculean task of getting together specimens of the old Australian collections has devolved upon me. I take this opportunity of repeating, Sir, the obligation that this herbarium is under to you for using your influence on its behalf. I may be pardoned for saying that the offices which I at present hold of honorary secretary of the Banks' Memorial Fund and President of the Australian Historical Society are an indication that I look upon old specimens with especial veneration, and that their care is an earnest object of solicitude with me.

I am sorry to hear that the publication of the plates of Cook's Voyage has been discontinued by the Trustees of the British Museum, and, if this decision is not irrevocable, I should be glad if the various Australian Governments could be communicated with and asked to share the expense.* I am sure that such a communication would receive sympathetic attention from the Premier† of my own State, who has done so much to keep the memory of Cook, Banks, and Solander green.

In passing, I may remark, in regard to my "defending the practice" of publishing certain unpublished names (if considered desirable), that my views on this subject, cannot, in fairness to myself, be stated in a few words. I, however, still think that my position as fully defined in *Proc. Linn. Soc., N.S.W.*, xxxvii, 698-701, is a reasonable one. But why doubt my loyalty to the Vienna Code?

As regards the "priceless historical documents" I had in my mind, I was partly thinking of Solander's Journal, which Mr. J. J. Fletcher of Sydney and you have already dealt with.‡ I am sorry to learn that Solander left so little botanical material not yet published.

But I was particularly thinking of the material that Brown had accumulated for the unfinished "Prodromus." It was also, I think, his duty to have published the Banks and Solander plates and MSS. An explanation of his neglect appears to be that he carried his love of seclusion to excess.

He was placed by Banks in a financially independent position, while he was in unfettered control of the finest botanical library and herbarium of his time. He was botanically without a peer, and appears to have resented the intrusions of younger men. Brown's attitude appears to me to be simply an instance of the well-known dangers of an absolute despotism. Had he realised that the collections in his care were public property, for the use of all qualified botanists under proper restrictions, things would have been very different.

Of the National Australian genus *Eucalyptus* only six species are referred to by Brown in his Collected Works. Hooker says Brown returned to England with the descriptions of his plants written out.§ If so he had described in MS. 100 species of eucalypts.|| These were, of course, not published. What became of the MSS.? And how is it that Brown's successors have had to worry out eucalypts without any help from Brown, who had such great opportunities, and who was the first botanist of his age? The world is poorer through not knowing the views of Brown on such a widely diffused and difficult genus.

* Mr. Britten informs me that all the Australian plants have been published. The remainder are of Brazil, Pacific Islands, New Zealand (already in hand for the New Zealand Government) &c.

† Sir J. H. Carruthers, who was in the office at the time.

‡ *Journ. Bot.*, Feb., 1906.

§ *Proc. Linn. Soc.*, 1886-7, p. 58.

|| Flinders' "Voyage to Terra Australis," ii (Appendix), p. 547.

Hooker* speaks of plants in Brown's care, "during half a century," † . . . they, together with the rest of his magnificent collections were jealously closed to botanists." This is a very serious charge.

The reason why Bentham did not consult the British Museum herbarium for the Flora Australiensis (the fact has been pointed out by you)‡ was probably the result of Brown's attitude in years gone by.

I believe I am justified in saying that the "Prodrromus" (continuation MSS.) are "priceless historical documents." Brown was paid by the State to collect the material, and to write an account of the collections, and it seems most regrettable that these MSS. cannot be given to the world.

I am much obliged to you for the list of certain Australian botanical MSS. in the Museum. Valuable as they are, they are still non-Brownian.

There is a book in our Mitchell Library in Caley's handwriting descriptive of his journeys; probably the British Museum volume supplements this. We have also a copy of Allan Cunningham's Journal for 1817-1821 in the Public Library here. It was presented by Kew. We have many other MSS. of Banks, Caley, and Cunningham in the Mitchell Library, and I hope they will all be collated with those in the British Museum some day. In addition, the New South Wales Government had many Banksian and other papers copied in London by the late James Bonwick.

I shall gratefully bear in mind your offer to give facilities for the transcription of some of the MSS. to which you refer.

Botanic Gardens, Sydney.

J. H. MAIDEN.

This correspondence of course goes a little beyond the "Botany of the Voyage of the 'Endeavour,'" with which I have headed this section.

(See Robert Brown, p. 100.)

* Icones pl. Vol. iv (3rd series), p. 16.

† Presumably 1810-1858 (year of Brown's death).

‡ I am given to understand that I am wrong here. Bentham consulted the herbarium, or at least part of it, but not the Banksian plates (? the Solander MSS.). "Some of the orders in Brown's herbarium, which Bentham wanted to consult for the Australian flora, were mislaid and could not be found." (1873. Daydon Jackson's "Life of Bentham," p. 226.) See also p. 61 (*infra*).

4. Cook's Second Voyage. Banks and the "Resolution."

THE success of the first voyage, and the enthusiasm it evoked, led to a second voyage being projected under Cook in H.M.S. "Resolution." At the solicitation of Lord Sandwich, Banks offered to accompany this expedition. The offer being accepted,* the outfit was begun, and Zoffany the painter, three draughtsmen, two secretaries, and nine other skilled assistants were engaged. The accommodation on board for scientific purposes was found insufficient, and additional plant-cabins were built on deck†. These were found on trial not only to affect the ship's sailing powers, but also her stability. They were, therefore, ordered to be demolished, and Banks abandoned his intention of sailing in the "Resolution." Dr. Lind had been appointed naturalist to the expedition under a grant of £4,000, by Parliament, but on hearing of Banks' decision he declined the post. Dr. Johann Reinhold Forster and his son George ultimately sailed with the expedition.

The reason given by Sir John Barrow, who was for many years Secretary to the Admiralty, for Banks' abandonment of the voyage, is probably, the correct one. He states‡ that "such a system was adopted by the Navy Board to thwart every step of his proceedings, especially on the part of its chief, the Comptroller of the Navy, Sir Hugh Palliser,§ whereby his patience was worn out, and his indignation so far excited as to cause him, though reluctantly, to abandon this enterprise altogether."||

It may be incidentally mentioned¶ that the great chemist Priestley, at that time minister at Mill Hill Chapel, Leeds, whom Banks had invited to join the expedition (on advantageous terms, including a

* See Well, ii, 55.

† For correspondence bearing on the instability of the "Resolution" attributed to Banks' fixtures for the scientific objects of the voyage, see *Hist. Rec., N.S.W.* i, 352, 355; also Kitson, pp. 234-8, 248.

‡ Sketches of the Royal Society, p. 26.

§ Captain Cook's patron, by the way. See also Weld, ii, 56, and p. 54, *infra*.

|| See also *Annual Register*, and *Gentleman's Magazine* for 1772, for some interesting information on the subject.

¶ "Banks' Journal" (Hooker), xxvii.

provision for his family), was also objected to, in his case on account of his religious principles, by the Board of Longitude.* Although thus bitterly disappointed, Banks nevertheless used his utmost endeavour to promote the objects of the voyage.†

The subject of Banks' leaving the "Resolution" is dealt with by Bladen‡, also by Kitson§ at some length.

Lieut. Charles Clerke of the "Resolution" writes to Banks, 13th and 31st May, 1772, *re* the deck-hamper of the ship, and Bladen, in an interesting footnote to the latter letter says, "The true facts of the case (*i.e.*, of Banks leaving the "Resolution") will probably never be known."

As showing how seriously Banks had entered into the plan of a second voyage of circumnavigation, I have seen, in the possession of Mr. Alfred Lee, of Sydney, receipts for money paid by Banks, amounting to over £5,000, for scientific stores and appliances, presents for the natives, and so forth, for this voyage. These documents are now in the Mitchell Library.

Cook writes to Banks, 2nd June, 1772, completing arrangements for the return of the remainder of Banks' property on the "Resolution," and concludes: "I pray my best respects to the Dr. (Solander), and since I am not to have your company in the 'Resolution' I most sincerely wish you success in all your exploring undertakens." This shows that the incident did not terminate the friendship of Cook and Banks.

A letter from Cook to Banks, "Resolution," Cape of Good Hope, 18th November, 1772,** contains the passage:—"Some cross circumstances which happened at the latter part of the equipment of the 'Resolution' created, I have reason to think, a coolness betwixt you and I, but I can by no means think it was sufficient to break off all correspondence with a man I am under many obligations too." The remainder of the letter gives various items of news, including the statement that collections were being made for Banks, and is altogether cordial.

A further letter, Cook to Banks, Plymouth Sound, 10th July, 1776.†† asks Banks for a description of "the New Zealand Spruce tree, or any other plant the drawing of which might accompany my journal" (of the voyage in the "Resolution.") . . . "In short, whatever plates of this kind (botanical) falls to my share, I shall hope for your kind assistance in giving some short account of them."

* For Priestley's own version, as given in his "Memoirs," see Kitson, p. 239.

† Weld, ii, (76) states that Banks contributed some presents to please the natives.

‡ *Hist. Rec.*, i (I) xxxiii.

§ "Captain James Cook," 232.

|| *Hist. Rec.*, i (I), 352.

¶ *Ib.*, 353.

** *Ib.*, 372.

†† *Ib.*, 402.

Indeed the friendship of Cook and Banks never died out.

Banks, in 1780,* drew up the statement on which the Lords Commissioners of the Admiralty applied to the King in Council for a pension for Cook's wife and children. A paper is in Sir Joseph Banks' autograph, dated Thursday, 28th July, 1785, 1 page folio.

Memorandum for the division of the profits arising from the sale of the publication of Captain Cook's late *Voyage*, agreed in the presence of Lord Sandwich, Lord Howe, Sir Joseph Banks, and Mr. Stephens, &c.:—

One and a half to Captain Cook's family, with the interest thereof to Mrs. Cook for life, &c.

One-fourth to the executors of Captain King, to be paid to his heirs.

One-eighth to the legal representatives of Captain Clerke.

One-eighth to Mr. Bligh, &c.

Banks was consulted in regard to the publication of the results of both the second and third voyages of Cook. For example, as regards the third voyage, the name Isle of Desolation was changed into Kerguelen Island at a meeting held at Banks' house while the journal of that voyage was being prepared for publication.

* *Hist. Rec., N.S.W.*, i (I), 432.

5. Voyage to Iceland (1772).

BEING disappointed in regard to this second voyage of circumnavigation, Banks, accompanied by Solander, set out on a scientific expedition to Iceland* in a vessel specially built for them, at a cost of £100 a month. They sailed on the 12th July, 1772, and on the way Banks carried out the intention he had formed to visit Staffa, to which he was the first to draw the attention of scientific men, sending a complete description, with drawings and measurements, to Thomas Pennant, who inserted it in his "Tour to the Highlands of Scotland." They spent a month in Iceland, exploring Mount Hecla, the geysers, and other remarkable features of the island. Banks made copious observations, which Dr. Troil, one of the party, and afterwards Archbishop of Upsala, included in his interesting account† of the island, without, however, according to Barrow, doing full justice to the exertions of Banks and his companions, whom he dismisses with a too vague and general eulogium. Banks also afterwards placed his MS. journal at the disposal of Mr. (after Sir) William Hooker, whom he had advised to visit the island for scientific purposes, and who made copious use of it, with due acknowledgment, in his "Tour in Iceland."

Banks always continued to take a keen interest in the Icelanders, and his humanity

was of signal service to these poor creatures; for when, some years afterwards, they were in a state of famine, the benevolence and powerful interest of this kind-hearted man brought about the adoption of measures which absolutely saved the inhabitants from starvation. We were at war with Denmark, and had captured the Danish ships, and no provisions could be received into Iceland. Claussen, a merchant, was sent to England to implore the granting of licenses for ships to enter the island, and through the active intervention of Sir Joseph, who, as a Privy Councillor, was an honorary member of the Board of Trade, the indulgence was granted.‡

The following notes by Suttor supplement the above account:—

Disappointed in this (Cook's 2nd Voyage) expedition, Mr. Banks was prompted to engage in some other research, and accordingly determined on a voyage to Iceland and the western islands of Scotland, partly for the purpose of scientific observations,

* Hooker, *op. cit.*, xxviii.

† See p. 216.

‡ Barrow, *loc. cit.*, p. 29. See also a full account in Weld, ii, 109, which includes a very interesting letter by G. R. Porter of the Board of Trade, detailing Banks' noble action.

and—as Van Troil states, who accompanied him—in order to keep together and employ the draughtsmen and other persons whom he and Dr. Solander had engaged for the South Sea expedition. . . .

The party was agreeably increased by Dr. James Lind, of Edinburgh, an astronomer, and the late Captain Gore, who accompanied Cook in his third voyage, to which we may add another lieutenant of the navy, three draughtsmen, two writers, and seamen, to the number of forty in all.”* . . .

On the 8th of August, 1772, they arrived off the coast of Iceland, and there anchored, from whence they proceeded to investigate the natural curiosities of that extraordinary and little-known island. Their journey to Mount Hecla occupied twelve days, the distance, between three and four hundred miles of it, over an uninterrupted tract of lava. Mr. Banks and his party were the first that ever reached the summit of that celebrated volcano, the attempt having been till then prevented, partly from superstition and the extreme difficulty of the ascent. (*Ib.*, p. 42)

* Suttor's "Life of Banks," p. 41. See also Weld, ii, 105.

PART II.

BANKS' BOTANICAL ACTIVITIES.

1. THE BANKSIAN HERBARIUM AND LIBRARY.
2. BANKS AND KEW.
3. BANKS AND PLANTS FOR NEW SOUTH WALES.
4. HIS BOTANICAL ACTIVITIES IN REGARD TO OTHER COUNTRIES

1. The Banksian Herbarium and Library.

On his return from Iceland, Banks settled in Soho Square, London, and thus entered on the active scientific career which has made his residence at that place famous. It became the principal centre of activity in natural history for the scientific men of every nation. Walford* says that Banks lived in the house No. 32, "now the Hospital for Diseases of the Heart." Here he formed his celebrated library and herbarium.

The house of Sir Joseph Banks was kept for many years by his sister, a learned lady, who had as great a passion for collecting coins as her brother had for botanical research. Her appearance and some characteristics are thus described by the author of "A Book for a Rainy Day":

Miss Banks, the sister of Sir Joseph, was looked after by the eye of astonishment wherever she went, and in whatever situation she appeared. Her dress was that of the *Old School*; her Barcelona quilted petticoat had a hole on either side for the convenience of rummaging two immense pockets, stuffed with books of all sizes. This petticoat was covered with a deep stomached gown, sometimes drawn through the pocket-holes, similar to those of many of the ladies of Bunbury's time, which he has introduced in his prints. In this dress I have frequently seen her walk, followed by a six-foot servant with a cane almost as tall as himself. Miss Banks, for so that lady was called for many years, was frequently heard to relate the following curious anecdote of herself. After making repeated inquiries of the wall-vendors of half-penny ballads for a particular one which she wanted, she was informed by the claret-faced woman who strung up her stock by Middlesex Hospital-gates, that if she went to a printer in Long Lane, Smithfield, probably he might supply her ladyship with what her ladyship wanted. Away trudged Miss Banks through Smithfield, "all on a market-day"; but before she entered Mr. Thompson's shop, she desired her man to wait for her at the corner, by the plumb-pudding stall. "Yes, we have it," was the printer's answer to the interrogative. He then gave Miss Banks what is called a book, consisting of many songs. Upon her expressing her surprise when the man returned her eightpence from her shilling, and the great quantity of songs he had given her when she only wanted one: "What, then," observed the man, "are you not one of our chaunters? I beg your pardon."

It has been stated that this lady and Lady Banks, out of compliment to Sir Joseph, who had been deeply engaged in the production of wool, had their riding-habits made of his produce, in which dresses those ladies at one period upon all occasions appeared. Indeed, so delighted was Miss Banks with this *overall*-covering, that she actually gave the habit-maker orders for three at a time—and they were called *Hightum*, *Tightum*, and *Scrub*. The first was her best, the second her second best, and the third her every-day one.

* Cassell's "Old and New London," iii, 191.

I have been informed that once when Miss Banks and her sister-in-law visited a friend with whom they were to stay several days, on the evening of their arrival they sat down to dinner in their riding-habits. Their friend had a large party after dinner to meet them, and they entered the drawing-room in their riding-habits. On the following morning they again appeared in their riding-habits; and so on, to the astonishment of every one, till the conclusion of their visit.

Being in possession of an immense number of tradesmen's tokens current at this time, I left them in Soho Square, with a note begging Miss Banks' acceptance of any she might want. After a few hours, her footman's knock at my door announced the arrival of Miss Banks, who entered the parlour holding up the front of her riding-habit with both hands, the contents of which she delivered upon the table, at the same time observing "that she considered herself extremely obliged to me for my politeness; but that, extraordinary as it might appear, out of so many hundred there was not one that she wanted."

Although Miss Banks displayed great attention to many persons, there were others to whom she was wanting in civility. I have heard that a great genius, who had arrived a quarter of an hour before the time specified upon the card for dinner, was shown into the drawing-room, where Miss Banks was putting away what are sometimes called *rattle-traps*. When the visitor observed, "It is a fine day, ma'am," she replied, "I know nothing at all about it; you must speak to my brother upon that subject when you are at dinner." Notwithstanding the very singular appearance of Miss Banks, she was in the prime of life a fashionable whip, and drove four-in-hand.*

Banks spared neither pains nor expense to make his library as complete as possible. A large portion, mainly botanical, was valued for insurance purposes in 1827 by the Trustees of the British Museum at £7,300.

The Banksian library is at the present time with the General Library of the British Museum in Bloomsbury, and not with the herbarium in the Natural History building in South Kensington, a remarkable arrangement, and obviously one in direct opposition to Banks' testamentary directions (Thiselton Dyer, 1900). Banks' special table is now in the keeper's room, Department of Botany, British Museum.

The library had enhanced value because of the remarkable catalogue prepared by Dryander (*infra*, p. 98).

The herbarium of Sir Joseph Banks is the foundation of the General Herbarium, (of the British Museum). At the time of its acquisition it was one of the most important in existence—not only on account of its extent, but as containing a large number of types of published species—and owing to the freedom of access which was allowed to it, one of the most frequently cited in botanical works. Besides the invaluable collections made in Malaya, Brazil, South Africa, Polynesia, Australia, and New Zealand, by Banks and Solander, in their voyage round the world with Cook in 1768-71, it contains the plants collected by Banks in Great Britain at various dates, and in Newfoundland and Labrador in 1776, as well as those obtained in Iceland in 1772. The herbarium was continually being enriched by purchase and exchange. Besides Hermann's herbarium, and the herbarium of Clifford, upon which the "*Hortus Cliffortianus*" is based, a certain number of Linnæus's types were obtained from Smith in 1786, when the Banksian herbarium was compared with that of Linnæus. The collections of William Houston, from Central America and the West Indies, were purchased by Banks

* "A Book for a Rainy Day: or, Recollections of the Events of the last Sixty-six Years." By John Thomas Smith, pages 211-214. (Richard Bentley, 1845.)

from Philip Miller, whose own herbarium, containing the types of many of the plants described in the "Gardeners' Dictionary," ed. viii (1768), was acquired by Banks in 1774. In that year Banks arranged with the "Societas Unitatis Fratrum" or Moravian Brothers, to collect plants at Tranquebar, whence he received about 500 specimens in 1775-78. In 1775 he purchased a large herbarium of Swiss plants, indicated in the herbarium as "Herb. Helvet.," collected by Dick; these Banks obtained through Dr. Pitcairn (1711-91), who had a botanic garden at Islington, specimens from which are in the herbarium. The collections of the Forsters and of Loureiro were acquired at about the same time. The plants collected by Alexander Russell (1715?-68) and his brother Patrick (1726-1805), who were at Aleppo in 1740-53 and 1755-71 respectively, were sent to Banks and are described by him and Solander in the "Natural History of Aleppo," ed. 2 (1789). Other well-known London gardens contributed to the Banksian collection at this period: notably those of James Gordon at Mile End, James Lee at Hammer-smith, William Malcolm at Kensington, and James Vere at Kensington Gore; there are also a few specimens from the garden of Richard Anthony Salisbury at Chapel Allerton, Yorkshire. The most important collection of cultivated plants is, however, that from the Royal Gardens, Kew, which contains the types of the numerous species described by Banks' librarians—Solander and Dryander (helped in the second edition by Brown) in Aiton's "*Hortus Kewensis*," the MS. original descriptions of these, and of a large number of other plants in the Sloane and Banksian herbaria, are preserved in the Department of Botany. Jacquin's herbarium, consisting largely of plants cultivated by him in the Vienna and Schönbrunn Gardens, and containing some of his West Indian plants, was purchased by Banks, and is incorporated with his collection, which also contains specimens sent by A. L. de Jussieu from the Paris Garden.

Among the more noteworthy of the Indian collectors are William Roxburgh; Buchanan (Hamilton), (who sent plants to Banks in 1794 and 1798); J. G. Koenig, who sent plants in 1776, and bequeathed to Banks his herbarium and MSS.; James Robertson, who collected in Bombay, Madras, China, and Johanna Island in 1772-76. The most important Chinese collection is that made by Sir George Staunton, during Lord Macartney's embassy to China in 1793.

From Polynesia are the large collections of J. R. and G. Forster, made during Cook's second voyage (1772-75); also plants obtained during Cook's third voyage (1776-80), by David Nelson, who also collected in Australia and Timor; William Anderson also collected during these voyages in the same countries. The specimens collected by Christopher Smith and James Wiles, during Bligh's voyage to Otaheite (1791-93) were also sent to Banks.

From the Cape there are, besides the very important collections of Francis Masson (1741-1805), who also sent plants to Banks from the Canaries and Azores, from the West Indies, and from North America and Canada; about 1,000 specimens from Oldenburg, collected in 1772; and others from James Niven (1774?-1826), David Nelson (*d.* 1789), and Andreas Auge (*fl.* 1794). Among the collectors in tropical Africa may be mentioned William Brass (*fl.* 1790), who collected at Cape Coast; Henry Smeathman (*fl.* 1750-87), who sent plants from Madagascar and Sierra Leone; and Christian Smith (1785-1816), whose important collections during the Congo expedition were described by Robert Brown. The principal contributor of Madagascar plants was John Vaughan Thompson (*fl.* 1807-29).

Among New World collections, the most important is that of John Clayton (1686?-1773), who sent his Virginian plants to Gronovius; they are the types of Gronovius's "*Flora Virginica*" (1743-1762). The volume of South Carolina plants collected by William Young (*fl.* 1753-84), with an accompanying volume of crude drawings, was acquired by Banks from the Bute library in 1794.

Other early American collectors represented in the herbarium are John Bartram (1699-1777), and his son William (1739-1823); W. V. Turner, who collected in

the "Cherokee Country" in 1769; Peter Kalm (1717-79); William Clifton (fl. 1765); Dr. John Mitchell (d. 1772); and Archibald Menzies (1754-1842).

Among West Indian collectors may be mentioned Olof Swartz (1760-1818), who contributed largely to the herbarium and worked at the material therein preserved, obtained by previous collectors; the results of his researches are included in his "Prodromus" (1783), where he pays a high tribute to Banks: "Non poterunt immortales perillustris hujus viri digne satis celebrari laudes"; Henri de Ponthieu sent plants from the Caribbee Islands in 1778; William Wright (1735-1819), and Roger Shakespear, from Jamaica, the latter collected in 1777-82; Alexander Anderson (d. 1815), plants from Demerara in 1791, and later from the St. Vincent Garden, of which he was curator; John Greg, plants from Dominica, collected 1777.*

Following was Robert Brown's opinion of the Banksian Herbarium:—

As I have everywhere mentioned the sources from which my knowledge both of genera and species is derived, it becomes unnecessary particularly to notice here the extent of my obligations to the unrivalled herbarium of Sir Joseph Banks, who, with his accustomed liberality, has permitted me to examine, and, where necessary, to dissect such specimens as seemed to have any peculiarity of structure, and has thus enabled me to found my genera on a more satisfactory induction than I could have done in any other part of the world.†

(The following is a transcript of a folio sheet of memoranda [in Robert Brown's hand], which is among the archives of the National Herbarium. The information it contains may be worth placing on record. A few notes are added in square brackets.—Ed. *Journ. Bot.*)

Memoranda respecting the Banksian Herbarium and Library, copied from notes in Sir Joseph Banks' writing, in a folio book, which he began in the year 1777.

1. Soc. Unit. Frat. (Societas Unitatis Fratrum)—(Moravians).

In the year 1774 I agreed with some of the brethren of this society who resided at Tranquebar, to send me home dried specimens of such plants as they could procure, at the rate of sixpence for a specimen of any species in flower, and as much for a specimen in seed, myself to send out paper for drying at my own expense; but to pay no more than two sixpences for any species, nor more than one unless it was sent in both the above mention'd states. In the year 1775 I received from them about 265 species, for which I paid Mr. (Hurlock) apothecary in St. Paul's Churchyard, according to the aforesaid rate. (A second collection of about similar extent, was received by Banks in April, 1778.)

2. Herb. Helvet. (Herbarium Helveticum).

In the year 1775, Dr. Pitcairn was, by a correspondent in Switzerland, offered the purchase of a large herbarium, the collector of which was dead, and the whole to be sold for the benefit of the widow. As the Doctor made no collection of dried plants he proposed it to me. I readily agreed, and a letter was returned desiring that if the price asked for it was reasonable it might be purchased and forwarded directly to me. It accordingly arrived, consisting of twenty-nine large pasteboard covers filled with plants loose on sheets of paper; the purchase money, charges of carriage, duty, &c., of which amounted to £39. As yet, however, I have not been able to have the name of the person who collected it. (To this Brown adds. "So far, Sir Joseph; in Dryander's hand in pencil follows, 'It was Dick.'")

3. Hort. Gordon.

James Gordon, an old, experienced nurseryman, inventor of many improvements in the art of cultivation. His nursery grounds lie on the right hand of the road from Mile-end to Bow, soon after you enter the parish of Bromley. In the year

* J. Britten, *Journal of Botany*, vol. xliii, pp. 122-124 (1905).

† R. Brown's Collected Works (Ray. Soc.), ii, 199.

1776, being then very old, he gave up business to his sons and a Mr. (Dermer)?, who immediately added large stoves to the gardens. (He died 1789; "Biogr. Index Brit. Botanists," 70.)

4. Johannes De Loureiro.*

John de Loureiro, a Portuguese by birth, and a Jesuit, resided many years at the capital of Cochinchina, in a religious mission. He sent (in) 1774 to his friend, Captain Riddel, in the East India Company's service, a small collection of plants dried, with descriptions of them in Latin, which proves him to be a man of education and abilities; both the plants and descriptions are in my possession, through Captain Riddel's kindness.

(On the title-page of his "*Flora Cochinchinensis*" Loureiro does not describe himself as a Jesuit, but as "*olim in Cochinchina Catholicæ Fidei Præconis*." He was, however, a Jesuit until the suppression of the Society in 1773.)

5. Hort. Dni. Pitcairn.

(William) Pitcairn, M.D., in the year (1775) President of the College of Physicians, established in the year a botanical garden at Islington, from whence, by his favour, I have from time to time many valuable specimens. ("Biogr. Index," 136; "Rees' Cyclop," under *Pitcairnia*.)

6. J. R. and G. Forster.

John Reynhold and George, his son, embarked in the year 1772 on board the "Resolution," Captain Cook, bound to the South Seas on discovery, sent by the Board of Admiralty; the father as naturalist, and the son as his assistant, in my room, when I was disappointed of my anxious desire of undertaking that voyage by the machinations of Sir Hugh Palliser,† then Comptroller of the Navy. For their reward they had 4,000 pounds, which at my desire was voted by the House of Commons, to enable Dr. James Lind, of Edinburgh, M.D., to accompany them, but the vote having passed in vague terms, it was thought proper to apply it to the benefit of the voyage of discovery in that manner. On their return they did me the favour to present me with very many specimens, both of plants and animals, which they had collected in the different countries they had visited. In the year 1776 I purchased of them for 400 pounds all the drawings of animals and plants which they had made in the course of the voyage.

(The above note has already been printed in this Journal [1885, 363] in the course of a full account of the Forster collections, but it is reprinted here so that Brown's memorandum may appear in its complete form. A large number of Forster's New Zealand plants with manuscript descriptions are in the Paris Museum [see "*Voyage de l'Astrolabe*" (Botanique), introd., pp. iv, v]. A herbarium of J. R. Forster was purchased at his death by Sprengel for 130 louis d'or [Schrader's "*Journal für die Botanik*," ii, 195]. Another collection, belonging either to J. R. or George Forster, was offered by Dr. Thomas Forster, son of one of them, to the National Herbarium in 1852, but was not purchased, as it was not thought likely to contain anything additional to the very fine series possessed by Banks.)

Copied March, 1828, having obtained leave the same day to do so from Sir Edward Knatchbull, to whom I delivered it along with the portrait of Captain Cook, Sir J. Banks' diplomas, and several other things of smaller importance.—(R. Brown).‡

* Loureiro is Banks' spelling, Loureiro the modern.

† See *supra*, p. 44.

‡ J. Britten in *Journal of Botany*. Vol. xl, 1902, pp. 388-390.

2. Banks and Kew.

BANKS acted as King George the Third's scientific adviser, which his position as President of the Royal Society made appropriate.

He took a great interest in Kew, the King's Garden, "the first botanic garden in Europe," as Banks called it, succeeding Lord Bute in the honorary directorship of it in the year 1772.

William T. Aiton, the King's gardener at Kew, says:—

To the Right Honorable Sir Joseph Banks his abundant gratitude is most justly due, not only for his judicious advice, which on all occasions has been readily and cheerfully granted, but above all for the unceasing and unwearied attention continued by Sir Joseph for nearly half a century to the best interests of the Royal Gardens at Kew, by which the increase of the collection, and consequently the value of this catalogue, have been promoted in an eminent degree. ("Hortus Kewensis," Aiton, vol. v., Postscript).

During the period that Banks acted as director of the scientific operations of Kew, the flora of the southern hemisphere was assiduously explored both by himself and by collectors sent out on behalf of that establishment.

He appointed collectors to the Cape of Good Hope (James Bowie) and New South Wales (Allan Cunningham) in 1814, on behalf of the Government. The free hand he had in such matters is shown in the correspondence at p. 84. "Report on Departmental Committee on Botanical Work" (British Treasury), dated 11th March, 1901.

At p. 124 I have devoted a special chapter to the excellent men employed by Banks as collectors, Allan Cunningham being more than that—he was an eminent botanist. Solander, his botanist-librarian, circumnavigated the globe with Cook and himself. Robert Brown spent four years in Australia in botanical exploration.

From Aiton's "Hortus Kewensis" a list may be compiled of the plants introduced by Banks into England (*i.e.*, to Kew), up to the date of the edition. New South Wales and New Holland figure prominently in the list. His services to British horticulture were most eminent, and the countries enumerated by Aiton give some clue to the numerous localities to which his botanical and horticultural activities extended. In Aiton's work the introduction of more plants is attributed to Banks than to any other man.* This publication is particularly valuable as a Banksian record, since Aiton and Banks were contemporaries.

* See also *Kew Bull.*, 1891, p. 305.

3. Banks and Plants for New South Wales.

IN the unique position he held at Kew he was able to further the interests of that establishment as well as that of the infant colony of New South Wales, cases and seeds of useful plants being sent to the antipodes, while the cases were returned to England with living plants for the Royal Gardens, together with seeds of interesting plants.

It is proper to assume that he was the principal adviser of Governor Phillip in the introduction of economic plants on the foundation of the colony of New South Wales.

On 27th April, 1789, Banks proposed * to Under-Secretary Nepean to fit the "Guardian" for the reception of pots to convey Port Jackson plants for His Majesty's garden at Kew, and for the conveyance of useful plants to the Colony. The suggestion was renewed by Banks, 30th April, 1794.† as regards the "Reliance" (Captain Portlock). The subject was again brought forward, 15th May, 1798,‡ this time in regard to George Suttor, who was about to leave for Sydney. Particulars of the "plant cabin" of the "Porpoise" are given.§ Suttor took out a collection of economic plants, chiefly from Kew. The plant-boxes of the "Porpoise" were afterwards transferred to the tween decks, and there is considerable correspondence on the subject,|| which, on account of the valuable collection of plants, was deemed to be of high importance.

Some additional plants received by Suttor on the "Porpoise" were enumerated by him on 16th May and 8th November, 1799.¶ Unfortunately the plants sent by the "Porpoise" failed. King writes to Banks under date 20th November, 1800** :—

I am sorry to say that not one of the plants planted in England has arrived. There are a few Cape plants, such as vine cuttings and a mulberry or two—sorry I am not to be able to give you a better account of what has cost you so much labour and expense.

* *Hist. Rec.*, i (2), 229, 247.

† *Ib.*, ii, 210.

‡ *Ib.*, iii, 382.

§ *Ib.*, 407.

|| *Ib.*, 538, 546. See also 644–647, 739.

¶ *Ib.*, 672, 709, 739.

** *Ib.*, iv, 257.

Suttor, however, makes a different statement, 28th December, 1800,* and I have not the necessary data to reconcile King's and Suttor's reports. The inordinate delay of the "Porpoise" in England did not give the plants a fair chance.

I do myself the honour of writing to you an account of what plants I have been able to take alive to New South Wales:—1 olive, 6 black mulberries, 6 white do. 4 willows, 18 Chily strawberries, 2 walnuts, 2 chestnuts (Spanish), 2 oakes, 4 pomgranites, 2 plantains, mint, and the following sorts of vines—Tokay, White Fontiniac, White Muscadine, Black Fontiniac, Constantia, and Muscat of Alexandria. It is with painful concern I inform you, Sir, that I have not been able to bring the hops and many other valuable plants that I had on board.

He gave an account of the disadvantages he laboured under.

There were two "Porpoises," which I will call "Porpoise" (1) and "Porpoise" (2). Suttor and his bride went on board "Porpoise" (1) in October, 1798, with Governor and Mrs. King, Mr. Caley and Mr. and Mrs. Wise. She did not sail till September, 1799, and after a violent storm in the Bay of Biscay, she returned to England. Suttor's fellow-passengers went to Sydney in the "Speedy." (See p. 128). A Spanish corvette, "La Infanta Amelia," was fitted out and called "Porpoise" (2). Suttor left England in that vessel on 17th March, 1800, arriving in Sydney, 6th November.

See also page 209.

To the end of his life Banks interested himself in the introduction of useful plants into New South Wales, though he does not seem to have taken the precaution of recording the plants in detail for the information of posterity.

* *Hist. Rec.*, p. 277.

4. His Botanical Activities in regard to other Countries.

BANKS' horticultural interests beyond seas were by no means confined to New South Wales.

In the *Kew Bulletin* for 1903, p. 11, there is an interesting letter from Mr. Henry Shirley, Chairman of the Botanic Gardens, Kingston, Jamaica, dated 20th December, 1794, to Sir Joseph Banks. It is interesting for two reasons, firstly, because of the tribute it pays to this good man—

The Committee appointed by the House of Assembly of this island for superintending the public Botanical Gardens, being sensible of the share this country enjoys in the general advantages derived from your great zeal and abilities, as well as of the interest you take in our success, particularly with respect to the valuable collection of plants lately received,

and so on; and, secondly, because the letter shows how the bread-fruit brought from Tahiti (Otaheite) had flourished exceedingly, while it contains a list, with native names, of various plants received from Banks from Tahiti, with notes on their acclimatisation in Jamaica. We note that this garden also received Timor plants.

Banks promoted the well-known voyage of the "Bounty," which incidentally led to the foundation of the great Dutch garden at Buitenzorg in Java (W. T. Thiselton-Dyer).

It can readily be imagined that, in those days of maritime discovery and exploration of new countries, the receipt of herbarium specimens of new plants was enormous. They were often conveyed by the King's ships, and were all consigned to or handed to Banks. Australia (New Holland) was for three-quarters of a century looked upon as a mere collecting ground for European botanists, so that all the early types have to be obtained from the other end of the world.

Banks was allowed to retain all the fruits of this work, and in this way the Banksian Herbarium was built up. There can be no doubt that it was virtually public property, and it was probably so regarded by Banks. It is believed that the present herbarium house at Kew was purchased by the Crown for its reception. (Thiselton-Dyer.)

The original Banksian collections, subject to a life interest on the part of Robert Brown (referred to at p. 117) were left to the nation, and did not find their way to Kew, but to the British Museum.

Banks was cosmopolitan in his sympathies. He gave many instances of his view that scientific men should not be separated by political divisions. Fabricius described his insects; Broussonet received his specimens of fishes; Gaertner and Vahl largely used the store of plants. He handed to Gaertner, for his "*De Fructibus et Seminibus Plantarum*," the collection of fruits that he made on the voyage with Cook.

PART III.

THE BOTANICAL PROTÉGÉS OF BANKS.

1. THE BANKSIAN ARTISTS—

EHRET, PARKINSON, BUCHAN, REYNOLDS, WESTALL, THE
BAUERS.

2. THE BANKSIAN BOTANIST-LIBRARIANS—

SOLANDER, DRYANDER, BROWN.

3. THE BANKSIAN BOTANICAL COLLECTORS—

NELSON, MENZIES, GOOD, CALEY, ALLAN CUNNINGHAM, HOVE,
CONSIDEN, AND BURTON.

1. The Banksian Artists.

BANKS was a munificent patron of artists. He wisely resolved that artists were a necessary part of expeditions of discovery, as necessary as the scientific and recording staff. Accordingly he took with him no less than three artists on the "Endeavour," and secured the appointment of competent artists on other expeditions.

The following enlightened sentiments, taken from the second codicil to his will, express his views that an artist is a necessary officer of a botanic garden:—

Deeply impressed by an opinion which I still continue to hold, and believe to be founded in truth, that the establishment of a botanic garden cannot be compleat unless a resident draughtsman to be constantly employed in making sketches and finished drawings of all new plants that perfect their flowers and fruits in it be a part thereof. . . .

Following is a statement of the botanical and other drawings accumulated by Banks:—

Of drawings there are, first, both those of plants and animals made by the natural history draughtsman employed by Sir Joseph Banks, in Cook's first voyage, amounting to 1,163; and of Cook's second voyage, a smaller number—301, made by the younger Forster, the assistant-naturalist in that voyage. A volume of drawings—forty-eight in number—by the late Mr. Francis Bauer, illustrating the structure and diseases of wheat. Miscellaneous finished drawings and sketches of the same artist, chiefly of the more remarkable plants which had flowered in the Royal Gardens at Kew during half a century—that is, from the date of Mr. Bauer's connection with that establishment in 1789 to the time of his death in 1840, amounting to 1,484; all of which were made at the expense of Sir Joseph Banks. A collection of finished drawings of New Holland plants, 203 in number, made during the voyage of Captain Flinders, by the late Mr. Ferdinand Bauer, who was employed as natural history painter in that voyage. A volume containing 510 drawings and sketches by Ehret, the most celebrated botanical painter of his time, chiefly of plants which had flowered in the gardens in the vicinity of London, about the middle of the last century; and a considerable collection of drawings of Guiana plants by Sir Robert Schomburgk. Besides all these, there are other botanical drawings of various artists and different periods, most of them of less importance than the foregoing, but altogether amounting to 4,660. The collection of drawings forms a highly interesting series, from the earliest and rudest attempts at delineation of plants in the 15th century, to the finished drawings of the two brothers—Francis and Ferdinand Bauer, which for beauty, accuracy, and completeness of details, are unequalled in this or any other country in Europe. The engraved copperplates mentioned in Sir Joseph Banks' will, and which are still unpublished, are of plants found by Sir Joseph Banks in Cook's first voyage, amounting to 743, and a smaller number of plants observed by Forster, in Cook's second voyage, the drawings of both series having been made in those two expeditions.*

* Robert Brown's evidence before the Royal Commission on the British Museum, 1847-8.

Banks did not keep these drawings to himself.

The drawings and specimens seem to have been available for reference very shortly after the return of the travellers (from the voyage of the "Endeavour").

Thomas Martyn, writing to Pulteney in February, 1772, speaks of having recently "spent a morning with Mr. Banks and Dr. Solander, to turn out 3,000 specimens of plants, 1,000 of them new species, and coloured drawings of 700, all elegantly and accurately done upon the spot."* They were also consulted by contemporary botanists in connection with their work; thus the drawings of *Zicria* and *Eriostemon* bear these names in the handwriting of Smith, who established these genera. A reviewer in König and Sims's "Annals of Botany" (ii, 366), speaks of the "vast collection of natural productions, and especially of dried plants, with complete descriptions and excellent delineations, both made on the spot, opened as it were a new world to the naturalist, and to the botanist in particular; for these treasures, so ardently expected, although not as yet committed to the press, have by no means been lost to the public, having, by their liberal possessor, been rendered easily accessible to every one desirous of informing himself in the natural history of New Holland." Gaertner, who published many of the Australian novelties in his important work "*De Fructibus et Seminibus Plantarum*" (1788-1805), continually acknowledges the help he received from the Banksian Herbarium and from Solander's MSS. M. Deleuze, in his biography of M. Gaertner, says: "M. Banks communiqua à M. Gaertner tous les fruits qu'il possédoit sans exception; il lui permit non seulement de les voir, mais de les couper de les analyser pour en dessiner l'anatomie; il lui donna tous ceux qu'il avoit doubles."†

In more recent times the drawings were consulted by Sir Joseph Hooker when preparing his "*Flora Antarctica*."

He speaks in high terms of the value of the collections of Banks and Solander in New Zealand and Tierra del Fuego, and adds: "Valuable as the dried plants are, their utility is doubly increased by the excellent descriptions, and by the beautiful coloured drawings executed on the spot, which accompany them, and were made at Sir Joseph Banks' own expense."‡ Seemann throughout his "*Flora Vitiensis*" (1865-73) refers to the drawings and specimens of the plants from the Friendly Islands, and Lowe cites the Madeira collections throughout his "*Flora of Madeira*" (1857-72). The Trustees of the British Museum gave permission to the New Zealand Government to obtain a set of engravings of the New Zealand plants from the copper plates; these it was proposed to reproduce in a reduced form in connection with Kirk's "*Student's Flora of New Zealand*." The carrying out of this project was arrested by the death of the author in 1897, but it is still the intention of the New Zealand Government to complete the literary portion of the work, and to issue the plates in a separate volume. A list of the Madeira drawings will be found in the *Journal of Botany*, 1904, p. 3.

It is a matter for regret that Bentham did not consult the drawings when preparing his valuable "*Flora Australiensis*."§ His work at the National Herbarium was, however, mainly in connection with the collections made by Robert Brown, then the property of Mr. J. J. Bennett, but housed in the Department of Botany by permission of the trustees, to whom they were subsequently bequeathed; and, as the following pages will show, the plants of Banks and Solander were to a considerable extent passed over unnoticed.||

Of the New Zealand plants there are 173 sketches, 205 finished drawings, and 185 plates; of those of the Friendly Islands—14 sketches, 114 finished drawings, and 88 plates; of those of Tierra del Fuego—1 sketch, 79 finished drawings, and

* Gorham, "Memoirs of John and Thomas Martyn," 141 (1830).

† *Ann. Mus. d'Hist. Nat.*, i, 217 (1802).

‡ "Botany of the Antarctic Voyage: *Flora Antarctica*," ii, 222 (1847).

§ See above, p. 43.

|| "Introduction to Banks and Solander Plants" (J. Britten).

66 plates; of those of Brazil—1 sketch, 37 finished drawings, and 23 plates; of those of Java—72 sketches, 44 finished drawings, and 29 plates; of those of Madeira—2 sketches, 22 finished drawings, and 11 plates; making a total of 675 sketches, 863 finished drawings, and 742 copper plates, of which 722 are represented in the collection of engravings.—(J. Britten, *op. cit.*)

GEORG DIONYSIUS EHRET (1710–1770).

Born at Baden in 1710. After working for Jussieu in France, he settled in England in 1740, and supplied the illustrations for Trew's "Plantæ Selectæ," and Brown's "History of Jamaica." He also painted a large botanical collection for the Duchess of Portland.

He published the celebrated plate of Linnæus' twenty-four classes. He was the most distinguished botanical artist of his time. His figures of Banks' Newfoundland plants have already been referred to.

I proceed to give some notes in regard to Banks' other artists. First of all let us deal with the "Endeavour."

SYDNEY PARKINSON.

He is the best known of the artists of the "Endeavour."

The biography of Sydney Parkinson, the draughtsman to whom the figures of the plants and animals observed on the voyage are due, is sufficiently recorded in the preface to his "Journal of a Voyage to the South Seas in H.M.S. 'Endeavour,'"* published after his death, and edited by his brother Stanfield; † it a few words may be said with special reference to his connection with Banks. His brother tells us that he was put to the business of a woollen-draper; but, taking a particular delight in drawing flowers, fruits, and other objects of natural history, he became so great a proficient in that style of painting, as to attract the notice of the most celebrated botanists and connoisseurs in that study. In consequence of this, he was, some time after his arrival in London, recommended to Joseph Banks, Esq., "whose very numerous collection of elegant and highly-finished drawings of that kind, executed by Sydney Parkinson, is a sufficient testimony both of his talents and application." This collection included forty drawings of animals made from figures and specimens brought from India by John Gideon Loten, Governor of Ceylon, and twelve drawings of plants (1767–8), which, like those of the animals, are on vellum. Two, of Indian plants, are probably from the drawings brought back by Loten; others are noted as from "Mr. Lee, Hammersmith," and "Kew." According to the "Dictionary of National Biography," it was by the advice of James Lee (not "an artist," but the well-known nurseryman of Hammersmith) that Parkinson was engaged by Banks to accompany the voyage to the South Seas. He died during the return voyage on January 26th, 1771.

The total number of drawings made by Parkinson during the voyage was 955, of which 675 were sketches and 280 finished drawings. All the Australian and most of the New Zealand ones are sketches; those from Brazil, Madeira, Tierra del Fuego, and the Friendly Islands are nearly all finished drawings; of the Java plants there are 44 finished drawings and 72 sketches—in a few cases there are both sketch and finished drawings of the same plant. On the back of each finished drawing are pencil notes by Parkinson, indicating the colour of the leaves, flowers, &c., and the locality is added in Banks' hand.†

* A quarto, published in 1773, with twenty-seven engraved plates of scenery, buildings, natives, implements, &c., of New Zealand, Otaheite, and Tierra del Fuego.

† J. Britten, *op. cit.*

No. 29.—ONE OF THE ARTISTS OF THE " ENDEAVOUR " (? 1749-1771).

The following additional biographical notes are taken from "British and Irish Botanists" (Britten and Boulger), p. 132:—

Born Edinburgh. Drawings in Dep. Bot., Brit. Mus. "Journal of Voyage," 1773 (*cfr.* "Preface" and "Explanatory Remarks," list of plants, 37-50). Pritzel, 240; Jackson, 223; Portrait prefixed to "Journal," engr. Jas. Newton.

ALEXANDER BUCHAN (-1769).

Banks, in his journal, refers to him as "the young man I brought out as landscape and figure painter." He had a fit at Tierra del Fuego, 16th January, 1769, and died at Tahiti, 17th April, in the same year.

Banks says: "I sincerely regret him as an ingenious and good young man, but his loss to me is irretrievable."

In Parkinson's "Voyage" there is only the mere mention of Buchan's epilepsy and unconsciousness on the 16th, and his death and burial on the 17th April.

"Cook's Journal," ed. by Wharton, p. 64, says:—

"Monday, 17th. At two o'clock this morning, departed this life, Mr. Alex. Buchan, landscape draftsman to Mr. Banks, a gentleman well skill'd in his profession, and one that will be greatly missed in the course of this voyage. He had long been subject to a disorder in his bowels, which had more than once brought him to the very point of death, and was at one time subject to fits, of one of which he was taken on Saturday morning; this brought on his former disorder, which put a period to his life."

I know nothing further of him.

JOHN REYNOLDS (-1770).

In Wharton's "Cook" and Hooker's "Banks" merely the date of Reynolds' death is given. Even Parkinson, who was an artist himself, does not mention Reynolds. He died 18th December, 1770, at Batavia.

The only other reference found is in Roth's "Port Mackay," where it is stated that some original sketches in the British Museum attributed to Buchan were probably made by Reynolds.

FRANCIS BAUER.

In Pritzel is the following bibliographical note:—

BAUER, FRANZ. *Tabulæ ineditæ plantarum in prima Cookiana expeditione annis 1769-71 ab Josepho Banksio et Daniele Solandro collectarium*, s.a. folio 28 tab. Bibl. Regia Berol.

Liber emtus est Londini ex Bibliotheca Fieldiana. Tabulæ aeri insculptæ absque inscriptione inter omnes summi artificis facile pulcherrimæ.

If this be correct, then Francis Bauer is another artist set to delineate the "Endeavour" plants.

The YOUNGER FORSTER was artist on Cook's Second Voyage.

We now come to the celebrated voyage, or series of voyages, of the "Investigator," referred to at length, under Robert Brown, p. 102, and Flinders, p. 203. The "Investigator" carried two artists, William Westall, "landscape and figure draughtsman," and Ferdinand Bauer, "botanical draughtsman."

WILLIAM WESTALL, A.R.A., F.L.S. (1781-1850).

Born at Hertford on 12th October, 1781. When only 19 was appointed draughtsman to Flinders' Expedition. Wrecked off the north coast of Australia, rescued and conveyed to China. Sketched there, and also in India. Returned to England after an absence of four years. Afterwards went to the West Indies; nearly lost his life by shipwreck at Madeira on the way there. Returned to England in 1805, and began exhibiting at the Academy. In 1812 elected A.R.A. He died from the effects of an accident on January 22, 1850. Amongst his pictures at South Kensington is one of Port Jackson.

A list of the drawings executed by him in his capacity as artist to Flinders' Expedition will be found below.

One of his best works is entitled:—"Great Britain Illustrated," a Series of Original Views, with Descriptions by T. Moule, *about 160 steel-plate engravings, engraved by Flinden and others.* First edition, 1830. Nearly all the cities and towns are depicted and much of the best natural scenery.

NO. 30.—WILLIAM WESTALL, THE ARTIST
OF THE "INVESTIGATOR." (1781-1850).

The Australian drawings of Westall were sent by the Admiralty to Sir Joseph Banks—"agreeably to your desire, in order to their being kept in a state of preservation until that artist's return," 22nd August, 1804.*

Banks to Brown,† 30th August, 1804, says: "Mr. Westall has taken his option to leave the ship (? "Calcutta"), and seek his fortune in India. He sent home several sketches, some of them

*Hist. Rec., v, 455.

† *Ib.*, 462.

interesting. His finished drawings were all spoiled in the wreck" (of the "Porpoise").

Mr. Marsden, Under Secretary to the Admiralty, writes to Banks, 21st February, 1805,* sending Westall's sketches.

Mr. Marsden wrote to Westall, 26th February, 1805,† referring him to Banks in the matter of selection of a sketch to be finished for the exhibition (perhaps of the Royal Academy).‡

List of Landscapes by W. Westall in Flinders' "Terra Australis."

Volume I.

1. View from the south side of King George's Sound.
2. Entrance of Port Lincoln, taken from behind Memory Cove.
3. View on the north side of Kangaroo Island.
4. View of Port Jackson, taken from the South Head.

Volume II.

5. View of Port Bowen, from the hills behind the Watering Gully.
6. View of Murray's Islands, with the natives offering to barter.
7. View in Sir Edward Pellew's Group—Gulph of Carpentaria
8. View of Malay Road, from Pobassoo's Island.
9. View of Wreck Reef Bank, taken at low water.

From the following list of original pencil and water-colour drawings of the Expedition, (which is of special interest if read in conjunction with Flinders' "Voyage") it would appear that Westall's drawings are at present in the library of the Royal Colonial Institute, London§:—

1 to 10. Water-colour drawings of Head-lands on the South, East, and North Coast of Australia, surveyed or discovered during the Expedition. These were prepared in England from the original sketches, with a view to being engraved in the book of Charts accompanying Captain Flinders' account of the Expedition. (See Nos. 129 to 138, below.) 11. King George's Sound, from the North Side: <i>a.</i> Point Possession. <i>b.</i> Mistaken Isle. <i>c.</i> Bald Head. <i>d.</i> Peak Head. <i>e.</i> Seal Island. <i>f.</i> Break-sea Island. <i>g.</i> Port Royal Harbour. 12. Do. Part of Oyster Harbour. 13. Do. from the Isthmus below Peak Head, looking northward.	14. King George's Sound, from the high land near Peak Head. <i>a.</i> Seal Island. <i>b.</i> Mistaken Isle. <i>c.</i> Point Possession. 15. Native of King George's Sound. 16. View on Middle Island above Goose Island Bay: <i>a.</i> Goose Island. <i>b.</i> Cape Arid. <i>c.</i> Cape Pasley. <i>d.</i> Salt Lagoon. <i>e.</i> Goose Island Bay. 17. Lucky Bay, looking eastward towards Cape le Grand. 18. Sleaford Mere, from the northern end of Cape Catastrophe. 19. View of Thistle Island (near Port Lincoln), named after Mr. Thistle, the "Master" of the "Investigator," who, with a boat's crew, was drowned near Cape Catastrophe.

* *Hist. Rec.*, v, 558.

† *Ib.*, 564.

‡ See also No. 74, p. 67, and No. 120, p. 68.

§ It would be delightful to have these Australian drawings reproduced in colours, so that Australians might study them.

20. Water-colour Copy of Native Drawings of Human Figures, and a Kangaroo, in a cave near Memory Cove.
21. Port Lincoln, a native hut in the foreground: *a.* Grantham Isle. *b.* Boston Isle. *c.* Port Lincoln. *d.* Stamford Hill.
22. Do.
23. Do. from North Side Hill: *a.* Boston Isle. *b.* Boston Bay. *c.* Cape Donington. *d.* Bicker Isles. *e.* Surfleet Hill. *h.* Kirton Point. *i.* Port Lincoln.
24. Do. distant view of.
25. Head of Spencer's Gulf, looking east: *a.* Mount Brown.
26. Do.
27. Three Drawings of a Native of Spencer's Gulf.
28. Drawings of a Eucalyptus and Banksia, Spencer's Gulf.
29. On Kangaroo Island. Head of Antechamber Bay.
30. Do. Sailors and Servants.
31. Do. Eucalyptus and Seals.
32. Port Phillip. Distant View of western arm of Western Port, looking to the south-west.
Cape of Good Hope.
33. View near Wynberg.
34. View at Foot of Table Mountain.
35. View near Simon's Bay.
36. At Foot of Table Mountain.
37. Kloof on Table Mountain.
38. Do. do.
39. Table Mountain.
East Coast (of Australia).
40. Port Jackson.
41. Do. Blue Mountains in the distance.
42. Do. Grass trees.
43. Do. Native of.
44. Do. do.
45. Do. do.
46. Do. Head of an old blind man, native of.
47. Do. Figure of a boy, native of.
48. Do. Head of the same boy.
49. Do. Group of native figures.
- 50 to 62. Views on the Hawkesbury River (including one of Broken Bay).
63. Port Curtis.
64. Do. View near.
65. Pine Bay, north side of.
66. Keppel Bay from South Hill, on the south side of the Bay: *a.* Sea Hill and Cape Keppel.
67. Do: *a.* Broad Mount.
68. Do. A native of.
69. Do. do.
70. Do. do.
71. Do. do.
72. Do. Trees.
73. Keppel Bay. Two drawings of native huts.
74. Port Bowen, from the north side of the harbour: *a.* Cape Clinton. (A picture was painted from this drawing, by Mr. Westall, by order of the Admiralty, and is now in one of the rooms at the Admiralty.)
75. Norfolk Island Pines, near Port Bowen. (These are *Araucarias*, but not identical with the Norfolk Island species. J.H.M.)
76. Young Norfolk Island Pines, do.
77. Distant Sound.
78. Thirsty Sound, from Pier Head.
79. Shoal Water Bay, from the entrance to Thirsty Sound: *a.* Townshend Isle and Cape.
80. Do. Head of a native of.
81. Do. Female, native of.
82. View of Thirsty Sound.
83. Do. do.
84. Do. do.
85. Do. do.
86. On one of the Percy Isles. Part of the Northumberland Island group.
87. Norfolk Island Pine, on the same Island.
88. Palm Tree and Pandanus, do.
89. Yucca (*sic*), neighbourhood of Port Bowen.
90. Cereus, or Gigantic Prickly Pear (*sic*), do.
North Coast (of Australia).
91. Gulf of Carpentaria. Prince of Wales' Isles. (2) Eastern opening of the Gulf.
92. Do. Sir Edward Pellew's Group. View of Vanderlin's Island from the north.
93. Do. do.
94. Do. On Groote Island.
95. Do. do.
96. Do. do.
97. Gulf of Carpentaria. Cape Arnheim, western opening of.
98. Do. do.

99. Gulf of Carpentaria Distant Isles near Cape Arnheim. English Company's Isles from Mount Dundas.
100. Do. English Company's Isles from near Cape Arnheim.
101. Gulf of Carpentaria. View in Arnheim Harbour. Melville Bay.
102. Do. View from near Cape Arnheim.
103. Do. Body of a native of Cape Arnheim, shot by the Expedition in a conflict at Morgan's Island.
104. Do. Figure and portrait of Wogah, native of Caledon Bay
105. Do. View near Cape Wilberforce.
106. Do. Young Pandanus.
107. Do. Palm Tree.
108. Do. Fan Palm.
109. Do. Palm Tree.
110. Do. Proa Bay—so called because a fleet of Malay Proas was found by the Expedition anchored in the bay, under the command of a Malay Chief—Probasso.
111. Do. Portrait of Probasso.
112. Do. The Malay Fleet in Proa Bay—engaged in collecting Tre-pang (Beche-de-mer) for the China market.
113. Do. Two Proas of the Malay Fleet under full sail.
114. Do. Drawings of Turtles and Sword-fish by the natives, found in the interior of Cavern Island, Gulf of Carpentaria.
115. Do. Drawings of a snake found at do.
116. Murray Isles. Torres Straits from the north.
117. Canoe of Murray Isles alongside the "Investigator," offering coconuts, &c., for barter.
118. Water-colour Drawing painted from the original sketches, Nos. 116 and 117. Murray Isle with canoes of natives approaching the "Investigator," to offer articles for barter. (This is one of the drawings which were saturated with seawater when the "Porpoise" was lost on Wreck Reef, and it was further mutilated by the rescued sheep being driven over it by John Franklin and the other midshipmen. Mr. Westall partially restored it to enable him to paint the subject, but he did not attempt to obliterate the destructive sheep marks.)
119. View of Government House, Sydney, from "Sydney Cove," by William Westall, R.A., in the year 1802. The main body of the House was the residence of Governor Phillip, and the long drawing-room was built by Governor King.
120. Port Bowen. View from the summit of Mount Westall, looking northwards: *a.* Townshend Isle. *b.* Leicester Isles. *c.* Cape Townshend. *d.* Percy Isles. *e.* Strong-tide Passage. (A picture was painted from this drawing by Mr. Westall by order of the Admiralty, and is in one of the rooms of the Admiralty.) See No. 74.
121. Port Bowen. Finished pencil-drawing taken from the original sketch from nature, No. 122. (Signed by Mr. Westall, which he rarely did, except in the case of finished drawings taken from original sketches).
122. Port Bowen. Distant view of Port Bowen from Mount Westall: *a.* Island Head. *b.* Entrance Isle and Entrance to Port Bowen. *c.* Cape Clinton. *d.* Cape Manifold. *e.* Broad Mount.
123. Pine Bay, North side of.
124. Shoal Water Bay, South side, from Pier Head. Entrance to Thirsty Sound: *a.* Shoal Water Bay. *b.* Mount Westall. *c.* Pine Mount. *d.* Thirsty Sound.
125. Gulf of Carpentaria. Round Hill Island from Round Head.
126. Port Curtis.
127. Gulf of Carpentaria. Round Hill Island from Round Head.
128. Port Curtis, View near.
- 129 to 138. Original sketches of the water-colour drawings, Nos. 1 to 10, afterwards executed for the purpose of being engraved and placed in the book of Charts of Captain Flinders' Expedition.*

* "Royal Colonial Institute Library Catalogue," 1895, pp. 54-56.

FERDINAND BAUER (1760–1826).

The following biographical notes are taken from Britten and Boulger, p. 12:—

Born at Feldsberg, Austria, 20 Jan., 1760; died at Hietzing, Vienna, 17 March, 1826. Accompanied Sibthorpe to Greece, 1784. Flinders' Expedition, 1801–5. "Illustrationes Floræ Novæ Hollandiæ," 1813. Lambert's "Pinus," 1810–37. Lindley's "Digitalis," Pritz. 17; Jacks., 398; Nich. Illust. vi, 838; *Ann. and Mag.* iv (1840), 67; *Proc. Linn. Soc.*, i, 1839, 39; *Journ. Bot.*, 1843, 106.

On the Australian expeditions of the "Investigator," Bauer and Robert Brown necessarily worked a great deal together, since one was the botanist and the other the botanical draughtsman.

Writing to Banks, 12th December, 1804, Brown says*: he did not go to Van Diemen's Land with Brown in December, 1803 and 1804. During last winter ((1804) Bauer was "uncommonly fortunate in the detection of new species of Orchideæ. A very few days before my return to Sydney he embrac'd an opportunity of visiting Norfolk Island, where he still remains." Particulars of his sojourn there, taken from Lhotsky's account, will be found in my "Flora of Norfolk Island."†

Brown, writing to Sir J. E. Smith, 12th January, 1806, says‡: Bauer "has made about 1,600 drawings, all of them accompanied by minute dissections."

Following is Brown's list of the same given by Banks§:—

Sketches of plants made on the coasts of New Holland				
and New South Wales	...	...	...	1,541
Do do Norfolk Island	...	...	...	80
Do do Timor	...	...	...	60

I have already touched, under Brown, on the number of drawings by Ferdinand Bauer of the "Investigator" expedition, and the following copy of a letter from Bauer, kindly communicated by Mr. F. M. Bladen, refers to the time Banks was supervising Bauer's work in England on behalf of the Admiralty||:—

"Bauer's Catalogue of Drawings." (No date). Mr. Bauer has the honor to submit to the Hon. Sir Joseph Banks a Catalogue¶ of the finished Drawings made by him from the Sketches he collected in New South Wales in the Voyage of His Majesty's Ship "Investigator."

* *Hist. Rec.*, v, 510.

† *Proc. Linn. Soc.*, N.S.W., 1904, p. 778.

‡ *Hist. Rec.* vi., 11.

§ *Ib.*, p. 18.

See the following MSS. volume at Kew:—"Bauer, Ferdinand. Enumeration of plants drawn by Ferdinand Bauer, and forming three volumes, in the Library of the Admiralty (now in the British Museum, Botanical Department, South Kensington), compared by Mr. E. G. Baker, 1838. W. B. H[emsley]. 4to."

¶ I have a copy of the catalogue, but have not reproduced it.

See also Endlicher, S. "Prodromus floræ norfolkicæ sive catalogus stirpium. . . . a F. Bauer collectæ et depictæ, &c. Vindobonæ, 1833. 8vo."

See also Lindley, John,—"Digitalium monographia . . . ad icones F. Bauer, penes W. Cattley. Londini, 1821." Fol.

Following are some extracts from an appreciation of Ferdinand Bauer, by Dr. John Lhotsky:—

Although considerable delay took place ere Flinders' voyage was published, still its intrinsic and geographical value was duly appreciated. Bauer bore his full share in contributing to the production of this work, and I incline to think that he assisted Mr. Westall in executing the landscapes, for I know of no book, (the "Vues des Cordillères" even not excepted) where plants and groups of foreign trees—*Seaforthia*, *Xanthorrhœa*, and *Casuarina*—are portrayed with such surpassing beauty and truth. In the Appendix, the description of ten species of plants are from Mr. Brown; these had been selected out of "the invaluable collection of drawings made by Bauer." It is easy to perceive, by a glance at these plates, that they were never executed at Home, and from dried specimens. Figures of *Flindersia australis*, *Eudesia tetragona*, and *Franklandia juncifolia*, are acknowledged by botanists to surpass everything of the same kind.

In the year 1813, Bauer began his "*Illustrationes Floræ Novæ Hollandiæ*"*—a work which did not meet with the encouragement it deserved. The cause of failure lay wholly with the author himself; but the error which he committed was of the most honourable kind; for it may be truly said that this publication outstripped, by at least a score of years, the capacities and attainments of the time at which it appeared. There is something very naive in the remark made on the subject in a letter written by Bauer's brother. He says: "Ferdinand could not find people capable either of engraving or colouring the plates properly, and he was consequently obliged to execute every part of the work with his own hands, thus occupying far too much time. Very few, indeed, coloured copies has he been able to prepare and sell." Thus a botanical book which would have been appreciated and supported in the year 1834, or even during the magnificent and art-encouraging reign of Napoleon in France, fell to the ground in 1814. It appears, from documents in my possession, that Ferdinand was excessively and unduly disheartened by this failure; so much so, that, fearing he should never be able to do anything else, he gathered up his papers, and closing, as it were, his accounts and transactions with the literary and scientific world. . . .

And here I shall conclude my notice of the part which Ferdinand Bauer bore in the expedition of the "Investigator," and proceed to that period when Flinders published the "Narrative" of his voyage. The high opinion which the Commander entertained of the subject of our memoir appears from many passages of his work. In several instances, where Brown was otherwise engaged, Bauer went to investigate portions of the coast, and in different cases, Captain Flinders speaks of them conjointly, as "Botanists": a juxtaposition than which nothing can be more flattering to Bauer. On the 5th of February, 1802, an honour was conferred upon him that promises to perpetuate his memory. To the south-east of Franklin's Island, at the distance of 11 miles, there is a low projection of the mainland, to which the name Point Brown was given, in compliment to the naturalist; and 4 leagues farther, in the same line, a cliffy head received the appellation of Cape Bauer, after the painter of natural history.†

FRANCIS BAUER, F.R.S., F.L.S. (1758–1840).

Botanic painter. Born at Feldsberg, in Austria; the elder brother of Ferdinand Bauer, also a botanic painter. Came to England in 1788, and was, by the liberality of Sir Joseph Banks and with the King's sanction, attached as draughtsman to the Botanic Gardens at Kew, where he remained till his

* Bauer, Ferdinand. *Illustrationes floræ Novæ Hollandiæ sive icones generum quæ in "Prodromo Floræ Novæ Hollandiæ et Insulæ Van Diemen descripsit, R. Brown. Londini."* 1813. Fol.

† "Biographical sketch of Ferdinand Bauer, natural history painter to the expedition of Captain Flinders, R.N., to Terra Australis." (Hooker's *Lond. Journ. of Bot.*, ii, 106 (1843).

death. He was exceedingly skilful and accurate in the delineation of plants. Among his published illustrations are "Delineations of Exotic Plants cultivated in the Royal Gardens at Kew," 1796. . . .

A monument is erected to his memory in Kew Church. At Kew there is a painting in oils, artist uncertain. Half-length, seated in a green coat, leaning on the back of his chair, and holding a three-cornered hat; face three-quarters to the right. Dimensions—36 inches by 27½ inches.—Hooker collection.*

See also a paper "On the Ergot of Rye," by Francis (Franz) Bauer. *Trans. Linn. Soc.*, xviii, 475. Read 21st January, 1840. The plate is dated 1805, and portion of another 1839†.

No better testimony of Banks' opinion of the merits of Francis Bauer can be given than the following extract from his will:—

I give and bequeath unto Mr. Frederick (should be Francis) Bauer, of Kew Green, who has been employed by me as a draughtsman for thirty years, one annuity of three hundred pounds . . . on condition that he continues to reside on Kew Green, and employs himself in making drawings of plants that flower in the collection at Kew, in the same manner as he has hitherto done, and the drawings which he shall so make be added to the collection now in his hands, and which revert to me or to my representatives at the time of his death.—(Quoted by Robert Brown.)

Following is the epitaph on his monument in Kew Church‡:—

In memory of Francis Bauer, Esq., F.R.S., F.L.S., &c., Botanical Painter to His Majesty George III, and resident Draughtsman for fifty years to the Royal Botanic Garden at Kew, where he devoted himself to the advancement of natural science, under the munificent patronage of Sir Joseph Banks, Bart., the President of the Royal Society. In the delineation of plants he united the accuracy of a profound naturalist, with the skill of the accomplished artist, to a degree which has been only equalled by his brother Ferdinand. In microscopical drawing he was altogether unrivalled, and science will be ever indebted for his elaborate illustrations of animal and vegetable structures, of which invaluable specimens are preserved in the British Museum and in the University of Gottingen. He was born at Feldsberg, in Austria, on the 4th of October, 1758, and accompanied his friend the Baron Joseph Jacquin to England in 1788. He settled at Kew in 1790, where he lived—admired, loved, and respected. He died on the 11th of December, 1840, aged 82 years. The works of Francis Bauer are his best monument. Friendship inscribes this record on his honoured tomb.

The Saxifrageous genus *Bauera* was named after the brothers, and also the following other Australian plants:—

Acronychia Baueri, Schott.; *Dodonæa Baueri*, Endl.; *Lasiopetalum Baueri*, Steetz.; *Acacia Baueri*, Benth.; *Chorizema Baueri*, Meissn.=*C. Henchmanni*, R.Br.; *Phyllota Baueri*, Benth.=*P. phylcioides*, Benth.; *Tephrosia Baueri*, Benth.=*T. purpurea*, Pers.; *Calythrix Baueri*, Schau.=*C. tetragona*, Labill.; *Eucalyptus Baueriana*, Schau.; *Eucalyptus Baueriana*, Miq.=*E. Stuartiana*, F.v.M.; *Harmogia Baueriana*, Schau.=*Bæckea densifolia*, Sm.; *Murucuja Baueri*, Lindl.=?; *Enchysia Baueri*, Presl.=?; *Isotoma Baueri*, Presl.=?; *Laurentia Baueri*, A. DC.=?; *Utricularia Baueri*, Br.; *Alternanthera Baueri*,

* "Kew Catalogue and Portraits of Botanists," 1906, p. 8.

† See also "Bauer, Francis. Memoranda and observations on several diseases in corn. 25pp. 4to., bound with Banks' 'Short Account,' 1805, dated Oct., 1805." (Kew Library.)

‡ *Kew Bulletin*, 1891, p. 303.

Moq.=*Gomphrena Brownii*, Moq.; *Banksia Baueri*, Br.; *Grevillea Baueri*, Br.; *Aristolochia Baueri*, Duch.=?; *Genoplesium Baueri*, Br.=?; *Peperomia Bauariana*, Cas. DC.=*P. leptostachya*, Hook. and Arn.; *Thysanotus Baueri*, Br.

Following are some works depicted by Francis (Franz) Bauer, additional to those already referred to:—

(a) “*Strelitzia depicta*, or coloured figures of the known species of the genus, &c.” London, 1818. fol.

(b) “Illustrations of Orchidaceous plants . . . with notes and prefatory remarks by J. Lindley.” London, 1830–38. fol. (Genera 20, Fructification 15).

(c) “A catalogue of the botanical drawings, books, microscopes, microscopical preparations, &c., of the late F. B. . . . including several works by his brother Ferdinand Bauer, &c.” London, 1841. 8vo.

(d) “Aiton, William Townsend. and Bauer, F.: Delineations of Exotick Plants cultivated in the Royal Garden at Kew. Drawn and coloured, and the Botanical Characters displayed according to the Linnean System, by F. Bauer.” Pts. 1–2, atlas folio, with 20 coloured plates illustrating the Genus *Erica*; bds., uncut; RARE. 1796.

The plates are extremely well-engraved and coloured, and by reason of its contents the work is a companion to Andrews’ great book on Heaths.

(e) “Hooker, W. J.,* Genera Filicum; or Illustrations of the Ferns . . . from the . . . drawings of the late F. Bauer, &c.” London, 1842. large 8vo.

* Mr. Hooker (afterwards Sir W. J.) was appointed to the Chair of Botany at Glasgow University on the recommendation of Sir Joseph Banks. He succeeded to the Directorship of Kew in 1840, and thenceforward a new era dawned for the Royal garden.

2. The Banksian Botanist-Librarians.

1. SOLANDER.

It is impossible to dissociate Banks' work from that of his three botanist-librarians, Solander, Dryander, and Brown, who were the custodians of the library of which we have spoken, and who largely carried on the botanical work of the kingdom by means of the Banksian Herbarium, which was really a public institution although maintained by the purse of Banks.

Daniel Carl Solander was born at Pitea, Sweden, 12th February, 1733, was a pupil of Linnæus, and came to England in 1759. He declined the post of Professor of Botany at St. Petersburg in 1762. He was appointed assistant in the British Museum in 1765, and shortly afterwards entered the employment of Banks, with whom and with Cook he went on the voyage of the "Endeavour," 1768-1771. He received the degree of D.C.L., Oxon., 1771. His relation to the British Museum is not clear; he is said to have been appointed keeper of Printed Books in 1773. He appears to have continued in the employment of Banks on the return of the "Endeavour," and lived in his house as "librarian" until the time of his death in 1782.

Like his master Linnæus, he was a naturalist in the wide sense of the word—a botanist and a zoologist, although, like Linnæus, he acquired the greater reputation as a botanist.

We have so few biographical details in regard to the botanist-coadjutor of Banks who came to New Holland on Cook's First Voyage, that the following extracts from Sir J. E. Smith's work* are interesting. The work will be referred to in the footnotes as "Corresp. Linnæus." They contain abundant references to Cook's First Voyage (in which Banks and Solander sailed), and to Cook's Second Voyage (in which the two Forsters were the naturalists). They also throw much light on the character of Solander, and why the descriptions of the plants collected by Banks and Solander were not published.

Linnæus to John Ellis, 6th Nov., 1759.

In the beginning of April, my friend Solander took leave of me for England; but ever since that time he has remained at the extremity of Scania, towards Elsinore. Whether he is detained there by indisposition, as his letters indicate, or whether he is afraid to venture on shipboard on account of the war, I know not. Having written by him to you and other friends, I have been in daily

* "A Selection of the Correspondence of Linnæus and other Naturalists," by J. E. Smith (2 vols. 1821.)

expectation of hearing of his arrival, and at the same time of learning how you were. I have just had a letter from him saying he hopes to be with you in about a week.*

Linnaeus to Ellis (Latin). Upsal, August 11, 1760.

I acknowledge myself greatly indebted to you for the peculiar kindness with which you have received my friend Solander; who, in his letters, cannot sufficiently praise your hospitality, in not only welcoming him yourself with paternal affection, but in recommending him also to your friends.†

Linnaeus to Ellis, (?) 1760.

I write in haste, not being willing to defer the above matters; any more than my most grateful acknowledgments for all your favours to my dear Solander. I only fear that his residence in your part of the world should be too expensive to allow of its being long continued.‡

Dr. Garden§ to Ellis, (?) January, 1761.

I confess I often envy you the sweet hours of converse on this subject (Natural History) with your friends in and about London. How must you enjoy Solander. O my God! ||

Dr. Garden to the same, (?) Jan., 1761.

My respectful compliments wait on your new friend and son of Apollo, Solander.¶

Solander to Ellis, London, Nov., 1761. (English orthography partly corrected.)

By Mr. Alchorne's** letter you may see, Sir, that I have been a good deal taken about Dr. Hill's†† new work. It contains not, as I thought, all the compound and aggregate flowers, but only the radicated flowers. I never met with any person who had it, or could show it me; therefore I desired Mr. Alchorne to give me his idea, because he has had an opportunity of looking it over; and he has been so obliging as to give me this letter to send you.

This summer, in August, they have discovered a new marble in Gottland, in Sweden. I have seen two tables of it, sent as a present to a merchant here in London. It is of a very odd colour, almost like tallow cut into small square pieces, and mixed with light-green soap. In some pieces there are spots of dark-red jasper, and dark-green porphyry. Besides this, they have lately discovered a black marble in the same island, said to be very fine and heavy, almost as heavy as the black one we had before; but I have not seen a specimen

Dr. Ribe and Mr. Varney present their humble respects.‡‡

Solander to Ellis. London, March 5, 1762. (Slightly corrected.)

Last night I was at the Royal Society. It was a long meeting, but very few things of consequence. One Rev. Dr. Foster had sent two letters; in one he will prove against Mr. Collinson, that swallows really, during winter, immerse themselves in water. He says he has observed them to assemble in large flocks

* Corresp.: Linnaeus, i, 125. Ellis was the great authority on the Corallines.

† *Ib.*, 134.

‡ *Ib.*, 136.

§ Dr. Garden, of Charlestown, South Carolina, U.S.A., where he was a physician and naturalist.

|| Corresp.: Linnaeus, i, 502.

¶ *Ib.*, 506.

** Solander, in a work of Swartz, dedicated the "Euphorbiaceous genus *Alchornea*" to this gentleman,—we have two Australian representatives of this very interesting genus.

†† Doubtless his "*Hortus Kewensis*," 1758, (a second edition, dated 1769, is before me). The first part deals with the Compositeæ, treating of the "radiatæ"; while later on the volume deals with the "aggregateæ." Solander had evidently not been able to see the rare first edition.

‡‡ Corresp.: Linnaeus, ii, 7.

in autumn, fly very high, quite out of sight, and then come down again, sit a while upon reeds or willows, and then plunge into the water. It was into one of his own ponds; but he forgot to search for them in the water afterwards; and this autumn they came not to that place. In the second letter he says it is the *Forficula auricularia* of Linnaeus (Earwig), which makes the labyrinth-like furrows under the bark, upon old trees, because he has found several of these insects in such holes. He likewise mentions having found there a kind of white maggots, which he took for *larvæ* of these *Forficulæ*. But that he is mistaken in these observations is very certain. The white maggots are the artificers of these labyrinths, and are

No. 31.—DANIEL CARL SOLANDER (1733-1782).

the caterpillars either of *Dermestes typographus* or *D. micrographus* of Linnaeus. The *Forficulæ* have only gone into such holes for shelter, as they do into all the cavities they meet with. In the first letter likewise mention is made of frogs in winter, during a hard frost, being found frozen, apparently dead, being hard and brittle like flint (glass?), so that they break with a blow. But if taken into a warm room, they come to life again. I never heard this observation before, and wonder from whence he has taken it. I have desired Mr. Collinson to write to him, and enquire.

There was also read an account of some antiquities found in the Isle of Wight, by Dr. Stukeley; and an account of the transit of Venus. An improvement in digesters was shown to the Society; and a couple of new members proposed. This is all that came under consideration

Mr. White tells me he intends to publish his figures in a large work, of which he has hopes that the King will be at the expense. He is now in the country, but will return in six weeks, when he means to write to Dr. Linnæus, about some alterations he wishes to have made in the "*Systema Naturæ*." Mr. White will publish his figures in a systematical form; and he wishes his work should agree with that of Dr. Linnæus. But I am afraid the latter will, on some points, not agree with him in opinion, especially as to classification. For instance: Mr. White means to reduce the *Cete* to fishes, or else to make a new class on purpose for them. He proposes, moreover, to refer swallows to the *Accipitres* (because, he says, their gape is like a hawk, and they catch insects as hawks do other birds or animals, which, in my opinion, is not a sufficient character); or else he would make a new order for them, not enduring to see them ranged with sparrows. There are many other things, relating to system, in which I think Dr. Linnæus cannot coincide with him.*

Peter Collinson to Linnæus, 2nd Sept., 1762.

My dear Linnæus cannot easily conceive the pleasure of this afternoon. There was our beloved Solander seated in my museum, surrounded with tables covered with an infinite variety of sea-plants, the accumulation of many years. He was digesting and methodizing them into order, and for his pains he shall be rewarded with a collection of them, which no doubt you will see. . . . Solander is very industrious in making all manner of observations to enrich himself and his country with knowledge in every branch of natural history.†

Collinson to Linnæus. London, Nov. 16th, 1762.

I am informed there are proposals from the Academy of Sciences at Petersburg to engage our dear Solander for a botanic professor. For the love and esteem I have for the doctor, I cannot forbear expressing my concern, for many reasons. First, from the uncertain situation of the public affairs in that kingdom; for it is impossible learning can flourish in tumults and riots. Who knows, in a revolution, which may soon happen, how far the person of a stranger may be safe, and his position secure? Next, if we consider, the Russian empire is inland, and those countries sufficiently explored, and their vegetable and mineral productions discovered by the indefatigable pains of Gmelin, Steller, and others; besides, that country has no commerce with the West or East Indies, to bring new and rare productions from thence. Pray what is there to exercise Solander's great talents, which he has been with so much pains and industry improving? Am I not witness to his daily labours? Do I not know of my own knowledge his unwearied application to attain competent skill, in every branch of natural philosophy? Must all these fine accomplishments be lost and sunk into supineness for want of proper subjects to exercise his aspiring genius? Can you, my dear Linnæus, advise Solander to be confined for years, no longer a free agent, but buried in obscurity and confinement? If any good and advantageous station should offer, and a person of his abilities will not want friends, he is here confined, and cannot accept of it until his time is out: how hard is this. Should it please God, my dear friend, to take you from us, who is there you could wish to be your successor, but Solander? Who is there could fill your place with so much propriety, and so well accomplished? But if he accepts the professorship on the old conditions, his hands will be tied, and his feet fettered; it will prevent his accepting

* Corresp. : Linnæus, ii, 8.

† *Ib.*, i, 56, 57.

any advancement. No doubt but you, my dear friend, know persons less eminent, but every way qualified in botanic science to teach Russian bears. I heartily wish we could here give Solander the encouragement he deserves. Some of his friends have proposed a scheme for that purpose; the success will be known before the end of this year. If, after all I have said, you have determined Dr. Solander for Petersburg, pray do not give a positive answer to the academy there, until you hear from your affectionate friend, P. Collinson.*

Linnæus to Ellis, Nov. 23, 1762.

A report has lately arisen here, that my friend Solander labours under some difficulties in your country. I earnestly entreat you, by your regard for me, to give me some account of him by return of post. I wrote two months since to inform him of his appointment to the Professorship of Botany at Petersburg; but to my surprise, have had no answer. My letter went in a cover to Brander and Spalding.†

Ellis to Linnæus, 21st December, 1762.

I have now the favour of yours of the 23rd of November, and have consulted with my good friend Mr. Solander about what he intends to do. I find that after maturely weighing what you so kindly intended for him at Petersburg, and after consulting many friends here, he is determined not to accept of that professorship for many reasons, which he tells me he has wrote to you at large. I hope in time he will get something honourable to employ and distinguish himself. I am greatly obliged to you for the honour you intend me, in giving me a new plant. I believe I met with it some years ago in Mr. James Gordon's nursery garden, and made a drawing of it, which I magnified for my friend Mr. Peter Collinson; since which, Mr. Solander has seen and described it as a new genus, and I suppose sent it to you. You will pardon me when I tell you that people here look on a little mean-looking plant as reflecting no honour on the person whose name is given to it; though I am convinced, as it is a distinct genus, the compliment is equally great with the largest tree. . . . With regard to the conduct of our mutual friend Mr. Solander, no man bears a better character here. He is constantly employed in the business of natural history, and, I am persuaded, has made many discoveries of new genus's in both the animal and vegetable world. His friends are considering of getting him employed in something that may be for his advancement, and they are in hopes of succeeding. He is exceedingly sober, well behaved, and very diligent, no way expensive; so that I hope he will do very well. I can assure you, the more he is known, the more he is liked; and now peace is near settled, he has a greater probability of succeeding, than when we were engaged in the hurry of a troublesome, though victorious war.

I am going to publish a short memoir on some few of the *Coccus*'s, especially to describe the male fly of the *Cochineal*. I shewed Mr. Solander two sorts, which I had observed at my friend Mr. Webb's garden, one on the *Ananas*, and one on the *Ribes*; which he says you have not yet described: but I have not been able to discover the males.‡

Dr. Garden to Mr. Ellis, November 19, 1764.

Can you let me have one of Solander's catalogues of the *Musæum*, and likewise Solander's draught and papers on the single *Gardenia*.§

When Mr. Murray arrived in London, you were not in town, and he wrote me that you had desired him to put them into Dr. Solander's hands, to whom I

* Corresp. : Linnæus, i, 57.

† *Ib.*, 158.

‡ *Ib.*, 159, 160.

§ I do not certainly know to which "Musæum" Dr. Garden refers. Perhaps to temporary employment at the British Museum.

likewise wrote largely at the same time, and sent specimens of many curious insects, and every other thing that I could collect. Now, my dear friend, ever since that time, I have never heard from Dr. Solander in answer to mine to him, nor have I ever heard from Linnæus, informing me of his having received, or not having received, my packages and letters. Mr. Murray wrote me that he had absolutely delivered them to Solander. I have written to Mr. Murray to wait on you about this matter, because I am afraid that, by some mistake or misfortune, I have failed in getting them conveyed to Linnæus. There was a valuable collection of fishes, with a copy of my characters of them. These would have almost complicated my account of our Carolina fishes, and their miscarriage gives me more pain, grief, sorrow, uneasiness, &c., than I can describe to you. The specimens I can never make up; a copy of the characters I have sent to Linnæus again, inclosed to you, to be forwarded to him, to shew him that I was not to blame, and that I had done my best to be punctual in acknowledging the honour he did me in corresponding with me, or in sending me his commands to be executed by me.*

Collinson to Linnæus, 1st May, 1765.

Dr. Solander goes on very successfully at the Musæum, and has been much engaged in surveying the Duchess of Portland's Musæum, where there is a very great collection of shells and marine productions, gems and precious stones.†

Garden to Ellis, 18th May, 1765.

Pray how does Dr. Solander go on in his catalogue? I am sorry that he never answered my last, as it breaks our correspondence—I hope without a cause.‡

Ellis to Linnæus. London, 19th August, 1768.

About three days ago I took my leave of Solander, when he assured me he would write to you and to all his family, and acquaint them with the particulars of this expedition.§ I must observe to you, that his places are secured to him, and he has promises from persons in power of much better preferment on his return.

Everybody here parted from him with reluctance; for no man was ever more beloved, and in so great esteem with the public from his affable and polite behaviour.

Solander to Ellis. Plymouth, August 25th, 1768. 2 o'clock.

It is to you, Sir, I chiefly owe my favourable reception in this country. It was you that first introduced me to such of your friends as have afterwards made England so agreeable to me. I assure you it is not without reluctance I now leave it,|| notwithstanding it is only for a time, and in the best of company, and in hope of gratifying my most favourite desires.

I should be void of all gratitude if I did not always recollect your friendship and goodness.

Pray present my best compliments and warmest good wishes to Miss Ellis¶; I hope at my return to be able to make some additions to her collection. She shall have something from every place, to put her in mind of her father's friend, and what a straggler he has been.

When you see Dr. Fothergill give him my respects, and tell him that we here in Plymouth met with a friend of his. Mr. Cookworthy, as worthy a man as can

* *Corresp. Linnæus*, i, 522-4.

† *Ib.*, 65.

‡ *Ib.*, 531.

§ *Ib.*, 231.

|| With Banks and Captain Cook in the "Endeavour."

¶ Afterwards Mrs. Watt.

be, full of knowledge, and very communicative; we are very much obliged to him for his civilities.

We have been detained longer than we wished by continually blowing westerly winds; but just now the wind is turned fair, and we have got the signal for repairing on board.

No. 32.—WEDGWOOD MEDALLION.

P.S.—Mr. Banks gives his compliments. Give mine to Mrs. Butler and all friends. I left a paper with Mr. Fabricius* that I had promised Messieurs Davis and Reymers; I hope they have got it. I was at last so hurried that I had not time myself to translate and to send it, but he promised to do it.

If you see any of the Museum people, tell them I wish them all well.†

* The entomologist.

† Corresp.: *Linnaeus*, ii, 10–11.

Solander to Ellis. "Endeavour," off the Bay of Funchal, September 18, 1768.

We just now, at going out of Madeira, met with an opportunity of sending a letter, but must write in a hurry, as the ship we are to send it with is under sail.

We have seen a great many fine *Mollusca*; got drawings and descriptions of them, but as no ship this year is expected to sail from Madeira to England, we resolved to send what we have by Lisbon.

Pray be so good as to send the inclosed to Mr. Lindegren, with my compliments, and beg him to forward it. You shall have a large packet by way of Lisbon.

Mr. Banks desires his compliments to you; mine to all friends, particularly to Mr. and Mrs. Webb, Miss Wilson, all at the Museum, &c., &c., &c.*

Ellis to Linnæus. London, November 1, 1768.

I received your very kind letter of the 12th of September, and now can inform you that I have received a letter from our good friend Dr. Solander from Madeira, dated the 18th of September; he was then sailing out of harbour of Funchal upon their voyage to the South Seas. He says they have met with a great many curious *Mollusca*, of which they have made drawings and descriptions; he adds they will send what they have got home by way of Lisbon, and promises me a large packet by that way, as no more ships are expected this year to sail for England from Madeira. He has sent me a letter inclosed for his mother, with orders to deliver it to Mr. Lindegren to be forwarded to her; he begs his kind respects to you and all his friends.†

The voyagers were now out of communication with the outside world for nearly three years.

Ellis to Linnæus. Gray's Inn, London, May 10, 1771.

It is with pleasure I inform you that we have certain accounts from the East Indies, that our worthy friend Dr. Solander, and Mr. Banks, with the astronomers, were safe arrived at Batavia the 10th of October, 1770, and that they proposed to sail for England in a month's time; so that we have great hopes of seeing them here next month. This news gives universal joy to the learned and curious in England; but it must give the highest satisfaction to you, who esteem him so deservedly; and to all his countrymen. . . .

I hear that Dr. Solander will, as soon as he arrives, be introduced to the Royal Family. He has been kept from the knowledge of our King by the interposition of some great men, who favour quacks‡; but I hear his Majesty is determined to see him when he arrives, and probably then will reward his merits.§

Linnæus to Peter Cusson, M.D., of Montpellier (date ?).

My pupil Solander, who has just been round the world with an Englishman of the name of Banks, thought he had collected a thousand new plants, chiefly from the new-discovered countries; but they will never amount to 500. He has promised me specimens of the whole, before he goes out on another voyage.¶

* Corresp. : Linnæus, ii, 12.

† *Ib.*, i, 236.

‡ Doubtless a reference to the Earl of Bute, late Prime Minister, sometimes styled "The Mæcenas of Botany," who favoured Dr. John Hill, a bumptious person, who obtained through Lord Bute's influence the appointment of first Superintendent of the Botanic Gardens, Kew, although there is some doubt about his having ever occupied this position. Obtaining a foreign order, he called himself "Sir" John Hill, Knight of the Polar Star. He died in 1775. An appreciation of the Earl of Bute will be found in *Kew Bulletin*, 1891, p. 290. For particulars of Dr. Hill see *Ib.*, p. 294.

§ Corresp. : Linnæus, i, 259, 260.

¶ This was of course a mere guess, and is somewhat depreciatory. If this reached Solander's ears, it might have contributed to his coolness to Linnæus.

* Corresp. : Linnæus, ii, 571.

Ellis to Linnæus. London, July 16th, 1771.

I could no longer defer sending you the agreeable news of the arrival of Dr. Solander and Mr. Banks, from their voyage round the world, laden with spoils, particularly of the vegetable world, some few rare ones of the animal kingdom; but I do not hear much of the mineral kingdom. They were all very healthy till they got to Batavia, where a violent fever carried off almost half their ship's crew. Dr. Solander has been very ill, but is now very well.

They have made great discoveries in Geography: the account of their voyage will soon be published, but as to their Natural History, I fear I shall not live to see it. They have sufficient for one thousand folio plates. They unfortunately lost both their painters, but the last died between Batavia and the Cape, so that most of their rarest things were drawn, but not completely finished.

They are so very busy getting their things on shore, and seeing their friends, after an absence of three years, that they have scarce time to tell us of anything but the many narrow escapes they have had from imminent danger. I long to hear from you, and fear you have been ill, otherwise you would have wrote to me.

Be so good to inform Dr. Solander's friends of the success he has had in returning safe after so many perils, laden with the greatest treasure of Natural History that ever was brought into any country at one time by two persons.

They came last from St. Helena, with eleven East Indianmen, who have, I hear brought a great many rare plants from China.

I hope Dr. Solander will write to you soon himself; I shall beg of him not to defer it.*

New Burlington Street, October 8, 1771.

Dr. Solander presents his and Mr. Banks' compliments, with many thanks for the loan of Plumier's plants.

Dr. Solander has sent inclosed some of the *Gumbo* or *Sassafras* leaves, as they are called in Florida, where they are used in many different ways, chiefly with fish and rice. The ordinary way that people of fashion use them is in beef-broth, with onions, spinach, or calliloo, and Cayenne pepper; one teaspoonful to a pint. It must stand ten or twelve hours in cold water; then pour it backward and forward, for a minute, into different vessels; after this, mix it intimately with a pint of the liquor, and pour the whole into the pot, where it must not boil above a quarter of an hour.†

Linnæus to Ellis (Latin). Upsal, October 22, 1771.

I have just read, in some foreign newspapers, that our friend Solander intends to revisit those new countries discovered by Mr. Banks and himself, in the ensuing spring. This report has affected me so much as almost entirely to deprive me of sleep. How vain are the hopes of man. Whilst the whole botanical world, like myself, has been looking for the most transcendent benefits to our science from the unrivalled exertions of your countrymen, all their matchless and truly astonishing collection, such as has never been seen before, nor may ever be seen again, is to be put aside untouched, to be thrust into some corner, to become perhaps the prey of insects and of destruction.

I have every day been figuring to myself the occupations of my pupil Solander, now putting his collection in order, having first arranged and numbered his plants in parcels, according to the places where they were gathered, and then written upon each specimen its native country, and appropriate number. I then fancied him throwing the whole into classes; putting aside, and naming, such as were already known; ranging others under known genera, with specific differences; and distinguishing by new names and definitions such as formed new genera, with their

* Corresp. : Linnæus, i, 263.

† *Ib.*, ii, 12.

species. Thus, thought I, the world will be delighted and benefited by all these discoveries; and the foundations of true science will be strengthened, so as to endure through all generations.

I am under great apprehension that if this collection should remain untouched till Solander's return, it might share the same lot as Forskall's Arabian specimens at Copenhagen. Thus shall I be only more and more confirmed in my opinion that the fates are ever adverse to the greatest undertakings of mankind.

Solander promised long ago, while detained off the coast of Brazil, in the early part of his voyage, that he would visit me after his return; of which I have been in expectation. If he had brought some of his specimens with him I could at once have told him what were new; and we might have turned over books together, and he might have been informed or satisfied upon many subjects, which after my death will not be so easily explained.

I have no answer from him to the letter I enclosed to you, which I cannot but wonder at. You, yourself, know how much I have esteemed him, and how strongly I recommended him to you.

By all that is great and good, I entreat you, who know so well the value of science, to do all that in you lies for the publication of these new acquisitions, that the learned world may not be deprived of them. They will afford a fresh proof that the English nation promotes science more than the French, or all other people together. At the same time, let me earnestly beg of you to publish, as soon as possible, your own work, explaining those elegant plates of rare Zoophytes, &c., which you last sent me. I can no longer restrain my impatience. Allow me to remind you that nothing is so uncertain, nothing so deceitful, as human life; nothing so frail or surrounded with so many diseases and dangers, as man.

Again, the plants of Solander and Banks recur to my imagination. When I turn over Feuillée's figures, I meet with more extraordinary things among them than anywhere else. I cannot but presume, therefore, as Peru and Chili are so rich, that in the South Sea Islands as great an abundance of rarities have remained in concealment, from the beginning of the world, to reward the labours of our illustrious voyagers. I see these things now, but afar off. If our travellers should take another trip, I shall have seen them as Moses saw Canaan.

When I ponder upon the insects they have brought, I am overwhelmed at the reported number of new species. Are there many new genera? Amongst all the insects sent from the Cape, I have met with no new genus, which is remarkable. And yet, except four European ones, they were all new species.

Pray make use of your interest with Solander to inform me to what class and order the Nutmeg belongs. I shall not take advantage of this information without making honourable mention of my authority.

When I think of their *mollusca*, I conceive the new ones must be very numerous. These animals cannot be investigated after death, as they contract in dying. Without doubt, as there were draughtsmen on board, they would not fail to afford ample materials for drawing.

Do but consider, my friend, if these treasures are kept back, what may happen to them: they may be devoured by vermin of all kinds. The house where they are lodged may be burnt. Those destined to describe them may die; even you, the promoter of every scientific undertaking in your country, may be taken from us. All sublunary things are uncertain, nor ought any thing to be trusted to treacherous futurity. I therefore once more beg, nay, I earnestly beseech you, to urge the publication of these new discoveries. I confess it to be my most ardent wish to see this done before I die. To whom can I urge my anxious wishes but to you, who are so devoted to me and to science? Remember me to the immortal Banks and Solander.*

* Corresp. : *Linæus*, i, 267-270.

Ellis to Linnæus. London, November 19, 1771.

I received both your kind letters of the 8th of August, and the 22nd of October, from Upsal. I delivered the two letters inclosed in that of the 8th of August, to Mr. Banks and Dr. Solander, and they both promised me that they would write to you; but they have been so hurried with company that they have very little time. They are now at Oxford, where they went to receive the honorary degrees of Doctors, and are soon expected in town, when I shall lay your last letter before them.

NO. 33.—WEDGWOOD MEDALLION.

I assure you it greatly distresses me to think of losing Solander for ever, for I cannot expect to see him more, should he return; but I fear he never will return alive.

I shall do what I can to persuade him to print the botanical account before he goes,* as it is all ready. The specimens are to be deposited in the British Museum till they return. I shall write to you soon again. I then will tell you what they determine to do, and I will beg them to write to you.†

* He had planned to go with Banks on Cook's second voyage.

† Corresp. : Linnæus, i, 271-2.

Linnaeus to Ellis. Upsal, 20th December, 1771.

I beseech you, by your warm regard for me and your sense of what is just and fair, to persuade Solander to send me some specimens of plants from *Banksia*, or *Terra australis*, that I may have some idea of the vegetable productions of that hitherto unknown region. You may ask this, on the ground of his long-established friendship for me, and of my attachment to him; of his honourable character, and his botanical zeal. You may remind him, that it was I who obtained his father's consent that he should study botany; that I have cherished him as a son, under my own roof; that I advised his visiting England; that I introduced him to you, and consequently to all your friends; that I procured him the Peterburgh professorship. If he slights my request, I scarcely think he can answer it to himself

You are entitled to my best thanks for undertaking to persuade Solander to publish his first botanical discoveries, before he sets out on another expedition. Otherwise his collection may long remain in the British Museum, a prey to moths and other insects, and the fruit of so much care, labour, expense, and hazard, may share the lot of but too many human projects, to the grief of the whole world. Have the Banksian plants any great affinity to the Peruvian discoveries of Feuillée? Do any of them resemble the productions of Europe, or the Cape, or do they very widely differ? Are they akin to the plants of America? Are any new genera of insects brought home by these travellers?

The new-found country ought to be named *Banksia*, from its discoverer, as America was from Americus.*

Ellis to Linnaeus. London, January 14, 1772.

Upon the receipt of your obliging letter of the 20th of December, I wrote to Dr. Solander to call and spend a day with me; accordingly he came a few days ago, and I showed him all your letters to me, and begged the favour of him, that he would send you an assortment of all the plants, which he and Mr. Banks had collected on the voyage. He assured me that he would do it, and also would send you as many of the descriptions as he could get copied; but he is doubtful whether he can send you those of the animal kingdom. I desired he might send them to the care of Charles Lindegren, who has promised to send them to you by the first ship. I shall not let him depart from this kingdom in peace, unless he pays that respect to you which I know he owes you, for the pains you have taken to qualify him for the company of our King, and the greatest people in this kingdom. Mr. Banks is taking great pains to preserve the animals in spirits, at a very great expense, but I fear we shall not live to see them described. This voyage towards the South Pole is more to please the head of our Admiralty, Lord Sandwich, than is consistent with prudence. They would have had employment enough for seven years, to have finished completely what they have discovered.

Many of their seeds are destroyed by the boxes being obliged to be exposed on the shore to the heat of the sun, and bad weather, when they had like to be lost on the coast of New Holland. I hope I shall be able, in the spring, to raise the seeds of a most valuable plant†, which they call *Chlamydia*, from the people of New Zealand, in the latitude of 40 degrees South, making themselves cloaks of it.

It seems to have leaves like an *Aloe* or *Yucca*; the flowers are hexapetalous and ringent, and the seed-vessel is above the receptacle. Solander says, it comes nearest to the *Hemerocallis*. From the leaves of this the natives prepare a fibrous substance, like the best flax; these fibres they connect together in a very new and curious manner with a needle and thread, so as to form very durable and convenient garments. As the seeds of it were all destroyed by the sunshine and

* Corresp.: *Linnaeus*, i. 273-5.

† New Zealand flax (*Phormium tenax*).

bad weather, I begged Solander to let me look at the specimens which they had preserved in papers, and was so fortunate as to find several seed vessels perfectly sound and full of ripe seeds. I have got some of them from him, and given them to our best gardeners, and have examined them in the microscope, and find the germ in the seed perfectly sound. I suppose you will have some sent you in your specimens. I find seed vessels will preserve their seeds a very long time.* . . .

The most curious animal that I think they have brought home is the skin of a four-footed beast, like the *Mus Jaculus*, or Jerboa, described in Edwards. It seems to be about three feet and a half high, standing on its hind legs. It weighed (if I remember right) 80 pounds, and was too swift for their greyhounds, so that they were obliged to shoot it. I think they say it differs from the *Mus Jaculus*, but I shall enquire of Solander more particularly about it.† They have added very little to my Zoophytes; and could not distinguish the animal of the *Tubipora*, though the rocks were covered with it. It was covered over with a mucilage; but they at that time had their lives to think of, by endeavouring to get the ship off the rocks.‡

Garden to Ellis. 10th December, 1772.

What is become of Banks and Solander? What is become of all their immense collections, I think they must greatly encrease the animal and vegetable kingdoms in new genera; surely these new countries must have many yet unknown productions.§

The same to the same. 15th May, 1773.

Allow me again to enquire after Messrs. Banks and Solander; are we to have any account of their voyage, or collections and observations?||

Solander to Ellis. London, October 9, 1773.

Many thanks for the last. At my return to town I met with Mr. Aiton, who told me that he had procured Mr. Taylor ripe fruits of the coffee; and that if he had known you yourself had wanted any, he could have procured you some from Gunnersbury, where they now have pulled all the ripe fruit; but he thinks that there are still some unripe ones on the tree; if they come to perfection, he will send you them.

The French have not been so successful in their visits to the New Zealanders as we were. Monsieur Marion was sent out from Old France, a little after our return, to visit New Holland and New Zealand. In January, 1772, he visited the southern parts of New Holland, but did not like the inhabitants; he, therefore, proceeded to New Zealand, where, after he had passed through the channel between Cape Maria Van Diemen and the island of Three Kings, he at last anchored in a bay which we call Motuaro, or Bay of Islands, within 6 miles of our anchoring place.

There, I suppose, he ventured on shore, without previous alliance, and the consequence was, that he himself and twenty-five of his men were killed, and in all probability afforded the inhabitants a good meal. This discouraged the rest so much, that they made the best of their way to Manilla, from whence this intelligence was sent by one of the surviving officers.

My best compliments to the ladies, and Mr. and Mrs. Jackson, Mr. Deponthieu, &c.¶

* Corresp. : Linnæus, i, pp. 276-7.

† This was the now well-known Kangaroo.

‡ Corresp. : Linnæus, i, 279.

§ *Ib.*, 592.

|| *Ib.*, 595.

¶ *Ib.*, ii, 13.

Solander to Ellis. London, Friday Night, July 22, 1774.

Nothing but the arrival of an Otaheite friend* could have made me so forgetful, in regard to you and many more of my English friends. But as I am one of the three that he can converse with, I have been obliged to give him almost all my time, in hopes that my other friends will forgive me. However, I have waited upon Dr. Fothergill, to let him know that I would, according to your desire, deliver back to him all the corals which are already figured; but he chose rather that they should remain in your chamber till his return. He sets out next Monday or Tuesday. I have delivered to Mr. Fabricius the walnut twig.

Now I will give you a short account of the voyage performed by Captain Furneaux in the "Adventure," who left England in the summer of 1772, with Captain Cook in the "Resolution." They kept company to the Cape of Good Hope; and in the beginning of December left that place, steering south, in search of Cape Circumcision, which they did not find; they, therefore, proceeded as far south as they could go; but in latitude $67^{\circ} 10'$ south, the ice prevented their proceeding further.

They afterwards steered a little northward, and so east, shaping their course towards New Zealand, where Charlotte Sound was to be their rendezvous. Soon after they had left the ice, near the supposed place of Cape Circumcision, the two ships by accident parted company. Captain Cook all along steering a more southerly course, chiefly in latitude 60° ; he at last anchored in Dusky Harbour, on the southernmost part of New Zealand. Captain Furneaux, keeping two or three degrees more to the northward, at last made the south part of New Holland, where he anchored in Bay Frederiek-Henry. He staid there but a few days, and then proceeded to the place of rendezvous in Charlotte Sound, where he arrived two months before Captain Cook came up to him from the southern district of New Zealand. From thence the two ships kept company to Otaheite, where they were remarkably well and friendly received. As their stay in New Zealand was longer than first proposed, they could stay but a short time in Otaheite, not above eight or ten days. A most cruel war had caused a great scarcity, and many of our friends were killed in a battle, where several thousands were slain by the people of Little Otaheite, who, for the sake of securing the title of King to their chief, had ventured a second time to attack the people of the Great Otaheite, and both times proved victorious. The two ships afterwards visited Huaheine, where Omait, the Indian, who is now residing in Mr. Banks' house, came on board Captain Furneaux's ship. He is a native of Ulaitea, and was at Otaheite when we were there. Oridi, a native of Bola Bola, at the same time embarked in Captain Cook's ship. After a week's stay at Huaheine, they went to Ulaitea, where they staid five or six days; and afterwards, in their way to the south, fell in with the islands of Middleburg and Amsterdam, two very delightful spots, well described by Tasman.

They staid but three days in those islands, and then proceeded again towards Charlotte Sound in New Zealand, to take in wood and water. The "Resolution," which is a better sailing ship than the "Adventure," got into the harbour on the 29th of November last, when the latter was blown off the coast, and obliged to run to the northward, and anchor in Tolaga, where the inhabitants rejoiced to see the friends of Tubaya and all of us. After a short stay there, Captain Furneaux made the best of his way towards Charlotte Sound, but did not get in till the latter end of December, when he learnt, from a letter left in a bottle that Captain Cook had left the place four days before his arrival. The inhabitants seemed now, as well as before, well pleased with their guests; but still a very dismal catastrophe made him repent his coming hither. One day he had sent out a boat, with an acting-lieutenant (Mr. Rowe), a midshipman, the ship's

* Omait; see below, p. 217.

† For a note on Omait and Banks, see Kitson, p. 353.

No. 34.—POINT SOLANDER (named by Cook). The south head of Botany Bay.

steward, and seven common men, to gather wild celery, in Grass Cove, a bay which we frequented every other day in our month's stay in the harbour. This place was not 6 miles from the anchoring-place; and as the boat did not return the same evening, the Captain, the following morning, sent another boat to look out for them, when they soon learnt the fate of their comrades. They had been killed, cut up in proper joints, roasted, and partly eaten; several baskets were found full of roasted pieces, some still hot, &c. &c. Captain Furneaux, not having got any orders or rendezvous appointed by Captain Cook, resolved to do as much as possible towards executing the tenor of the general orders, which was, to look out for land in the southern seas. He, therefore, sailed directly south from New Zealand, till he came into latitude 55°; and, afterwards, between that and 60°, continued his course eastward, chiefly in sight of ice, looking out for St. Sebastian's Land, and again for Cape Circumcision; but arrived, the 18th of March last, at the Cape of Good Hope, without having seen an inch of new land. From thence he arrived in England the end of last week. *Obs.*—Notwithstanding he has not discovered any new lands, he has still made a glorious voyage; he has sailed round the globe, in a higher southern latitude than any ship before. He has proved that there is no large southern continent, and that the French pretended discoveries are small islands, instead of continents; or perhaps, as my friend Omai calls ice, things that the sun drives away, or causes to vanish. I have been so long writing this letter, that Omai is almost asleep. He will come out to Hampstead, and visit you, as soon as he has had the small pox. To-morrow we are to go out with him to Baron Dimsdale, who is appointed to perform the operation of inoculation, which I, with all my heart, wish may be attended with success. He is a well-behaved, intelligent man.*

Solander to Ellis. New Burlington-street, August 10, 1774.

I am very much obliged to you for your last letter and the bottle from Greg, which I received just as I was setting out for Hertford to attend my friend Omai during his confinement for the small pox. I left him yesterday, when he was declared to be out of all danger. The small pox was come out, and seemed to be of a mild sort. I promised him to go down again next Friday, so that my short stay in town will not permit me to visit you till my return next week, which will be on Tuesday. Captain Furneaux has brought home a few seeds, which we divided among Aiton, Gordon, Lee, Forsyth, and Malcolm. A few have also been given to gentlemen. Mr. Topham Beauclerk has a greater number from Mr. Bayley than the Captain had. I hope he will take care of them as his seeds seemed to be better preserved than the Captain's.†

Solander to Ellis. London, October 13, 1774.

I have read through Dr. Garden's account of the Electrical Eel, and think it a paper well worth publishing; I have also shown it to Sir John Pringle,‡ who is of the same opinion. If the weather is not very bad, I purpose to wait upon you on Sunday next, and will then bring back this letter and talk over what you else have wrote about.§

Solander to Ellis. London, Thursday, October 27, 1774.

Do not imagine that anything shall alter my principles in regard to the friendship I owe to you as one of my first and best friends: you shall always find me a true friend and well-wisher. I am sorry if you should ever find reason to think otherwise of me. The reason why I so seldom can dispose of myself in the fore-

* Corresp.: Linnæus, ii, 14-18.

† *Ib.*, 18.

‡ President of the Royal Society.

§ Corresp.: Linnæus, ii, 19.

noon, is my attendance at the Museum; so I have only Saturday and Sunday forenoons to myself, and then often such things call me away that can not be foreseen or suffer any delay. That was the case last Saturday, when I was obliged to go into the city to get from the Custom-house a bottle-case with animals from the Mosquito Shore, preserved in spirits. Mr. Deponthieu was at Mr. Banks's the same day, when I showed him a chocolate fruit from thence, dried, of a different variety from what is cultivated in the West India Islands. It is spotted, and, therefore, by the Spaniards called the Tiger Chocolate. It is said to yield the best chocolate, and is now introduced on the Mosquito Shore.

Be assured I shall not omit to arrange and write the proper names on the corals at your chambers. You shall find it done. Mr. Banks and Omai returned from the country yesterday; but Omai goes down with Lord Sandwich again on Saturday next.

I have re-examined the chocolate flowers, and will give you a copy of my description.

Mr. Aiton has sent me two plants from the seeds Mr. Bruce brought from Abyssinia; both are new, one a species of the *Ajuga*, the other a *Coreopsis*.*

Solander to Ellis, London, November 7, 1774.

To-day when I leave the Museum, I shall go into the city and make a further enquiry after the box and bottle which Mr. Hodgson has sent you in the "Sarah and Elizabeth," Captain Footc. What Mr. Banks had from the Mosquito Shore came by a Captain Miller.

The man who showed the Electrical Eels in Carolina, as described by Dr. Garden, is now arrived; but, unluckily, all the five eels died during the voyage, or at least when he came up to London. One was alive when he landed at Falmouth, where several persons felt the electrical shocks; but that one died on the passage from thence to London. However, he has benefited by Dr. Garden's advice, to put them into spirits in case they should die. He has brought us four complete specimens, well preserved, for which we propose to raise by subscription, or some other method, a sum of money, to enable the man to go out again. Mr. John Hunter danced a jig when he saw them, they are so complete and well preserved.

This week I certainly will settle and mark your corals; it vexes me very much I have not been able to do it long ago.

We shall have a drawing made of one of the Electrical Eels; and John Hunter has promised an anatomical description, to accompany Dr. Garden's account, when presented to the Royal Society.

My best compliments to your friends about you, particularly Mr. Scott.†

Solander to Ellis. December 21, 1774.

I hope you have received safe the coloured prints I sent you the day before yesterday.

I have taken an exact copy of the drawing I now return you; so from that I can at any time make out what may be necessary for the plate of the *Theobroma*. Whenever I see the drawing, which is to be engraved, I shall accordingly shape and proportion the parts of fructification. Do not you think that the inclosed are too large?

Mr. Banks has bought Miller's Herbarium, and we have been busy these two weeks in getting it home and into some order. As there are a great many of Houston's plants from Vera Cruz, &c., I think it a valuable acquisition.‡

* Corresp. : Linnæus, ii, 19.

† *Ib.*, 20.

‡ *Ib.*, 22.

Solander to Ellis. London, June 29th, 1775.

I am in hopes of being able to wait upon you on Saturday next, and then to give you a full account, both of your paper on the Gorgonias, and also of your corals in Gray's Inn.

Captain Cook arrived, the 22nd of March last, at the Cape of Good Hope, without having lost a single man by sickness. He has not met with any continent, but found several islands not before seen by Europeans; some above 80 leagues long, most of them near the tropic. The largest he has called New Caledonia, it is situated a little to the eastward of New Britain, in 18 to 20° of south latitude. He has never been to the northward of the Aequator. He has been in 71° 10' south latitude, in 106° 30' west longitude; of course much further south than any one before him. He has seen a prodigious quantity of ice, and some ice mountains, whose tops were covered with clouds.

In the South Sea he saw no land in the high latitudes, but in coming from Tierra del Fuego to the Cape of Good Hope he fell in with one island in 54°, and another in 59°; both covered with snow and ice.

The "Resolution" is now expected every day.

Mr. Forster, in a letter to Mr. Barrington, says he has discovered 260 new plants and 200 new animals.

All the Indians they have visited have behaved well; even when he returned to Charlotte Sound, where Captain Furneaux lost some men, they received Captain Cook well.*

Solander to Ellis. Friday morn. July 21, 1775.

I am afraid it will not be in my power to wait upon you on Sunday next, as I am under an engagement to go down as soon as the express arrives from Captain Cook, who is now daily expected, and may arrive by Sunday. However, I will soon wait upon you. I have received Mr. Irving's note.†

Solander to Ellis. London, August 28, 1775.

Dr. Solander presents his compliments to Mr. Ellis, and sends him a map with the track of the two last ships; and also a copy of the Jalappa plate. It is exactly copied from the original drawing. If Mr. Ellis wants any more of them, they are at his service.

Dr. Solander was last Saturday at Kew, where he saw Mr. Masson, who is lately come back from the Cape of Good Hope, with a great cargo of new plants, all in perfect health. He has been 800 miles inland to the north of the Cape, and brought from thence a glorious collection.‡

Solander to Ellis. London, May 4, 1776.

The Bread Fruit of the South Sea Islands within the tropics, which was by us during several months daily eaten as a substitute for bread, was universally esteemed as palatable and as nourishing as bread itself. No one of the whole ship's company complained when served with Bread Fruit in lieu of biscuit; and from the health and strength of whole nations, whose principal food it is, I do not scruple to call it one of the most useful vegetables in the world. Throughout a great part of the East Indies the same kind is found to grow wild; and I do not doubt that the *Socca*, taken notice of in the eastern part of the East Indies, is in quality equal to that of the South Sea Islands. As it undoubtedly must be of the utmost consequence to bring so valuable a fruit to countries where the climate is favourable to a production which cannot bear cold, I think it would be necessary

* *Corresp.* : Linnæus, ii, 22.

† *Ib.*, 23.

‡ *Ib.*, 24.

to encourage everybody who goes to any part of the world where it is to be met with, to bring it over, either by young plants properly rooted, or by seeds collected in the proper season, and sown during the passage. I am sure no expense ought to be spared in an undertaking so interesting to the publick.*

A letter is extant from Solander to Banks, dated London, July 31st Wednesday (about 1772), respecting the prints and maps to be prepared for the French and German translations of Cook's Voyages and Discoveries, which the naturalist, John R. Forster, was anxious to take with him to be reproduced by French and German engravers; mentions Earl of Sandwich, the First Lord of the Admiralty.

Solander's Character and Achievements.

We have few letters to Solander himself, and those addressed to Banks frequently contain a cordial message to the former, *e.g.*—

Lieut.-Clerke, "My respects and most social wishes to the good doctor. I'll write him as soon as possible."†

The personal affection he inspired is clearly stated in Ellis's letter, quoted above, dated 19th August, 1768.

Ellis on another occasion speaks of him as "very diligent . . . the more he is known the more he is liked." He was evidently a general favourite.

The letters already given show the affectionate solicitude of Linnæus for his friend and pupil, and also his high opinion of Solander's qualifications.

Solander's reputation early reached America. Note the remarkable exclamation of Dr. Garden (letter of January, 1761).

Collinson speaks of his zeal and industry, and hints at the suitability of Solander as the successor of Linnæus.

According to Fabricius, Fru von Linné (wife of the great Linnæus) forced her husband, who by such a concession surely partook largely of her guilt and meanness, to procure the nomination of his pupil Solander to be his future successor in preference to his own son, and it was part of her plan that he should marry her eldest daughter. Solander, however, disclaimed both the usurpation and the bait, refusing to leave England, and the misguided father recovered his senses and authority, causing his son to receive this truly honourable distinction.‡

The complaints as to Solander's being a bad correspondent began soon after his arrival in England, and were made by many people, *e.g.* Dr. Garden, 19th November, 1764.

Linnæus writes to Ellis, January, 1767, "Pray persuade Solander to write to his excellent mother, who has not received a letter from her beloved son for several years, which she much laments. Her residence is now at Pitea."§

* Corresp. : Linnæus, ii, 24.

† *Hist. Rec.*, i (1), 381.

‡ "Through the Fields with Linnæus," Florence Caddy, ii, 345 (1887).

§ *Ib.*, ii, 239.

He treated his master, the great Linnæus, very badly, "He assured me he would write to you and all his family," writes Ellis to Linnæus on the eve of Solander's departure on Cook's Voyage. Evidently by that time his neglect to write home had become a settled habit.

When the expedition returned, Ellis again wrote to Linnæus, "I hope Dr. Solander will write to you soon himself; I shall beg of him not to defer it."

The letter of Linnæus to Ellis, 22nd October, 1771, is pathetic. He evidently found it was useless to write to Solander direct, as he would probably not get an answer, so he writes to an intermediary. Indeed in this letter he states, "I have no answer from him to the letter I enclosed to you, which I cannot but wonder at." He refers to his ingratitude, "You yourself know how much I have esteemed him, and how strongly I recommended him to you."

His appeal would have melted most hearts, but it was made in vain to Solander. Linnæus was quite right; Solander would make no response.

Ellis to Linnæus, 19th November, 1771, says, "I shall do what I can to persuade him to print the botanical account before he goes (on Cook's Second Voyage), as it is all ready." He did not go on Cook's Second Voyage, but the "account" was never printed till 1900, when the "Illustrations," edited by Mr. Britten (*see* p. 37), appeared.

Linnæus continues to plead with Ellis, and in the letter of 20th December, 1771, he states what Solander owes to him. I do not see how Solander's conduct towards his great master can be designated other than by an ugly name.

Dr. Garden was solicitous about the delay in presenting to the world the scientific results of the voyage of the "Endeavour," and we know, from other sources, that the whole of the scientific world shared this anxiety.

When Solander died letters from his mother were found unopened in his room.

As regards the botanical results of the voyage of the "Endeavour," to Solander was allotted the descriptive part of the work, while Banks superintended the engraving of the plates.

Solander's failure to complete his portion of the work* is attributed by Smith to the interruption caused by other avocations, the dissipation of London society, to which so agreeable a companion was always acceptable, and the indolence induced by a sedentary and luxurious life.†

* Following is praise of Solander by a man who was very sparing of praise:—"For the figure here given I am also indebted to the liberality of the illustrious President of the Royal Society, who has enabled me to complete the account of this remarkable plant, by permitting me to copy Dr. Solander's description, which I was the more desirous to give, as it exhibits a specimen of the accuracy with which subjects of natural history were investigated in that celebrated voyage; of whose important results it is to be lamented so little is known to foreign naturalists, though in this country they have ever been open to the public, and in the most advantageous manner." R. Brown's Coll. Works (Ray Soc.), p. 163.

† Corresp.: Linnæus, ii, 2.

On which Britten comments:—

The very numerous MSS. left by Solander, and the fact that the descriptions, with the exception of the Australian plants, had been transcribed by him for the press, seem to qualify Smith's implied censure, and suggest that the position and numerous occupations of Banks were mainly responsible for the delay which resulted in the non-production of the work.

Britten being familiar with the quantity and quality of the MSS. is a competent judge, but it is a fair question to ask if this is an adequate eleven years' work.

I have abundantly shown that Solander was habitually neglectful in his correspondence with his mother, and with Linnæus and other scientific men. Smith had exceptional opportunities for forming an estimate of the character of Solander and his judgment is probably correct. We have too many instances of the incompatibility of a life of "good company" with the pursuit of science. Solander was a jovial soul, and his correspondence and his work alike fell into arrear in consequence.

Sir J. E. Smith, who knew Solander, who was the intimate friend of Banks, and an eminent botanist himself, after deploring Solander's laziness and luxurious habits, sums up

Note from Dr Solander to Mr Ellis
 Dr Solander presents his compliments to Mr Ellis, and will do himself the pleasure of waiting upon him to dinner on Saturday next—

Br Mrs

Aug 3. 1776.

Solander's qualifications and influence upon science in the following words:—

It ought nevertheless to be remembered, that if the talents and liberality of this eminent man were not so directly useful, in the way which might have been expected, any more than those of his great patron, Sir Joseph Banks, whose loss, never perhaps to be compensated, we have now to deplore, they have, like his, been otherwise pre-eminently beneficial. They have proved the example and the spur of all that has been done for natural science, during half a century, in Britain; perhaps in every quarter of the world. It was Solander who reduced our garden plants to order, and laid the foundation of the ‘*Hortus Kewensis*’* of his friend Aiton. His instructions made everybody correct and systematic, and introduced Linnæan learning and precision, in spite of opposition, which sometimes assumed considerable authority (see Vol. I, pp. 35, 36). No one ever came so near his great teacher in the specific discrimination of plants. In generic distinctions he was prone rather to combine than to separate; in which he followed his master's example. Natural orders or affinities seem never to have entered into his contemplation. In nomenclature and terminology he was always classical and correct, never yielding to the fashions or corruptions of the day. Conchology eminently engaged his attention, and he laboured successfully, with Ellis, in that study; as also in the investigation of the more obscure tribes of marine vegetables as well as animals.†

The greater portion of the writings of Solander are comprised in the manuscript volume of the botany of the voyage of the “*Endeavour*,” enumerated by Mr. Britten, *supra* p. 35.

Some of his letters, and he was evidently a good letter writer when in the vein, have been printed above. Not many of his letters appear to be in existence.

Alleged Existence of a Journal by Solander.

Solander's writings being so few,‡ it became of special importance to inquire as to the existence of a journal alleged to have been kept by him.

Mr. Fletcher pointed out that Mr. Maiden's exhibit of the Banksian plants§ suggested a matter of more than sentimental interest to Australian naturalists which needed ventilation, namely, the whereabouts of Dr. Solander's Journal, and the prospects of its publication as a companion volume to Admiral Wharton's “*Captain Cook's Journal*” (1893), and Sir Joseph Hooker's “*Journal of the Right Hon. Sir Joseph Banks*” (1896). It was not generally known, perhaps, that Solander kept a journal, as very few published references to it can be found. The speaker had met with only two. In his preface to “*Cook's Journal*,” Admiral Wharton refers to it under the impression that Hawkesworth had actually made use of it in drawing up his well-known compilation. But neither Hawkesworth's preface, nor a comparison of Hooker's “*Banks*” with Hawkesworth's “*Cook*” lends any countenance to this view. On the other hand, Captain P. P. King seems to be the only author who has anything definite to say about the Journal, and this apparently from personal knowledge. In his remarks upon Sting-ray Bay as the earlier name of Botany Bay, Captain King says—“It is so called in charts of the “*Endeavour's*” voyage, in the Hydrographical Office at the

* The 1st edition owes its principal value to Solander.

† Corresp. : Linnæus, ii, 1-3.

‡ I wrote to the librarian of the Royal University Library of Upsala, who says that “Solander went early to England and did not publish anything in Sweden.”

§ See p. 18.

Admiralty, as well as in Sir Joseph Banks's copy of the "Endeavour's" journal, and in Dr. Solander's MS. journal, both of which are in the possession of my friend Robert Brown, Esq.* The subsequent fate of the Journal seems to be a matter of unpublished history. If the supposition be not altogether groundless that when the "Endeavour" was in harbour and there was a prospect of botanising, Banks left the record of zoological and anatomical details to Solander for the most part, one can understand Sir Joseph's brief mention of certain topics, such as the characteristics of the kangaroo, concerning which his Journal might otherwise have been expected to be more explicit. Three kangaroos were captured during the stay of the "Endeavour" at the Endeavour River. But Sir Joseph says nothing about the sex of these animals, of their dentition, of the syndactylism of the hind feet, nor of any possible affinity to the female phalanger with two young ones which he himself captured. Nevertheless we know from other sources that some of these points did not altogether escape the notice of members of the party. Oliver Goldsmith's account of the kangaroo, published in 1774, appears to have been based largely on information supplied by Sir Joseph; and this contains one observation which is possible only upon the skull in a fresh condition. And though not a naturalist, Sydney Parkinson makes a very fair attempt, in his Journal, to describe both the dentition and the syndactyle hind foot. It seems hardly credible that Solander's Journal would reveal nothing upon these and other interesting points. Therefore the expectation that its publication would supply a valuable complementary volume to Hooker's "Banks" appeared to be not altogether a vain one. It was to be hoped that some effort might be made to rescue it from oblivion and to make it accessible to those who would gladly welcome its publication—or even the portion of it which relates to Australia.†

In reference to which Britten says:—

The remarks on p. 279 of last year's journal, referring to a journal supposed to have been kept by Solander, have attracted attention in Australia, and Mr. Maiden sends me the full report of Mr. Fletcher's remarks at the meeting of the Linnean Society of New South Wales on May 31st, 1905, on a summary of which my comment was based. They run as follows:— (See above.)

Captain King's statement is, as Mr. Fletcher says, "definite," and it seems difficult to see how he could have been mistaken. Nevertheless I think it is pretty certain that he *was* mistaken. Admiral Wharton's reference to Solander is purely incidental, and may, I think, be dismissed. Mr. Fletcher shows that none of those who might have been expected to mention such a journal make any reference to it; had it existed, it might have been expected to be found in the Natural History Museum, where the collections and MSS. relating to the voyage are preserved. Mr. Carruthers, who inherited the Brown-Bennett traditions, never heard of it; and, as it would not form part of Banks's MSS., it would not have gone with them into the possession of Lord Brabourne; had it done so, it would have shared their fate.

So far as the kangaroo is concerned, Mr. Fletcher's suggestion and objection are met by the fact that the Zoological MSS. (usually called the "Solander MSS." but by no means entirely his work, Banks, Dryander, and others being represented therein) include a long description in Latin by Solander of the "Kanguru," drawn up, I am inclined to think, on the spot. In these MSS. Solander writes in Latin and in Swedish, rarely in English.

I think we must conclude in the absence of any further evidence that Solander kept no journal; or at least that, if he did, it has not been preserved.‡

Solander wrote a "Description of the Collection of Petrifications found in Hampshire" which had been given to the British Museum.

* King's "Narrative of a Survey of the Intertropical Coasts of Australia," vol. ii, p. 9, 1827.

† *Proc. Linn. Soc. N.S.W.*, xxx, 223.

‡ *Journal of Botany*, Feb., 1906.

In Mrs. Caddy's work, already quoted (ii, 80, 81), we have a reference to a parasitic worm which appears, on the Baltic and Bothnian coasts, to cause very serious injury to human beings. Linnæus calls the species *Furia infernalis*, and describes it in his "Systema Naturæ" (Ed. 13, Vindob. p. 1325, 1767). For the genus, Linnæus quotes Solander as author in *Act. Ups. ined. Fn. svec.*, 2070; also, *Amaen. acad.* 3 p. 322.

Mrs. Caddy says that Solander has recorded several cases of this disease, and describes the animal as if he had seen it, in the "Nova Acta Upsaliensia"* vol. i, p. 55. "The *Furia infernalis* seems an animalcule one-sixth of an inch long. Dr. Solander describes it as dropping out of the air in autumn."

Under Art. "Furia" in "Rees' Cyclopædia," vol. xv, we have a very full account of this animal, to which my readers are referred.

In 1786, was published, Ellis, J., "The Natural History of Many Curious and Uncommon Zoophytes, collected from various-parts of the globe, systematically arranged by D. Solander," 62 plates, 4to.

In the correspondence of Ellis, already quoted, are several references to his co-operation with Solander, and it is obvious that Solander's share in the work was no nominal one.

His name is commemorated in the Solanaceous genus *Solandra*, Salisbury, and in the following Australian species:—

Spondias Solandri, Benth.; *Tribulopsis Solandri*, R.Br.; = *Tribulus Solandri*, F.v.M. *Acacia Solandri*, Benth.; *Banksia Solandri*, Br.; *Orthoceras Solandri*, Lindl.; = *O. strictum*, R. Br.; *Agrostis Solandri*, F.v.M.; = *Deyeuxia Forsteri*, Kunth.

2. DRYANDER.

OF Jonas Dryander, Banks's second botanist-librarian, we know much less than we do of Solander. Like Solander, he was a Swede, having been born at Gottenburg, March 5th, 1748.

His father was a clergyman; he was educated at the Universities of Gottenburg and Lund, and also at Upsal under Linnæus. He was intended for the practice of physic, but dedicated himself chiefly to the study of Natural History (especially Botany) and Bibliography.

He arrived in England July 10, 1777, and resided many years (after Solander's death in 1782) with Sir Joseph Banks as his librarian.

He was librarian of the Royal Society and also librarian and Vice-President of the Linnean Society. He was a member of the Swedish and Russian Academies of Science. He died in London, October 19, 1810.

In the Botanic Gardens, Sydney, there is an etching of Dryander by William Daniell, after a drawing, 1796, by George Dance, R.A. To the waist, seated with arms folded, profile to right. [See Plate.]

* Qy. identical with the Linnean reference.

No. 36.—JONAS DRYANDER (1748-1810).

Following is a list of his works so far as I have been able to ascertain them:—

1. Extract from the minute book of the Linnean Society, November 4, 1788. "Mr. Dryander communicated to the Society, from Sir Joseph Banks, Bart., a specimen of an incomplete *Buprestis*: introduced from Bengal in a bale of muslin. (*Linn. Soc. Trans.*, i, 255-6, 1791.)"

2. Observations on the genus of *Begonia* (1789), *Linn. Soc. Trans.* i, 1791, pp. 155-173. Romer, "Archiv. Botan." i, 1798 (Hft. 3), pp. 65-79.

3. *Desiderata pro Bibliotheca Banksiana*. (London) 1790, 8vo, 27 pp. Recensentur 1343 opera ex historia naturali, quæ ill. Banks' pro bibliotheca desiderabat, valde rara pleraque, e Sequiero potissimum sumta; quorum maxima pars jam mihi innotuit.

4. *Lindsaea*, a new genus of ferns (1787), *Linn. Soc. Trans.* iii, 1794, pp. 39-43; Romer "Archiv. Botan." ii, 1799-1801, pp. 234-237.

5. On genera and species of plants which occur twice or three times, under different names, in Professor Gmelin's edition of Linnæus's "Systema Naturæ." (Read July 3, and October 2, 1792). *Linn. Soc. Trans.* ii, 1794, pp. 212-235.

6. *Catalogus bibliothecæ historico-naturalis Josephi Banks, Londoni*, typ. Gul. Bulmer et soc., 1796-1800, v. 8vo vol.—

i. *Scriptores generales*, 1798, vii, 309 p. ind.

ii. *Zoologi*, 1796, xx, 578 p. ind.

iii. *Botanici*, 1797, xxiii, 656 p. ind.

iv. *Mineralogi*, 1799, ix, 390 p. ind.

v. *Supplementum et index auctorum*, 1800, 531 p.

"250 copies only were stated to have been issued. The work itself is a monument of careful arrangement and accuracy, but the subdivision of subjects is carried to excess."—(Daydon Jackson.)

7. *Dissertatio Fungos regno vegetabili vindicans*.* Romer, "Archiv. Botan." ii, 1799-1801, pp. 202-209.

8. "*Chloris Novæ Hollandiæ*; or, Catalogue of the Plants of New Holland and Van Dieman's Land, hitherto published, as far as they have come to the knowledge of J. Dryander." "*Annals of Botany*," ed. König and Sims, vol. ii, 504-552 (1806). The article is dated 20th January, 1806.

He enumerates 376 species† and his principal sources of information are Gaertn. Sem; Labillardière Nov. Holl.; Andrews' Repos.; Ventenat Choix; Ventenat, Mahnaison; Smith, New Holl.; do. Ann. of Bot. (i);

* See also Lidbeck, Erik Gustav. *Praes. Diss. Fungos regno vegetabili vindicans* . . . subiecit J. Dryander. Londini Gothorum [1776]. 8vo.

† See note in J. J. Fletcher's Presidential Address, Section D. Aust. Assoc. Adv. Science, 1900, p. 90.

White's Voy.; Vahl Enum., *Linn. Soc. Trans.*; Cavanilles in *Anales de Hist. nat.*; *Bot. Mag.*; Salisb. Prodr.; Willd. sp. pl.; L'Herit. Sert. Angl.; Schrader Sert. Hannov.; "Hortus Kewensis."

9. Botanical description of the Benjamin Tree of Sumatra. *Phil. Trans.* vol. xvi. (lxxvii), 1809, pp. 287-288.

He edited Roxburgh's "Plants of the Coromandel Coast."

His *magnum opus* is No. 6, the elaborate catalogue of Sir Joseph Banks's library.

He also published in the Transactions of the Royal Academy of Sciences at Stockholm.*

By the extensive assistance he gave in compiling Aiton's "Hortus Kewensis," he may almost be considered as the author of that work as far as the first portion of the second edition is concerned. Indeed some botanists go so far as to say that the authority for the new species enumerated in that work should be given as "Dryander," and not as "Aiton," who was merely a gardener, but with little botanical knowledge. Solander and Brown also enriched various editions. The younger Aiton published the following note in the second edition of that work:—

To the memory of his deceased friend Jonas Dryander, Esq., a melancholy tribute of acknowledgment must be paid, for having continued to the son the assistance given to his father during the publication of the former edition of this work. This inestimable man exerted his best talents not only in improving the plan, but in arranging the materials of this catalogue for the press, and correcting the proof sheets during the progress of the printing, until a few days previous to his death; endeavouring at the same time to instil into the mind of the author some portion of that extensive scientific information for which he was so universally esteemed.†

In Aiton's work the only plant "Jonas Dryander, M.A." is credited with having brought into cultivation at Kew is *Lepidium piscidium* from the Society Islands.

His name is commemorated in the Proteaceous genus *Dryandra* from Western Australia, and *Grevillea Dryandra*, R. Br.

Dryandra of Thunberg, first published in *Flora Japonica*, being not generically different from *Aleurites*, which was previously established by Forster, I have peculiar satisfaction in giving the name of my respected friend, Mr. Dryander, to a genus so nearly related to *Banksia*, from which indeed it differs chiefly in inflorescence, but in that respect so widely as to be at once distinguishable.‡

Dryander leaves behind him the reputation of being the best bibliographer of his time, and a sound botanist. He also seems to have been a man much respected and beloved. Brown's opinion of the

* The Librarian of the Royal University Library at Upsala, writes to me—"The only paper I know from Dryander is the following:

"Anmärkningar vid örtslagtet Albuca, med beskrifningar på tre nya slag deraf.

"Kongl. Vetenskapsakademien's Handlingar, Ary. 1784, p. 289. (Stockh.)"

† "Hortus Kewensis," Vol. v (postscript).

‡ R. Brown's Coll. Works (*Ray Soc.*, ii, p. 179.)

inflexibility of Dryander is referred to in an interesting letter to Sir J. E. Smith, *infra*, p. 113.

Brown was not given to paying compliments; this is what he said on one occasion :

To the invaluable herbarium and library of Sir Joseph Banks I have on this, as on all other occasions, enjoyed the freest access; an advantage which has been greatly enhanced by the opportunity it has given me of consulting my friend Mr. Dryander, both as to the formation of genera and respecting synonyms, on which points his sound judgment and unrivalled erudition so well enable him to decide.*

3. BROWN.

ROBERT BROWN was the third and unquestionably the greatest of the Banksian botanist-librarians.

He was born on December 21st, 1773, the son of a Scottish Episcopalian minister (James Brown)† at Montrose, at a time when legal restrictions pressed severely on the Episcopalians in Scotland. When only eighteen he communicated to the Natural History Society of Edinburgh a list of additions made to the "Flora Scotica" of Lightfoot, accompanied by critical observations.‡

He went to Marischal College, Aberdeen, in 1787, and his name appears in the register of students until 1790, in which year he went to Edinburgh to enter on the study of medicine. The early records of Marischal College throw little light on the progress of students in their classes, so that we find no information in them as to his progress; but from other sources it is known that he early showed a marked love of science, and that while still engaged in his medical studies he made botanical excursions into the highlands of Aberdeenshire, Forfarshire, and Perthshire, which yielded plants not previously known as British. From an early period he habitually examined and carefully recorded the distinctive features of the new forms he met with, a method of great value to him in his later researches. (For further details of these early years, see Carruthers *loc. cit.*) In 1795 he entered the army, and accompanied the regiment of Fife Fencibles to Ireland, with the rank of Ensign and Assistant Surgeon. While in Ireland he continued his botanical studies, and occasional visits to London enabled him to make the personal acquaintance of others of similar tastes. Among these were Sir Joseph Banks, who formed a high opinion of his ability.§

The British Government at the close of the eighteenth century decided to make coastal surveys of New Holland, and also investigations into the natural history of such parts of the country as could be

* *Op. cit.*, ii, 31.

† For an interesting account of Brown's remarkable ecclesiastical experiences see Carruthers in *Journ. Bot.*, 1896, p. 27.

‡ Hooker's Eulogy, in *Proc. Linn. Soc.*, 1837-8, pp. 54-67.

§ See Prof. Trail in *Gard. Chron.*, March 16th, 1901, p. 177.

No. 37. — ROBERT BROWN (1773-1858).

visited during the progress of the expedition. Accordingly H.M.S. "Investigator" was fitted out and Captain Matthew Flinders placed in command. (*Infra*, p. 200.)

Banks, under date 12th December, 1800,* writes to Brown that a naturalist is required for the "Investigator," about to proceed to New Holland

for the purpose of exploring the natural history (amongst other things). The salary of the naturalist will be £400 a year. . . . If you chuse to accept the appointment I will certainly recommend you. . . . The voyage will, I conclude, last three years at least.

Brown accepted the proffered post.

Flinders' great work† should be studied. It gives minute details and maps of the itinerary of the expeditions, and many notes as to Brown's collecting grounds.

Brown's general account is as follows:—

The first part of New Holland examined in Captain Flinders' voyage was the south coast, on various and distant points of which, and on several of its adjacent islands we landed, in circumstances more or less favourable for our researches. The survey of the coast took place from west to east, and our first anchorage was in King George Third's Sound, in 35° south latitude, and 118° east longitude. In this port we remained for three weeks, in the most favourable season for our pursuits; and our collections of plants made chiefly on its shores and a few miles into the interior of the country, amount to nearly 500 species, exclusive of those belonging to the class Cryptogamia, which, though certainly bearing a small proportion to phænogamous plants, were not, it must be admitted, equally attended to. At our second anchorage, Lucky Bay‡ of Captain Flinders' chart, in 34° S. lat., and about 4½ to the eastward of King George's Sound; we remained only three days, but even in that short time added upwards of 100 species to our former collection.

Goose-Island Bay, in the same latitude and hardly one degree to the eastward of the second anchorage, where our stay was also very short, afforded us but few new plants; and the remaining parts of the south coast, on five distinct points of which we landed, as well as on seven of its adjacent islands, were still more barren, altogether producing only 200 additional species. The smallness of this number is to be accounted for, partly, no doubt, from the less favourable season in which this part of the coast was examined; but it appeared to depend also in a considerable degree on its greater sterility, and especially that of its islands.

Of New South Wales, or the east coast of New Holland, scarcely any part beyond the tropic was examined in the voyage; our first landing after leaving Port Jackson being at Sandy Cape, in nearly 25° S. lat. Between this and 21° S. lat. we had many, and upon the whole, favourable opportunities for observation, especially at Port Curtis, Keppel Bay, Port Bowen, Strong-tide Passage, Shoal-water Bay, and Broad Sound, the survey of which was completed; we landed also on two of the Northumberland and on one of the Cumberland Isles.

On the north coast we landed on Good's Island, one of the Prince of Wales' Isles of Captain Cook; for a few hours at Coen River on the east side of the Gulph of Carpentaria; and in more favourable circumstances on many of the islands and some points of the mainland on the west side of this gulph. Several of the

* *Hist. Rec.*, iv, 265.

† "Voyage to Terra Australis."

‡ See *lis*, p. 66 of Westall's landscapes referring to this and other localities referred to by Brown.

group called the Company's Islands in the chart, the shores of Melville Bay, of Caledon Bay, and a small part of Arnhem Bay were also examined.

We then left the coast, owing to the decayed state of the ship, which, on our return to Port Jackson, was surveyed and pronounced unfit for the prosecution of the voyage.

Captain Flinders having, in consequence of this, determined to repair immediately to England, for the purpose of obtaining another vessel to complete the objects of the expedition, Mr. Bauer and myself agreed to remain in the colony of New South Wales, until his return, or, if that should not take place, for a period not exceeding eighteen months. During this time we added very considerably to our collections of plants, within the limits of the colony of Port Jackson and its dependent settlements; the banks of the principal rivers, and some parts of the mountains bounding the colony were examined: I visited also the north and south extremities of Van Diemen's Land, remaining several months in the vicinity of the river Derwent; and repeatedly landed on Kent's Islands, in Bass Strait, on the shores of which the principal part of the submarine *Algæ* contained in our collections were found.*

A brief account of Flinders' three voyages of circumnavigation, two of them performed in the "Investigator," with Brown on board, is given below (p. 203), when speaking of Flinders.

Flinders' first Australian voyage began when he left Spithead, 18th July, 1801. He worked from the Leeuwin along the south coast, and reached Port Jackson 9th May, 1802.

The second voyage began at Port Jackson 22nd July, 1802. He went north along the Queensland coast, surveyed the Gulf of Carpentaria with thoroughness, and finding his ship rotten made for Timor, 31st March, 1803, and returned *via* West and South Australia to Port Jackson on 9th June, 1803, Peter Good, Brown's assistant, dying a few days later.

When Flinders left for England in the "Porpoise," wrecked at Wreck Reef, Brown remained behind to prosecute his researches.

Following are a few letters bearing on the above period:—

Brown writes to Banks from Sydney, 6th August, 1803,† giving an account of his various collecting grounds and the various difficulties he had experienced in collecting and preserving his specimens. He reports the death of Peter Good.‡ His letter is an important one, as showing the progress of his researches.

It would appear that he did not receive very much assistance from Flinders in the preservation of his collections. Brown again refers to this subject, in even stronger language, in a letter to the Rt. Hon. C. F. Greville of the same date,§ in which he gives much the same information as is contained in the letter to Banks.

Many of Brown's collections were on board when Lieut. Fowler (with Flinders on board) lost the "Porpoise" on a coral reef (Wreck

* Flinders' "Voyage to Terra Australis," vol. ii, Appendix, p. 534.

† *Hist. Rec.*, v, 180.

‡ *Infra*, p. 126.

§ *Ib.*, p. 185.

Reef), lat. $22^{\circ} 11' S.$, and long. $155^{\circ} 13' E.$, in August, 1803 (see below, p. 205). In September Brown writes to Banks* :—

The loss of the garden and specimens is to my department irreparable, for altho' I possess duplicates of almost all the specimens, yet those sent were far the best, belonging to the South Coast, and in consequence the most valuable that have been collected during the voyage. I trust Captain Flinders' report of the safety of the seeds are correct, for of them I have no duplicates.

In this letter he deals with the native bear (Coola), platypus, and other zoological subjects. The duties of Brown were to collect and make observations in zoology as well as botany.

As regards geology, see—

An account of some geological specimens, collected by Captain P. P. King, in his Survey of the Coasts of Australia, and by Robert Brown, Esq., on the Shores of the Gulf of Carpentaria, during the Voyage of Captain Flinders, by William Henry Fitton, M.D., &c. Read before the Geological Society of London, 4th November, 1825.†

The rock specimens collected on this (Flinders') survey (by Brown) were reported on by Dr. Fitton in 1825, but nothing was done beyond their enumeration and the indication of their agreement with those of the same denomination from other parts of the world, no attempt having been made to chronologically arrange them. Others collected by Brown during his sojourn in New South Wales were reported on by Dean Buckland in 1821, hereafter referred to.‡

Writing to Banks from Kent's Group, Bass Straits, 30th December, 1803,§ Brown reports his presence there and again alludes to the collections sent by the wrecked "Porpoise" on Wreck Reef. He adds—"Kent's Group has afforded very little—twelve new plants. and nothing new and interesting in any other part of natural history."

He wrote to Colonel Paterson, Lieut.-Governor, from Sullivan Cove (Hobart), River Derwent, 4th March, 1804||, that after leaving Kent's Group he went to Port Dalrymple (Launceston) "which we reached on the 1st of January (1804); there we remained till the 18th, which gave me sufficient time to examine its shores and to make a few excursions into the country. . . . From Port Dalrymple we had a short passage to Port Phillip, where we staid but a few days. It being determined to remove the colony to the Derwent, and the Lady Nelson being detained to carry the settlers, I remained in her, and after a passage of ten days, anchored in Risdon Cove." He also states :—

"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."

He says that he has been twice up Mount Wellington, and believes he has forty new species, and some of them are very singular. It is not clear whether this is a second forty.

* *Hist. Rec.* v. 227.

† Reprinted in "Narrative of a Survey, &c.," by Captain P. P. King, ii, 566-630.

‡ Tate in *Proc. Aust. Adv. Sci.*, v, 5.

§ *Hist. Rec.*, v, 284.

|| *Ib.*, 343.

No. 38.—BUST OF ROBERT BROWN, by Peter Slater.

Brown was therefore present at the inauguration of the first settlement at Risdon Cove under Lieut. Bowen; he was also one of the original founders of the settlement at Sullivan's Cove (the modern Hobart) under Lieut.-Col. Collins. Thus he is an historical personage as regards Tasmania, and it is hoped that any manuscripts of his in regard to these early settlements will be published, whether they are fully understood by the owners or custodians or not, as (considering the man who wrote them), they must contain valuable observations.

He writes to Banks from Sydney, 12th December, 1804,* and this letter supplements that of 4th March, 1804, from Sullivan's Cove (Hobart). He says he has found 540 species in Van Diemen's Land, and expects about 100 to be nondescript.

On 5th November, 1804,† Lieut. Menzies writes to Governor King that Mr. Brown is up the north branch (the Williams River) of the River Hunter.

In a letter to Banks, 12th December, 1804,‡ Brown mentions that since his return from Van Diemen's Land he has visited the Hunter River and examined all the branches,§ as far as a very small boat could proceed. He speaks of the unfriendliness of the natives. "The excursion has added fifty species of plants to my collection, but in other departments absolutely nothing."

Brown visited the Grose River, New South Wales, on at least two occasions:—

"Mr. Brown and Bauer, &c., visited the confluence of the Grose, Nepean, and Hawkesbury, and were indefatigable." (King to Banks, 9th May, 1803).|| And again—"Since my last letter,¶ I have, as well as my strength would permit, examin'd the banks of the Rivers Grose and Hawkesbury, and added a few new species to my herbarium." (Brown to Banks, 21st February, 1805).**

Brown's letter to Banks, thus quoted, is very interesting. He had finished the first eight (Linnean) classes, which, "exclusive of Gramineæ and Cyperordeæ contains upwards of 1,000 species." He sends a number of interesting plants, with critical notes on a new genus, and on *Azolla*.

He writes to Banks from Liverpool, 13th October, 1805,†† reporting his arrival in England "after a tedious and uncomfortable passage of nearly five months" in the "Investigator."

Thus ends Brown's voyage to Australia and back. Not many of his letters have been preserved, but the few quoted give some account

* *Hist. Rec.*, v, 509.

† *Ib.*, v, 483.

‡ *Ib.*, 510.

§ Presumably including the Williams and Paterson and Allyn Rivers.

|| *Hist. Rec.*, v, 133.

¶ The "last letter" to Banks in *Hist. Rec.*, v, 509, is 12th December, 1804.

** *Ib.*, v, 559.

†† v., 711.

of his movements and the localities and dates of such an eminent collector are of a degree of importance which can only be fully appreciated by the botanist.* Following are some of the localities visited by him on the south coast of Australia, with the names quoted by him on his specimen-labels.

Flinders' "Terra Australis" makes a number of allusions to the places where the "botanical gentlemen" collected, and I have already (page 102) quoted Brown's general statement.

Bay I†—"4 days." (Lucky Bay.)

Bay II.—Goose Island Bay.

Bay III.—Fowler's Bay. "a few hours." Memory Cove, 3 days.‡

Bay X.—Port Lincoln, 7 days.

Inlet XII§.—An anchorage on Kangaroo Island, 3 days.

Inlet XIV.—Gulf of St. Vincent, a few hours.

Kangaroo Island,|| 5 days.

King's Island, 1 day.

Port Phillip, 6 days.

Flinders, in a letter to the Admiralty, dated 11th May, 1802,¶ gives a list of the principal positions on the south coast where the "Investigator" anchored. Doubtless botanical collections were made at every anchorage:—

No. 1.—A small bay** on the main, within D'Entrecasteaux' Archipelago, affording shelter and water sometimes. Lat. 34° S.; long., $122^{\circ} 23'$ E.

Note.—A smaller bay lies $1\frac{1}{2}^{\circ}$ west of this, which affords more complete shelter, and also wood and water.

No. 2.—Goose Island Bay, in the same archipelago, 4 or 5 miles from the main, affording shelter and wood and water sometimes. There is a lake here containing much salt. Lat. $34^{\circ} 5'$ S.; long. $123^{\circ} 19'$ E.

No. 3.—A bay††, in the main affording shelter from all winds, those at S.E. excepted. Lat. 32° S.; long. $132^{\circ} 39'$ E.

* Brown quotes a number of his collecting places, *Hist. Rec.*, iv, 778.

† There is a Bay I, which is King George's Sound. See *Hist. Rec.*, v, 181, but this is apparently Lucky Bay, *Hist. Rec.*, iv, 748 and 750.

‡ See No. 9 *Hist. Rec.*, 751.

§ *Ib.*, 778. But perhaps Spencer's Gulf, *Ib.*, 751.

|| On March 22 and 23, 1802, Brown was on shore at Kangaroo Head (near the modern Hog Bay); April 2-5, 1802, on shore at Kangaroo Head, boat excursion to American River and Pelican Lagoon, ascended Prospect Hill, situated on the isthmus connecting Dudley Peninsula with the main mass of the island. The collection was derived entirely from the littoral tracts and he could not have seen the characteristic inland flora. (*Proc. Roy. Soc. S.A.*, vi, 131 (1882-3),

* *Hist. Rec.*, iv, 750.

** Lucky Bay.

†† Fowler's Bay.

- No. 4.—A bay*, on the north side of an island, 6 leagues from the main, affording shelter. Lat. $32^{\circ} 33\frac{1}{2}'$ S.; long. $133^{\circ} 35'$ E.
- No. 5.—An anchoring place in the north side of an island†, 6 miles from the main; open to westerly winds. Lat. $32^{\circ} 21'$ S.; long. $133^{\circ} 48\frac{1}{2}'$ E.
- No. 6.—An anchorage place on the north side of an island‡ near the main. Lat. $33^{\circ} 23'$ S.; long. $135^{\circ} 5'$ E.
- No. 7.—Anchoring place on the north side of an island,§ 5 leagues from the main; open to north-westerly winds. Lat. $33^{\circ} 41'$ S.; long. $134^{\circ} 46'$ E.
- No. 8.—Anchoring place in the north side of an island|| in the entrance of the largest inlet, 5 miles from the main. Lat. $34^{\circ} 56'$ S.; long. $136^{\circ} 16'$ E.
- No. 9.—Memory Cove, in the main,¶ open to the N.E., affording shelter for one vessel. Lat. $34^{\circ} 57\frac{1}{2}'$ S.; long. $136^{\circ} 9'$ E.
- No. 10.—A deep bay,** in the main, affording shelter, wood, and water. The water pits at the head of the bay are in lat. $34^{\circ} 48\frac{1}{2}'$ S.; long. $135^{\circ} 55'$ E.
- No. 11.—Anchorage under one of a cluster of small islands†† in the largest inlet. Lat. $34^{\circ} 33'$ S.; long. $136^{\circ} 21'$ E.
- No. 12.—The largest inlet,‡‡ in which the "Investigator" anchored frequently. Lat. $32^{\circ} 25'$ S.; long. $137^{\circ} 56'$ E.
- No. 13.—Anchorage under Kangaroo Island, sheltered from all winds, and affording wood and generally water. Lat. $35^{\circ} 42\frac{1}{2}'$ S.; long. $138^{\circ} 11'$ E.
- No. 14.—The smaller inlet,§§ in which the "Investigator" anchored thrice. The entrance is sheltered by Kangaroo Island, and its head lies in lat. $34^{\circ} 8'$ S.; long. $138^{\circ} 19'$ E.
- No. 15.—Anchorage on the north side of King's Island, in Bass's Straits. Lat. $39^{\circ} 37\frac{1}{2}'$ S.; long. $144^{\circ} 14'$ E.
- No. 16.—Port Phillip, affording shelter, wood, and water. The south point of entrance is in lat. $38^{\circ} 18'$ S.; long. $144^{\circ} 45'$ E.

* Petrel Bay, on the north coast of the largest island of the Isles of St. Francis.

† One of the Isles of St. Peter.

‡ One of Waldegrave Isles; the longitude, according to Flinders' chart, should, however, be $134^{\circ} 44'$ east.

§ Flinders Island. The position of the island, according to Flinders' "Terra Australis," vol. i. p. 124, is latitude $33^{\circ} 41'$ south, longitude $134^{\circ} 27' 30''$ east.

|| Thistle Island; so called by Flinders in honour of the Master of the "Investigator," John Thistle.

¶ To the north of Cape Catastrophe. Flinders gives the situation of this cove in his "Terra Australis" as latitude $34^{\circ} 58'$ south, longitude $135^{\circ} 56\frac{1}{2}'$ east.

** Port Lincoln, so named by Flinders in honour of his native county or county-town.

†† Sir Joseph Banks Group.

‡‡ Spencer's Gulf.

§§ Gulf of St. Vincent.

Following were Brown's collecting places in the "Investigator," on the Queensland coast. He says:—

"I subjoin a list, referring to Captain Flinders' letters for an exact acct. of their situation"*:—

1. Sandy Cape.
2. Port I in chart (Port Curtis).
3. Keppel Bay, which was found to communicate with Port I.
4. Port II (Port Bowen).
5. Shoalwater Bay, and in the passage into it within Cape Townsend.
6. Thirsty Sound, as its outer and inner entrance.
7. Broad Sound in various places.
8. Under one of the Northumberland Isles.
9. Under one of the Cumberland Isles.

(A Northumberland Isle "i," and Cumberland Isles "k" and "l," are mentioned by Flinders.)† In the chart, Gulf of Carpentaria, are marked two islands—Y1 and Y2.‡

The following is of special interest to Sydney botanists:—

Introduced Plants at Sydney, 1802–4§.

[Among the miscellaneous papers of Robert Brown preserved in the National Herbarium, London, is a list of plants noted by him as introductions during his visits to Sydney, 1802–4; of this the following is a copy. It has not seemed worth while to add the modern synonymy, as the plants will easily be recognized by the names given.

Of the two plants to which a ? is prefixed, there are no specimens of *Lepidium didymum* (*Senebiera didyma*) from Brown in the Herbarium, but *Cotula coronopifolia* is well represented. Of *Malva capensis* (*Malvastrum capense*) we find no mention elsewhere as an introduced plant; we have no specimens from Brown, nor do we find any reference to it in his MSS.—*Ed. Jour. Bot.*]

Plantæ introductæ vicinitatis Portus Jackson.

Plantago major. Ubique ad margines viarum.

Nicotiana Tabacum. In ruderatis et ad vias prope Sydney.

Datura. In ruderatis ad Sydney et Parramatta.

Solanum sodomæum.

Physalis pubescens.

Asclepias fruticosa.

Daucus Carota.

Apium graveolens.

Silene anglica. Prope Sydney.

* *Hist. Rec.*, iv, 855.

† "Terra Australis," ii, 93–6.

‡ See *Hist. Rec.*, v, 83.

§ *Journ. Bot.*, July, 1906, p. 234.

Lythrum hyssopifolium. Ad vias prope Sydney.

Euphorbia Peplus. In hortis ubique.

Fragaria vesca.

Stachys arvensis. Prope Sydney.

Erodium moschatum. Ad Parramatta.

? *Lepidium didymum*. Ubique ad vias.

Vicia sativa.

? *Cotula coronopifolia*.

Malva capensis. Ad oppidum Sydney prope domum D. Chapman.

Poa annua.

Panicum Dactylon..

Phalaris canariensis.

Lolium temulentum. In agris frequens vitium.

Lolium perenne. Rarius ad vias.

Briza virens [minor]. Prope domum Gubernatoris ad Sydney.

Anagallis cærulea. Prope domum D. Caley ad Parramatta.

Scleranthus annuus. In hortu D. Caley.

Cerastium vulgatum. In hortu D. Caley.

Anagallis arvensis. In vicinitate Sydney.

Urtica urens. In ruderalis, &c., prope Sydney.

The letter of Banks to Secretary Marsden of the Admiralty, January, 1806,* is an interesting and valuable document, detailing the work of Brown and Ferdinand Bauer in the Australian trip, from which they had just returned. It gives an estimate of the number of species brought home by Brown, and an enumeration of the sketches of plants and of animals made by Bauer. It also details the propositions of Banks for the working up by Brown and Bauer of these collections.

Then comes the work of Brown who was engaged, until 1810, on the task of working up the material he had collected in Australia. He had been on the books of the "Investigator" during the Australian expeditions, and his five years' work in England continued to be at the cost of the Admiralty. The work of Brown and Bauer was supervised by Banks, to whom progress reports were furnished by the botanist and artist respectively. Brown's letter to Banks, of 18th June, 1807,† gives a progress report of his work on the plants he brought home in the "Investigator." He mentions—"The interesting novelties to the botanist are, however, numerous, and are chiefly contain'd in the natural orders—Proteaceæ, Rubiaceæ, Campanulaceæ, and Orchideæ."

* *Hist. Rec.*, vi, 17.

† *Ib.*, 268.

He writes again, 2nd June, 1809,* a further progress report:—

The number of plants described is 1,600, of which nearly 1,300 are as yet unpublished; and these comprehend upwards of 100 genera consider'd as new. Mr. Bauer has finished 119 drawings. He reports that he has made some progress in preparing a *Prodromus*.

Brown makes a further progress report,† to Banks, dated 6th January, 1810.

The number of species of plants is not absolutely ascertain'd, but may be reckon'd 3,400, of which about 2,800 have been arrang'd and specimens selected for the public collection; of these nearly 2,200 are described; of this latter number, upwards of 1,700 are new species and comprehend 140 new genera.

Instead of making his *Prodromus* refer to new genera and species only, he stated that he had decided to include all New Holland plants.

Mr. Bauer had made 145 finished drawings. The total number of his sketches of New Holland plants is 1,542, and animals is 263. Of Norfolk Island there are 80 sketches of plants and 40 of animals. Of Timor plants, 60; and Cape of Good Hope, 79.

The portion of the *Prodromus* referred to was an accomplished fact the same year, when he published the "*Prodromus Floræ Novæ Hollandiæ*," and another contribution in 1814, as the Appendix to Captain Flinders' Voyage:—

The first of these works, though a fragment, has for half a century maintained its reputation unimpugned, of being the greatest botanical work that has ever appeared.‡

Speaking of Brown's Australian voyages, Hooker‡ says:—

Owing to the late Robert Brown having accompanied this voyage, it proved, as far as botany is concerned, the most important in its results ever undertaken, and hence marks an epoch in the history of that science. Brown united a thorough knowledge of the botany of his day, with excellent powers of observation, consummate sagacity, an unerring memory, and indefatigable zeal and industry as a collector and investigator; he had further the advantage of being accompanied by a botanical draughtsman, Ferdinand Bauer, who proved no less distinguished as a microscopic observer than as an artist; and he had a gardener, Mr. Peter Good, to assist in the manual operations of collecting and preserving. Hence, when we regard the interest and novelty of the field of research, the rare combination of qualities in the botanist, and the advantages and facilities which he enjoyed, we can easily understand why the botanical results should have been so incomparably greater, not merely than those of any previous voyage, but than those of all similar voyages put together.

The last sentence is strong language, but its truth has never been disputed.

The following correspondence of Brown at this period, hitherto unpublished, and for which I am indebted to Mr. F. M. Bladen, the Official Historian of New South Wales, contains much that is of interest to botanists, and especially to Australian ones.

* *Hist. Rec.*, vii, 160.

† *Ib.*, 262.

‡ "Introductory Essay to the Flora of Tasmania," p. cxiv.

Brown to J. E. Smith.* (Undated, but written in 1810.)

I beg you will accept of my best thanks for your kind attention to my quæres on Proteaceæ, &c., and for the inspection of specimens of your *Conchium compressum*,† and *sphæroideum*,‡ which I received with your last letter

The Society§ has hitherto been at no loss for matter to read at their meetings, and for this they are partly indebted to my long-winded paper on Proteaceæ. In mentioning to you this paper, Mr. McLeay has rightly informed you that I have retained the name *Hakea*, but I am sorry he thought it necessary to add that he "was sure this was not done from any want of respect for you." My conscience indeed very fully acquits me of being actuated by a motive which I trust appears to you as improbable as it does to me unworthy.

In my paper I have assigned no reason for retaining the name of *Hakea*,¶ for though I could not acquiesce in your determination on the subject, I feel it would be unbecoming in me to have expressly combated anything you had so recently said in the Linnean Transactions. But as I am most anxious to avoid the possibility of a misunderstanding, I must here trouble you with the detail of every circumstance that has influenced me in this matter.

Were the insignificance of generic names the only or even principal consideration in such cases, I surely could not have hesitated in adopting yours which is admirably expressive of the form of the fruit.

But as Schrader has a no less decided claim of priority and as I was unacquainted with any botanical exception to it (for your paper only hints at the possibility of there being any such) I was guided by the rule generally followed by Botanists and expressly inculcated by Linnæus himself. If, therefore, I have erred it has arisen from my giving implied credit to the assertions of Schrader (see dedication and preface to Sec. France), whose veracity, however, I had no reason to doubt; but the moment I am convinced that Hakea, either as a Botanist or an enlightened promoter of the science, has no claim to the distinction, I will most gladly relinquish a name for yours, which has not only the advantage of being descriptive, but, in my mind, has been long associated with the plants themselves.

Cavanilles, as you know, adopted *Hakea* at a time when he was acquainted with your name, and he has so explicitly assigned his reasons, that unless on the score of Hakea's unworthiness** I confess I do not understand how he could have changed it in any future publication; as in your paper you have not mentioned Labillardière, I conclude his work was not before you when you were engaged in it, for he also has adopted *Hakea* and described three very distinct species. I do not rest much upon Persoon who in his Synopsis likewise uses it, but I am acquainted with no foreigner except Ventenat who has adopted *Conchium*, and this I must observe he has done without assigning any reason, though he had previously, in mentioning the genus, always used it, and at the time of his publication knew that no less than seven species had been described under that name.

* Sir J. E. Smith, M.D., the purchaser of the Linnean Herbarium and founder of the Linnean Society. He described many Australian plants.

† *Hakea acicularis*, R. Br.

‡ *Hakea gibbosa*, Cav. *Conchium* had recently been described by Smith in *Trans. Linn. Soc.*,

§ The Linnean Society. Writing to Smith under date 12th January, 1806, Brown says—"Since I received your letter I have undertaken the office of librarian, &c., of the Linnean Society, a situation which in some respects is more suitable to my inclinations than abilities."

¶ "On the Proteaceæ of Jussieu," *Trans. Linn. Soc.*, x, 15. Read, 17th January, 1809. Published 1810.

** Brown's adoption of Schrader's generic name *Hakea* in preference to Smith's later name *Conchium* has been followed by modern botanists. Smith's paper is "A Botanical Sketch of the genus *Conchium*," (*Trans. Linn. Soc.*, ix, 117).

** This scarcely seems a ground for interference with the law of priority, which is far too stable for change to be warranted for such a reason.

Liverpool Oct. 13 1835
H. M. S. Investigator.

Dear Sir After a tedious & uncomfortable passage of nearly five months, we have just been enabled to reach this Port the first we have been in since we left Port Jackson; The cause of the Investigator's coming home & other circumstances relating to her it is unnecessary for me to state to you, as you will doubtless learn them better from other quarters. When it was first determined to dispatch her to England, Governor King recommended her, as the best conveyance for the collection that was likely to offer, and altho' in such a vessel it was impossible to take the Garden & judged it better to leave it, particularly as Mr. Calver agreed to superintend it & Govt King assured me it would in all probability soon follow us in the Buffalo. I am longer to delay my departure especially as Letters from Capt. Flinders then a Prisoner in the Isle of France had deprived me of every hope of the voyage being immediately prosecuted.

As to the Collection embarked in the Investigator it was, after repeated representations, provided for, as well as the reduced state of the vessel & her crazy condition would admit of. & since it has been on board I have received from Capt. Kent every assistance in his power to enable me to preserve it. While within the Tropics the plants were carefully examined & those that most required it were changed into dry paper but such has been the wet state of the ship that they must again be suffering & that I fear considerably.

I am therefore most anxious to have them removed on shore & I earnestly beg they may not be again put on board the Investigator for the purpose of being brought round to Portsmouth or the River as she is not only a crazy but absolutely a lifeless ship.

The expense of land carriage cannot I suppose be very great.

I enclose a list of the Packing Cases containing the collection as also that of Mr Bauer & I have taken the liberty of adding our luggage which is not very formidable, consists mostly of Books, & contains nothing which the custom house would detain.

I shall most anxiously wait your instructions & cannot avoid again expressing my wish that the collection may be removed as soon as possible from the Investigator & transported to London by land.

I beg to be remembered to Mr. Dryander & in the best manner and to assure you

that I am Dear Sir

With the greatest respect

Your most obed^t & humble serv^t

Robert Brown

These are the reasons that have decided me in retaining the earliest name, and with a conviction of their sufficiency, I do not see how consistent either with respect to you, or to myself, I can change it. I have still another reason, but though it has weight with me, I do not put it in the scale because I am aware it is not unmingled with selfishness. My friend Mr. Dryander, who has already adopted *Hakea* in his catalogue, intends I am certain, to continue it in the edition of "Hortus Kewensis,"* now preparing for the press, and you will very readily believe that my determination, especially if unsupported by reasoning, will have very little influence with him. Now I confess, that as several of my new species will appear in the New Catalogue, I am, on that account, more than usually anxious to coincide with him.

You may be assured that in all cases I am most desirous to adopt your decisions, sensible that where I have the misfortune to depart from them I incur no small risk of committing myself, and I trust you will consider it unnecessary for me to add, that where I am induced to differ from you either as to names or structure, I am not likely to do it in terms calculated to hazard your friendship or esteem. But among such a number of objects which different observers will often contemplate under very different points of view, occasional diversities of opinion will necessarily occur, and a few such indeed there are in my paper already mentioned. These I could wish when you come to town to submit to your inspection previous to anything being determined upon respecting its publication, and I now hasten to conclude, &c.

(Signed)

R. BROWN.

Smith to Brown. Norwich, January 14th, 1810.

I fully intended preparing my paper on *Brunonia*† (is not that the best name for it?), for next Tuesday, but independent of some things that I could not postpone, I have been unusually interrupted by visitors last week. You may depend on it by the 6th of February. I have happily this winter had no interruptions from headaches or other indisposition, so that my Flo. Brit. and Lapland Tour are in a thriving condition. I thank you very much for your kind communication, as I was, for many reasons, anxious to stand godfather to your genus. On one point chiefly I beg to offer a suggestion, though with the deference due to your superior‡ knowledge in Nat. Orders. This genus seems to me a true *Dipsacea* and having truly a *flos inferus*, it confirms the propriety of Jussieu's suggestion, p. 195 Obs. line 7, &c., that "perhaps the outer calyx in *Dipsacæ* is inferior." In studying the Scabiosæ of Fl. Græca I have had occasion to weigh this matter. It seems to me that *Brunonia* is a *Dipsacea* with a *perfectly inferior flower*, while in *Dipsacus*, &c., the calyx and base of the corolla are more or less united into a spurious kind of pericarpium. I need not point out to you the lights which *Morina*, *Valeriana*, and thence the *Rubiaceæ* and *Corymbifereæ* throw on the subject. As to habit, see how striking an affinity there is between your two species and the *Scabiosa cretica* and *graminifolia* of Linns. I shall be anxious till I hear your opinion.

I thank you and my good friend Dryander for what you propose abt. Wahlenberg's remarks. I should gladly accede to it, were the Lapland Tour likely to appear *very* soon. The 1st vol. is printed, but what with the wood-cutter, the printer, and the tediousness of the translating and composing the whole, the 2nd vol. can hardly be done these six months.

* Referred to in speaking of Dryander, *supra*, p. 91. This is additional evidence, already alluded to, of Dryander's responsibility for the botany of a portion of the work that is called by Aiton's name.

† In honour of Brown. Smith's paper was "An Account of a New Genus of New Holland Plants named *Brunonia*." (*Trans. Linn. Soc.*, x, 365).

‡ A compliment to the profundity of Brown's knowledge from one of the first botanists of the day.

It is a pity, therefore, that this curious matter shd. be kept back so long, and I shall be sufficiently obliged to Mr. Dryander if (in whatever way he may publish it now) he would still allow me to *append* it to my book hereafter. I have indeed got the *Proteaceæ*,* but, shall not keep it—I mean hereafter not to notice at all, or very slightly, that or any other of the author's productions. He is now taken off my hands by the enemies he makes on all sides, and is a striking proof how much bad principles and feelings not only prevent, but absolutely sink, good natural talents. I am happy to say my resentment has become extinct much faster than my friendship did. When I take the trouble of looking after him even in his own *pedantry* of natural affinities, he really proves often very weak. In the higher line of seizing and defining characters, and in clear elucidation he is truly paltry, and scarcely beyond Gawler,† whom he so much resembles in many odd *aberrations of affinity*, if you will allow the expression. But enough of this *par ignobile*.

I rejoice to hear your *Prodromus*‡ is really printing, which is more than I hoped as yet. I am also happy to hear McLay's§ accident is not so serious as I at first supposed. He is in all respects a most valuable man.

With best compliments to Sir Joseph Banks, Dryander, and all friends,

(Signed)

J. E. SMITH.

* A reference to the reputed work of Joseph Knight, nurseryman, King's Road, Chelsea,—“On the cultivation of the plants belonging to the Natural Order *Proteaceæ*, with their generic as well as specific characters and places, when they grow wild.” London, typ. Savage, 1809. 4to. xix, 128 pp. I tab. col.

We have no evidence that Knight had the slightest claim to be considered a botanist, and there can be little doubt that the whole of the botanical portion of his work was written by Salisbury. (*Journ. Bot.*, xxiv, 297.)

In regard to the bitter feeling that was engendered by Knight's work, in the “*Banksian Correspondence*” are copies of letters which passed between Smith and Salisbury, which were sent by Smith to Banks, as well as the correspondence between Smith and Banks on the subject, an abstract of which may at some time be worth publishing. (*Ib.*, p. 297.)

Robert Brown read a paper before the Linnean Society on January 17th, 1809, “On the *Proteaceæ* of Jussieu,” which was not published until 1811. Meanwhile, during 1809, Knight's book was issued, containing descriptions of many of the plants taken up by Brown in his paper. In the preface to which we read:—“Perhaps few works have greater claims to originality than the present, not a single line being copied from any other.” There is no reference in the book to Brown's paper, at the reading of which Salisbury was present. (“*Salisbury ejusdem coram Societate Linneana lectionem audivit.*” Brown, “*Prodromus*,” 376.)

It may be that the sentence just quoted was written as a defence against the charge he had good reason to expect. At any rate, the charge was soon made. “How shocked was I,” writes Goodenough to Smith, December 26th, 1809, “to see Salisbury's unrepentitious anticipation of Brown's paper on the New Holland plants, under the name and disguise of Mr. Hibbert's gardener. Oh! it is too bad. I think Salisbury is got just where Catiline was when Cicero attacked him, viz., to that point of shameful doing when no good man could be found to defend him. I would not speak to him at the anniversary of the Royal Society.” (“*Memoir of Sir J. E. Smith*,” i, 538.)

Brown speaks of the book as “*nimis festinanter conscriptus.*” (“*Prodromus*,” 391), (James Britten in *Journ. Bot.*, xxiv, 298.)

I have referred to the matter of the scientific ostracism of Salisbury by reason of his plagiarism. in *Proc. Linn. Soc. N.S.W.*, xxvii, 697 (1902).

Robert Brown and Salisbury were too good observers to rest contented with the Linnean method of classification, but the former gave himself chiefly to observation of the minute parts of plants, and the discrimination of sundry genera, whilst Salisbury was never fairly represented by any productions worthy of his great ability.” (Historical Introduction, p. xxxviii, in “*Guide to the Literature of Botany*,” by B. D. Jackson, 1880.) This seems a fair tribute to pay to the memory of Salisbury, whose great talents were in a measure concealed by infirmity of temperament.

† Ker, John Bellenden (*olim Gawler*) (1765–1842?) b. Ramridge, Andover, Hants? 1765?; d. Ramridge, Jnne, 1842. “*Recessio Plantarum*” (anon.), 1801; see *Ann. Bot.*, i, 17. Edited *Bot. Register*, 1815–24. “*Strelitzia*,” 1818. “*Iridearum genera*,” 1828. Contrib. to *Bot. Mag.* (see pref. to vol. xv), *Trans. Linn. Soc.*, x, 166, Pritz., 162; Jacks., 565; R.S.C., iii, 639; iv, 279 (the papers attributed to Masson); *Gen. Mag.*, 1842. ii, 220; *Dict. Nat. Biog.*, xxxi, 52; *Portr.* (as a boy), by Reynolds, engr. by J. R. Smith. *Bellendena*, Br. (Britten and Boulger, p. 97.)

‡ The “*Prodromus Nova-Hollandiæ*,” 1810.

§ Alexander Macleay, Secretary of the Linnean Society, 1798–1825, Colonial Secretary of N.S.W., 1825–36.

I had a letter from Sir Jos. Banks lately, so much better as to handwriting than I have seen from him for a long while, that I trust it is a good proof of his health.

Brown to Smith. (?) February, 1810.

I was highly gratified by your kind and instructive letter, which I should have immediately answered, had I not intended first carefully to examine and compare *Brunonia* with *Dipsacæ*, but this the extreme coldness of the weather and the darkness of the forenoons have prevented me from accomplishing. I am therefore, obliged to advert to your ingenious observations* respecting its affinity, with such knowledge only as had formerly determined me to place this remarkable plant between *Campanulacæ* and *Compositæ*. The view which you have taken of the matter, had not entirely escaped me, but you have stated it more fully and with greater perspicacity than I had done. I was, however, deterr'd from referring my genus to *Dipsacæ* on account of the differences which even taken singly though not of universal are of very general importance, and when united appear to me to have more than twofold weight—these are germen superum and embryo rectus in *Brunonia* oppos'd to germen inferum and embryo inversus in *Dipsacæ*.

I have just looked at *Scabiosa graminifolia* and *cretica*, must acknowledge that the resemblance in habit between them and the New Holland plants is very striking, and I fully acquiesce in the justness of your observations respecting the difference between *Scabiosa* and these plants in so much as relates to the calyx and germen, for though Jussieu's observation quoted by you seems only to regard the outer calyx or bractæ, yet it is surely quite as applicable to the inner or true calyx, for when indeed is in any case the difference between calyx superus and inferus unless in the former its accretion to, and in the latter its want of cohesion with the ovarium? Nevertheless this circumstance is found to be upon the whole so constant in natural families, witness *Dipsacæ* & *Remse'loes* [*sic.*] (and *Syngenesiæ*, I confess also), that it must always have considerable weight in determining our ideas of the affinity of new genera, and when coupled with another circumstance (that, viz., of the direction of the embryo), of similar importance and equally constant in the two families just mentioned, it seem'd to me to go very far in deciding the place of the New Holland genus in a natural series at least if not any given order. Other circumstances might be mentioned, such as the 5-fold division of the flower and the cohesion of the *Antheræ*, which would remove the genus in some measure from *Dipsacæ* and approximate it to *Compositæ*, to which, indeed, it would be very clearly referable if you only suppose the body of the calyx glued to the ovarium, whereas to assimilate it to *Dipsacæ* you must not only suppose this, but also invert the embryo. But there is still a peculiarity in which it differs from both, and that is in the structure of its stigma, to which I know nothing similar except in your *Goodenia*, *Scævola*, and some nearly-related genera of *Campanulacæ*, and this, in fact, was my chief reason for putting the genus between that order and *Compositæ*.

But the circumstance which I apprehend must have had considerable weight with you in placing it with *Dipsacæ* is the existence of the outer calyx or bractæ. There, therefore, would be one peculiarity oppos'd to another, and both of them confessedly important, neither do I know in what scales to weigh their relative importance to you in your favour, though I might adduce *Jasione* and *Platynema*, and I conceive I have structure of important parts of fructification, though to weaken my first argument *Globularia* might be brought forward, but then this genus, which in many respects nearly approaches *Brunonia* quite as nearly as *Scabiosa*, wants the outer calyx entirely.

* *Brunonia* is a remarkable genus classed by modern botanists in the *Goodeniaceæ*. Its position was long a matter of difficulty and elucidation of its affinities hence had a fascination for the mind of Brown. See in particular his observations at vol. ii, p. 310 of his *Collected Works* (Ray Soc.)

Upon the whole there is surely no such thing as *Natural Orders* in nature, and my scepticism would lead me a step further, but to confine myself to the former position, I have sometimes been inclined to put together my thoughts on this subject, which from what I have already said you are probably not at all impatient to see, and I should then take *Brunonia* for my principal illustration, for whatever natural order it is put to it will certainly prevent the order from being defined. But to conclude, if after weighing what has been already said you should be inclined to hesitate, pray let me entreat you as a Scotchman not to prove my relationship to *Scabiosa*, for after all if I had but the colour of sulphur I might stand some chance of getting rid of that connection.

As I have communicated that part of your letter which relates to Wahlenberg's remarks to Mr. Dryander, who desires his remembrances, and to say that as his only wish is to have the observations, which he conceives important, preserved in a respectable publication, he thinks he cannot better provide for them than by finding them a place in the work you are now preparing; he will therefore give up his former intention of publishing them immediately, and as being quite new in the country they will perhaps be somewhat more acceptable to you.

The translation is at present in my possession, for I had formerly solicited Mr. D.* for leave to present it for reading to the L. (Linnean) Socy. in the event of dearth of original matter, but as the society have at present food enough for two or three meetings, and as something else may be reasonably expected. I shall send it to you in a few days that you may judge how far it will suit your publication.

As to the supposed author of *Proteaceæ*,† I scarce know what to think of him. except that in affinity he stands between a rogue and a fool, and he appears to me sometimes to lean to the one family and sometimes to the other, for I do not deny that he has a considerable share of acuteness, but I think he is in most cases almost totally destitute of judgement, the little that he has being chiefly expended in grafting his lies upon a stock of truth—this is an expression of Lord Kain, but not unsuitable to a secretary of the Horticultural Society.

The stock, however, he now and then mistakes, of which I have lately met with a whimsical instance. Cavanilles, in describing a species of *Banksia*, had on the authority of the carpenters of Malaspina's ships, called it "arbor 30 pedes alta," and this is all he says of its height, but as on the same authority he has compared the tree to an oak, the aforesaid secretary thought he might very safely call it a tree 30 feet high or more, and as it has been but lately introduced into this country he thought there was sufficient grounds for roundly asserting that it grew at some distance off from the settlement of Port Jackson. Now what do you suppose is the real state of the case, the tree 30 feet high or more is a shrub generally of 3 or 4 feet, but never exceeding, and not to say equalling at some distance from Port Jackson. I suppose the author would, after learning the truth, tell me he meant by *some* the minimum possible; for it absolutely grows in the town of Sydney, and I have never met with it at any distance.

Hooker‡ to Brown.

Halesworth, March 21, 1810.

I have lately been examining all my foreign *Jungermanniæ* for the purpose of ascertaining whether or not I could discover in any of their fructifications something analogous to the situation of the Calyptra in your New Holland species, but I am not able to find anything like it. In two or three New Zealand species I can find no Calyptra at all. On the Calyptra of our *J. epiphylla*, the little styles or pistilliform bodies proceed from all parts of it, but the insertion of the Calyptra is the same as in other species. A similar Calyx to what you observe in your New Holland species, I think you will find also in *J. adunca* Dicks., *J. scalaris*,

* Probably Dryander, who died this year (1810).

† R. A. Salisbury. See footnote to p. 114.

‡ Afterwards Sir W. J. Hooker, Director of Kew.

and *J. emarginata*, Ehrh., as well as in two or three exotics. I find *J. pulcherrima* (which appears in habit, a good deal allied to your *Jungermanniæ*) has a very different calyx and nothing remarkable about it.

Pray do you approve of the term *Fronde* for the *Jungermanniæ*? Dr. Smith and I are inclined to think it should be so. The Dr. also proposes to me that the foliolium when divided as in *J. bidentata*, *bicuspidata*, &c., should be called "foliolium biceps," that that of *J. undulata nemorosa*, &c., should be called *foliolium bilobum*, and that part of it which has been called an auricle, *lobulus*. What Schmiedel calls Corolla, Dr. Smith thinks may be called a *Calyptra*, as in mosses; but if you think proper to call it by any new name, and will give me leave, I shall most gladly adopt it.* I should be much gratified by information of this kind from you, or any other observations relative to *Jungermanniæ*, which I will not fail, thankfully, to acknowledge.

Between Count Frampe, who may be detained longer in this country than he expects, and Sir George Mackenzie, who talks of accompanying him and publishing an account of his voyage, it is probable that I shall be left behind. At any rate I am at this time quite in uncertainty about going. If I do not go, I should very willingly make a little excursion to Teneriffe, or what would please me much better, to the Brasils. I do not at all see, however, that such a scheme is practicable, I should certainly wish, first of all, to finish my little History of the British *Jungermanniæ*, and get an intended description of the foreign ones in some state of forwardness.

I am quite vexed that I have not yet been able either to meet with a copy of "Flora Scandinavia" or the "Traveller's Guide" to return you for those which I lost. I do not recollect whether it was the old edition of the "Flora Lapponica" or Dr. Smith's I borrowed of you, but I have given a copy of each in charge to Mr. Leach who will deliver to you whichever it was of them.

(Signed) W. J. HOOKER.

The publication of Brown's "Prodromus,"† which was the coping stone of the author's work for the Admiralty on the plants of the "Investigator" expedition, took place in 1810, and Dryander died during the same year. Brown thereupon entered the service of Banks as librarian in place of Dryander, for whom he had had always a sincere regard.

Banks died in 1820, but not before he had made provision for Brown, and thus for the continuity of the botanical work which for so many years had been carried on, in Banks' house, with the aid of his celebrated herbarium and library.

His will contained the following clauses:—

I give and bequeath unto my indefatigable and intelligent librarian, Robert Brown, Esq., an annuity of two hundred pounds . . . I also give to the said Robert Brown the use and enjoyment during his life of my library, herbarium, manuscripts, drawings, copperplates engraved, and everything else that is contained in my collections . . . and after his decease then I give and bequeath the same to the Trustees for the time being of the British Museum.

He also left Brown (after Lady Banks' death) the lease of his house in Soho Square.

* Another instance of the deference paid to Brown in abstruse points of comparative morphology.

† "Prodromus Floræ Novæ Hollandiæ. . . ." Vol. i, Londini, 1810. 8vo. Reprinted in "Isis," col. 801-984. Lipsiæ, 1821. 4to. Ed. 2. See "Vermischte botanische Schriften," iii, Norimbergæ, 1827. 8vo.

Brown made over these collections to the nation within a short time after acquiring possession of them; in fact, his appointment as first keeper of the Botanical Department of the British Museum dates from 1827. In an inquiry into the British Museum in 1835, Brown stated that he was an under-librarian of the Museum, and designated Keeper of the Banksian Botanical Collections.

From the following passage it is evident that Brown had an herbarium which he considered to be his private property, in addition to what is and was known as the Banksian Herbarium.

At the death of Robert Brown in 1858, his herbarium came into the possession of John Joseph Bennett, then Keeper of the Department of Botany. It mainly consisted of the very valuable and interesting collection made by him in his capacity as naturalist during the voyage of H.M.S. "Investigator,"* commanded by Captain Flinders, on the coast of New Holland and Van Diemen's Land in 1802-5, and included nearly 3,900 species, among them being the types of Brown's "*Prodromus Floræ Novæ Hollandiæ*." The herbarium during Bennett's lifetime was kept at the Museum, and was accessible to botanists; it was largely employed by Bentham in the preparation of his "*Flora Australiensis*." On Bennett's death, in 1876, the Museum became possessed of a complete and very fine series of the Australian plants, with all Brown's notes, and of the remainder of his herbarium, which contained Australian plants from Baxter, Sturt, Mitchell, and Labillardière, Brown's own collections in Timor and at the Cape, and various specimens from other collectors, including types of species described by Brown.†

Brown published no bulky works, but if they lacked size and number they were of the highest quality. Of the erudition of Brown, of his genius for gross and minute morphological work and interpretation of the results from the point of view of classification, there can be no difference of opinion. There is the finish of a master about his work—his descriptions are models of discrimination, condensation, and comprehensiveness, while his names are models of nomenclature.

His contemporaries held him in the greatest respect, and frequent compliments show the depth of their admiration.

There is an enumeration of Brown's works in Pritzel's "Thesaurus," p. 35. In the preface (by J. J. Bennett) to the second volume of Brown's Collected Works (Ray Society) there are corrections of Pritzel, and also information in regard to the assistance Brown gave to the authors of certain well-known works.

Daydon Jackson points out that the following work—(Ker, J. B.) "On three species of the *N. O. Orchideæ*," Lond., 1817, 4°, is, in Pritzel, *Thes. Ed. i*, erroneously ascribed to Brown.

The second portion of the Second Edition of Aiton's "*Hortus Kewensis*" owes much of its botanical value to Brown.

* This is contrary to modern, or at all events to Australian, ideas. It has been already shown that Brown was paid by the Admiralty while on his Australian expeditions; while the Admiralty also paid him for nearly five years to prepare the botanical results of the expedition, which were published in the "*Prodromus*" in 1810. The specimens were surely public property, and Mr. Bennett rightly made arrangements for landing them back to the nation.

J. Britten, in *Journal of Botany*, xlii., p. 124.

To Robert Brown, Esq., most learned in the practical knowledge of botany, and in the very refined and scientific parts of it in particular, with a mind comprehensive and acute, and with friendship equally liberal to the author, must be attributed the improved state of the latter volumes of this work. Much new matter has been added by this gentleman, and some without reference to his name; but the greater part of his able improvements are distinguished by the signature of *Brown mss.**

Speaking of this work [Aiton (W.) "*Hortus Kewensis*." London, 1789. 8vo. Ed. 2, by W. T. Aiton. 1810-13], Daydon Jackson says of it—"Much of the descriptive matter was contributed by J. Dryander as far as Dodecandria, and thenceforward by R. Brown, many of whose genera were published in it."

It would be desirable to issue an official list of plants in the "*Hortus Kewensis*," which are to be attributed to Solander, Dryander, and Brown, respectively. A number have come to be attributed to Aiton, apparently simply because they were published in the work which bears his name.

Brown's largest and most important treatise is of course his "*Prodromus Floræ Novæ Hollandiæ*"† (1810), a remarkable work, and the eulogy of it by Sir Joseph Hooker is quoted at p. 111. An extract says:—

In point of novelty of plant forms and structures which it describes, accuracy in details, precision of language, wealth of observations, and far-reaching views of classification, it maintains to this day the unique position which was assigned to it on its appearance.

I searched the *Edinburgh Review* and failed to find the "hostile criticism." I accordingly applied to Mr. Hemsley, of Kew, and Mr. Britten, of the British Museum. Following is Mr. Hemsley's reply:—

We have searched, Mr. B. D. Jackson has searched, and Mr. J. Britten has searched in all probable publications of the period, and nothing has been found to confirm the tradition of hostile criticism of R. Brown's latinity. The reason why he did not continue was probably the absurdly small sale.

The Director of Kew (Lieut.-Col. Prain, M.D.) was so kind as to send me the following extracts bearing on the subject:—

... nor is there at present any encouragement for works on natural history, so that the first volume of Brown's "*Prodromus Floræ Novæ Hollandiæ*," a most scientific work, finding no sale whatever, he has stopt short. (Letter dated 4th February, 1817, written by Francis Buchanan.)‡

* "*Hortus Kewensis*," Aiton. Vol. v. Postscript.

† Not only were the commencing and concluding parts of the "*Prodromus*" never printed, but the published volume was withdrawn from sale very shortly after its appearance. This circumstance is mentioned in the eulogy pronounced on Brown by Martius, who adds that it was owing to a hostile criticism of its latinity that appeared in the *Edinburgh Review*. In the translation of the eulogy, communicated to the *Annals and Magazine of Natural History* (for May, 1859), by the late Prof. Henfrey, it is stated that the "*Prodromus*" remained in the hands of the publisher for many years. I may add that in 1856 Mr. Brown informed me that the "*Prodromus*" was printed by himself, costing him about £100, and after about twenty-six copies were sold at 18s. each, he recalled all the remaining copies. I made a note of this at the time (1856), and inserted it in a copy which he gave me in 1839. (Hooker's Eulogy.)

‡ Life of Francis Hamilton (once Buchanan), in *Ann. Roy. Bot. Gard., Calcutta*, x, p. xxviii.

* Brown's work on the plants of N. Holland, one of the most scientific that has of late appeared, would not sell in London, and he was so mortified that I believe he will publish no more of his Prospectus. (Letter dated 16th October, 1821, written by Francis Hamilton.)*

Supplementary to this, as its name denotes, is "Supplementum primum Prodrromus Floræ Novæ Hollandiæ exhibens Proteaceas Novas," &c., pp. 40 (1830).

Following are additional works wholly or partly by Brown:—

The Miscellaneous Botanical Works of R.B. Ed. by J. J. Bennett. (Ray Soc.) London, 1866-67. 2 vols. 8vo. Atlas, ib., 1868. fol.

Illustrations. See Bauer (Ferd.), 1813.

Observations . . . on the Herbarium collected by Prof. C. Smith, in the Vicinity of the Congo . . . under Captain Tuckey, &c. (Narrative). London, 1818. 4to.

A brief account of Microscopical Observations on the Particles contained in the Pollen of Plants, and on the general existence of Active Molecules in organic and inorganic bodies. London, 1828. 8vo.

Observations on the Organs and Mode of Fecundation in Orchideæ and Asclepiadeæ. London, 1831. 8vo.

Additional Remarks on the Pollen Mass in Asclepiadeæ. London, 1833. 8vo.

Supplementary Observations on the Fecundation of Orchideæ and Asclepiadeæ. London, 1833. 8vo.

Botanical Appendix to Capt. Sturt's Expedition to Central Australia (Narrative, ii). London, 1849. 8vo.

A list of Plants collected in Melville Island, &c. See Parry, W. E. [1st voy.]. 1824.

Denham (D.) Travels in Northern and Central Africa . . . Lond., 1826. 4to. Botanical appendix by R. Brown, pp. 208-246; Plants collected by W. Oudney, D. Denham, and H. Clapperton. American reprint. Boston, 1826. 8vo. The editions of 1828 and 1831 do not contain any Botany. French Transl., Paris, 1826. 3 vols. 8vo. Atlas, 4to.

Bennett (J. J.), and R. Brown. Plantæ javanicæ rariores . . . legit et investigavit T. Horsfield. Lond., 1838. 4to.

For a detailed critical appreciation of Brown's works see Hooker's Eulogy, p. 58 *et seq.* It is a valuable and succinct account of the principal discoveries and observations made by our author. Sir Joseph Hooker's noble eulogy† is the tribute of one master to the greatness of another.

Space will only permit me to give a few brief extracts:—

. . . investigations which display an untiring industry, an accuracy of observation and exposition, a keenness of perception, together with sagacity, caution and soundness of judgment, in which he has not been surpassed by any botanical writer.

* *Op. cit.*, p. xxxi. Since the above was written, Mr. James Britten has written a most interesting bibliographical note on Robert Brown's "Prodrromus," in *Journ. Bot.*, xlv, 246 (June, 1907).

† *Proc. Linn. Soc.*, 1887-8, pp. 54-67. Hooker in a footnote says:—"Other reviews of Brown's life and labours will be found in the obituary notices of the Royal Society, in the Address of the President of that society on the occasion of Brown being the recipient of the Copley Medal in the eulogy of Von Martius, translated by Hentfrey, and printed in the *Annals and Magazine of Natural History* (May, 1859); and in two articles (by myself) in the *Gardener's Chronicle* or 1858, pp. 493, 701, 732."

Speaking of the "amazing number of 4,200 species of plants belonging to all orders," dealt with in the "Prodrômus," the unaided work of one botanist, he remarks "This is a feat unexampled in the history of botanical science." . . .

It established his reputation as the possessor of a greater grasp of scientific botany than any predecessor or contemporary, and it has been called in Germany his "*Opus aureum*."

Humboldt gave him the title "*Botanicorum facile princeps*." Asa Gray* says of him:—

. . . perhaps no naturalist ever taught so much in writing so little, or made so few statements that had to be recalled, or even recast; and of no one can there be a stronger regret that he did not publish more.

His work was at first that of a descriptive botanist, but this very soon brought him face to face with problems that involved the most difficult questions in the science. In the endeavour to determine the relations of the little-known and very peculiar Australian flora, he found it necessary to choose whether to accept the convenient artificial system of classification devised by Linnaeus, and which held almost unquestioned sway in Britain, or to seek to discover the natural affinities of the plants, and to base the classification upon these. To those trained in methods and in the results of discoveries largely due to his genius it is scarcely possible to realise the difficulties that he had to overcome. He recognised that to ascertain relationships the structure and development of plants must be known to an extent very far beyond that yet reached. These researches demanded new methods, and the instruments alone available were very defective when compared with the necessities of every laboratory of the present day. But Brown overcame all difficulties, and, with instruments such that we can but marvel at the work done with them, he opened up new lines of research in structure, in development, and in functions of plants, and threw light on many points that had been darkness before he touched them, while he showed the way for others to advance, and may be said to have given form to many parts of the science.

He was naturalist in the broad sense when attached to the "Investigator," and in other Australian explorations, but his botanical work† eclipsed that done by him in zoology and geology. His letters and notes bear frequent testimony to his industry in regard to zoological observations and collections. Many of his non-botanical collections met with the fate that Fletcher‡ has shown fell to the lot of most of the early zoological specimens. Some of his birds were described in an unfinished work,§ but probably most of his specimens are now beyond the reach of identification.

As regards his personal characteristics, one record runs:—

Those who knew him as a man will bear unanimous testimony to the unvarying simplicity, truthfulness and benevolence of his character. With an appearance of shyness and reserve in the presence of strangers, he combined an open-heartedness in relation to his familiar friends, and a fund of agreeable humour, never bitter or caustic, but always appropriate to the occasion, the outpourings of which it was delightful to witness. But what distinguished him above all other traits was the singular uprightness of his judgment, which rendered him on all difficult

* "*Collected Works*," ii, 253.

† For an account of Brown's services to botany, see chapter 3 of Sach's "*History of Botany*." (Garnsey and Balfour's translation. (Clarendon Press.)

‡ *Proc. Aust. Assoc. Adv. Science*, (1909.)

§ Vigors and Horsfield, *Trans. Linn. Soc.*, xv.

occasions an invaluable counsellor to those who had the privilege of seeking his advice.*

He was painfully careful for accuracy in all his work. It was pointed out by a reviewer, who knew more of the language than the substance of the work, that some inaccuracies in the latinity† were to be found in the volume. This led Brown to withdraw the volume after only a very few copies had been sold. He carefully corrected the called-in copies, neatly scraping out and correcting the very trifling errors. Henceforth copies of the "Prodromus" could be had only as a gift from the author; but in Germany two reprints were issued to meet the foreign demand for the work. The manuscripts of this great work and of the portion never published are preserved in the Library of the Botanical Department of the British Museum.‡

What honours could be accorded to him by learned societies were freely bestowed. An associate of the Linnean Society in 1798; he was a Fellow in 1822, and President 1849-1853; he was admitted to the Royal Society in 1811, and was welcomed as a member of many scientific societies at home and abroad, while marks of honour from various other sources flowed in upon him, including D.C.L., Oxon., 1832, LL.D., and Knight of the Prussian Order "Pour la merite." He died, full of years and honours, 10th June, 1858, and was buried in Kensal Green Cemetery, London.

On 18th October, 1895, there was unveiled a bronze bust§ of Brown by D. W. Stevenson, sculptor, of Edinburgh. It was at the cost of Miss Hope Paton, Brown's kinswoman, and was placed in a niche in the outside wall of the house at Montrose where he was born.

On 28th February, 1901, Prof. W. H. Trail, the Professor of Botany, unveiled a marble replica of the bust in the Picture Gallery of Marischal College, Aberdeen.

In August, 1899, in my official capacity, I purchased from Mr. Stevenson a plaster cast from the original model for this bust, and it is now in the Museum of the Botanic Gardens, Sydney. So far as I am aware, only these three copies of this fine bust are displayed to public view.

At Kew there is a small plaster bust, "facing spectator, neck bare, no drapery." There is one at the British Museum, but whether the same as the Kew bust I do not know. There is a bust by Peter Slater at the Linnean Society, presented by the subscribers, 7th November, 1861; a copy is in the Sydney University, presented by the late Sir William Macleay. (See p. 105.) At Kew there is a "Medallion, modelled in wax in 1852, by R. C. Lucas—bust in frock coat, profile to right; dimensions (oval) 7 inches by 5 inches." At Kew there is a portrait "Painted in oils, about 1856, by Stephen Pearce. To the waist, seated fronting spectator, in a black coat, clean-shaven face turned three-quarters to the right. Dimensions—15 inches by 12½ inches."

* Quoted by Prof. Trail, *Gard. Chron.*, 16th March, 1901, p. 177.

† This is based upon an error, *ante*, p. 119.

‡ Carruthers in *Journ. Bot.*, xxxiv, 24 (1896).

§ *Journ. Bot.*, 1896, p. 26, with an illustration of the bust.

There is at the Linnean Society, presented by the subscribers, 1st December, 1885, an oil painting by H. W. Pickersgill, R.A. Half length, seated at a table, holding his eyeglass in his left hand, facing spectator. Kew has a line-engraving by C. Fox, after this painting.

There is a "portrait" at British Museum (Natural History).

At the Botanic Gardens, Sydney, is a copy of the Maguire lithograph (Norwich Series), date about 1850. (See p. 101).

We are thus acquainted with the personal appearance of this great man. Mr. Justen,* the eminent bookseller (he was the proprietor of Dulau & Co.), of Soho Square, whose place of business was but a few doors away from Banks' house, bequeathed to Brown, told me that he knew him well, and often had business dealings with him. He was a little, spare man, active in his movements, who always dressed in black, often dingy black. He was very reserved, and used to escape into his house if he imagined that a stranger desired to speak to him. This not from any unkindness of spirit, but from a feeling of shyness and a desire to conserve his time that never left him.

Other bibliographical references to this great man will be found in *Proc. Linn. Soc.*, 1859, xxiv (shortly after his death). See also Pritzel's "Thesaurus Literaturæ Botanicae," p. 43; Baillon's "Dictionnaire de Botanique" (1876-92), i, 501; Royal Society "Catalogue of Scientific Papers," i, 660, vii, 279; *The Times*, quoted in the *Cottage Gardener*, xx, 176; "Bonplandia," Jahrgang vi, 223 (1858); *Proceedings of the Royal Society*, ix, 527; *Proceedings of the Royal Geographical Society*, iii, 237; "Robert Brown: son Election à la place d'Associé Etranger de l'Institut de France" (*Flore des Serres*, xx, 32, 1874), the Eulogy signed "A.J."; Dictionary of National Biography vii, 27; Britten and Boulger, 25.

The genus *Brunonia*, Smith, is named in honour of Brown, as has already been indicated. Very many species of Australian plants were also called after this eminent man.

† John Lindley (1799-1865), the celebrated botanist, was assistant-librarian (under Brown) to Banks, for a few years. While in that employment he published *Rosarum Monographia*.

* For a portrait and appreciative notice of this worthy man, see *Journ. Bot.*, Feb., 1907.

3. The Banksian Botanical Collectors.

EITHER at his own expense, or in his capacity as honorary director of Kew, and on behalf of the King, Banks sent out a number of botanical collectors, whose duties were to send home living plants and seeds for the Royal Gardens at Kew, and also dried specimens, which latter were placed in the Banksian Herbarium. Following is a list of the principal of them:—David Nelson, Archibald Menzies, Peter Good, George Caley, Allan Cunningham, and Anthony Pantaleon Hove; while Denis Consideen and David Burton collected for him in New South Wales.

1. DAVID NELSON.

David Nelson was a Kew gardener and became Collector on Cook's Third Voyage (1776–80), H.M.S. "Resolution" and "Discovery."

Captain Charles Clerke writes to Banks*:

H.M.S. "Discovery." Cape of Good Hope, 23rd November, 1776. "Your man Nelson is one of the quietest fellows in nature; he seems very attentive, and, I hope, will answer your purpose very well . . . He has made a trip up the country here with Gore."

From a letter at p. 406 it is evident that Banks paid Nelson's expenses.

Cook visited Adventure Bay, Southern Tasmania, in January, 1777, and a considerable collection of plants was made by Nelson and Mr. William Anderson, Surgeon of the "Resolution"; these plants are now in the British Museum. He here collected twigs of a plant which were taken to Europe and first described by L'Héritier as *Eucalyptus*.

He was afterwards botanical collector in H.M.S. "Bounty," 1787, under Captain Bligh, when that ship sailed for Tahiti to transport Bread-fruit trees to the West Indies. Bligh reported to Banks,† "Bounty," Spithead, 5th November, 1787, "The conduct of Nelson, the gardener, is very satisfactory."

He was one of those sent adrift by the mutineers of the "Bounty," and eventually died of the exposure,‡—of fever at Coepang, Timor,

* *Hist. Rec.*, i (1), 405.

† *Ib.*, i (2), 117.

‡ See also *Kew Bulletin*, 1891, 297.

20th June, 1789. Bligh says of him, "whose good conduct in the course of the whole voyage, and manly fortitude in our late disastrous circumstances, deserves this tribute to his memory."

In "Hortus Kewensis" he is credited with having introduced the following plants to Kew:—

Podalyria sericea, Cape of Good Hope.

Oxylobium ellipticum, V.D.L.

Melaleuca squarrosa, V.D.L. and N.S.W.

Rumex giganteus, Sandwich Is.

In dedicating the genus *Nelsonia* of the Acanthaceæ to his memory, Robert Brown* says:—

Dixi in memoriam Davidis Nelson, Hortulan meritissimi, qui in ultimo itinere Cookii plurimas novas species plantarum primus legit. postea vero expeditioni priori Cel. Navarchi Bligh adjunctus, in insula Timor occubuit.

His Australian, Cape and Timor plants are in the British Museum (Britten and Boulger). See also *Gardeners' Chronicle*, 1881, ii, 267.

2. ARCHIBALD MENZIES.

Archibald Menzies was Surgeon and Botanist to Captain Vancouver's expedition of discovery and survey to the N.W. coast of America. He was appointed on the recommendation of Banks, and Menzies' instructions were drafted by Banks.† It will be observed that the instructions were largely botanical and horticultural.

Banks was further consulted‡ by the Government in regard to the mode of carrying on the survey of the N.W. coast of America.

Under date Nootka Sound, § 26th September, 1792, Menzies gave Banks a general account of the voyage, including a reference to the newly discovered "King George's Sound," where the "Discovery" stayed a fortnight, and where he made a "copious collection of its vegetable productions, principally the genus *Banksia*, which are here very numerous."

Botanical collector. Born at Weem, Perthshire. Entered as a gardener at the Botanic Gardens, Edinburgh, and studied surgery at the University there. Became a surgeon in the navy, and was stationed in America, where he joined Captain Vancouver's expedition, 1790-95, visiting the Cape, King George's Sound, New Zealand, the Sandwich and Galapagos Islands, and Valparaiso, from which places he brought back a variety of plants and other specimens of natural history. His account of the voyage appeared in Loudon's *Magazine of Natural History*.

* "Prodromus," 481.

† *Hist. Rec.*, i (2), 424.

‡ *Ib.*, p. 456.

§ *Ib.*, p. 638. There are other letters to and from Menzies in this volume.

He practised for a time in London, where he died. Bequeathed his herbarium to the Botanic Garden, Edinburgh. The genus *Menziesia* was dedicated to him by Sir J. E. Smith. There is at Kew a coloured crayon drawing by Eden Upton Eddis. Bust, aged face seen in profile to the left. Dimensions—17½ inches by 13½ inches. Hooker Collection.*

The following additional biographical notes are taken from Britten and Boulger.

Born 15th March, 1754, died London, 15th February, 1842, F.L.S., 1790. Introduced *Araucaria imbricata*,† 1796. Plants in Herb. Mus. Brit. and at Kew. Imperial Dict. of Univ. Biog.; Smith Corr., ii, 272; Fl. Tasmania, cxiv; Bot. of Geol. Survey of California, 553; *Proc. Linn. Soc.*, i, 139; Lasègue, 366; R.S.C., iv, 345. Oil portr. by Eddis at Linn. Soc.

Besides the genus *Menziesia* already referred to, the following species commemorate him:—

Drosera Menziesii, R.Br.; *Utricularia Menziesii*, Br.; *Banksia Menziesii*, Br.; *Leptoceras Menziesii*, Lindl. *Caladenia Menziesii*, R.Br.; *Thysanotus Menziesii*, Br.=*T. Patersoni*, R.Br.

Menzies had presented [nearly] all his plants to Sir Joseph Banks with the exception of grasses and cryptogams, which he was particularly devoted to, and of which he was endeavouring to increase his collection.‡

3. PETER GOOD.

There is no record of the entry of this young Scotch gardener into Kew. He appears to have been in the employment of Earl Wemyss, 1796. In 1796 he was selected from the Kew staff to proceed to Calcutta to bring home a collection of plants prepared by Christopher Smith. He returned to Kew, where he filled the position of foreman until 1st March, 1801, when he was appointed botanical collector under Robert Brown,§ the botanist attached to Flinders' voyage (H.M.S. "Investigator"), of survey of the coast of Australia, at a salary of £100.

Brown wrote to Banks, Port Jackson, 30th May, 1802,¶—

In Mr. P. Good I have a most valuable assistant, a more active man in his department could hardly, I believe, have been met with.

Banks to Brown, 8th April, 1803,¶¶ speaks of—

Your able and quiet assistant, Peter Good. His diligence and docility have been before tried.

* Kew Catalogue of portraits of botanists, p. 84 (1906).

† For a full account of the memorable introduction of this Chili Pine, see *Kew Bulletin*, 1891, p. 299.

‡ Daydon Jackson's "Life of Bentham," 36.

§ John Mackay, Principal Gardener, Botanic Garden, Edinburgh, introduced Good to Brown. See a letter in "Notes from the Royal Bot. Gard., Edin.," Nov., 1904, p. 33.

¶ *Hist. Rec.*, iv, 777.

¶¶ *Ib.*, v, 89.

Brown wrote to Banks, Sydney, 6th August, 1803*—

Poor Peter Good, who while he enjoy'd health was most indefatigable, and whose exertions in his department were without doubt the cause of his untimely fate, died a few days after our arrival here of dysentery, contracted soon after our departure from Timor.

The date of his death was 11th June, 1803.

On Monday last, Mr. Good, Botanist, belonging to H.M.S. "Investigator," and who died on the preceding day on board that ship, was brought on shore for interment. A number of officers attended in procession to the place of burial, where, after the funeral ceremonies were performed, a party of marines fired three volleys over the grave.†

There is a letter‡ from Brown to Banks, giving particulars of the disposal of Good's private effects.

See also Salisbury, *Parad. Lond.* t. 41; *Gardeners' Chronicle*, 29th October, 1881, p. 568; "British and Irish Botanists" (Britten and Boulger); *Kew Bulletin*, 1891, 301; *Journal Kew Guild*, v, 28 (1897).

Good worked under Brown's directions, and his route has been indicated in speaking of Brown (p. 107) and Flinders (p. 203).

The genus *Goodia*, Salisb., was dedicated to his memory, and also a *Banksia* and a *Grevillea* by Brown.

In "Hortus Kewensis" many plants are attributed to Good as collector. Of course, as regards the Australian plants, he collected under the immediate supervision of Brown. The seeds were forwarded to Kew, where many new plants were raised from them, conspicuous amongst them being numerous species of Proteaceæ, Myrtaceæ, and shrubby Leguminosæ. These ultimately made Kew famous for New Holland plants, Dr. Lindley calling special attention to these plants in his "Report on Kew," drawn up in 1838.

4. GEORGE CALEY.

He was the son of a Yorkshire horse-dealer who, when George was a boy, removed to Middleton, near Manchester, and engaged in farming. He was four years at the Manchester Grammar School. His attention was directed to botany by seeing a volume on Farriery on his father's shelves, and desiring to know more about plants referred to in that work. He botanised in his native county and beyond, and at least as early as 1798 he was corresponding with the celebrated botanist Dr. Withering. He was compelled to follow his father's business as a farrier, and afterwards sought employment as a weaver, but lost no opportunity of studying.§

* *Hist. Rec.*, v, 181.

† *Sydney Gazette*, Sunday, 19th June, 1803.

‡ *Hist. Rec.*, v, 204.

§ See "Where There's a Will There's a Way, or Science in the Cottage. An Account of the Labours of Naturalists in Humble Life," by James Cash. London: Robert Hardwicke, 192 Piccadilly, pp. 21-41. This work contains autobiographical notes of Caley, which I cannot find elsewhere. He must have been born between 1775 and 1780.

Desirous of extending his knowledge and being of an enterprising nature, he wrote to Sir Joseph Banks, President of the Royal Society, expressing his desire to be employed as a botanical collector abroad. Sir Joseph Banks' reply and advice came in due course.* He offered him a post as working gardener at Kew, to prepare him for higher work.†

Banks writes to Under Secretary King,‡ 13th December, 1798:—

I have with me a young man who has for more than three years studied practical botany and horticulture under my directions, and who has, without the advantages of what is called a liberal education, made a considerable progress in both these branches of useful knowledge.

I took him under my care because he appear'd to me to have a natural bent towards these studies, and because he assur'd me that he felt an irresistible impulse to travel into foreign parts, and a full persuasion that he should be able to discover something useful to the manufactures of his native town, Manchester. I intended to have recommended him to his Majesty's service as a botanist travelling for the improvement of Kew Garden, had a vacancy happen'd in that department, which I expected would have been the case.

He is young, full of health, and abounding with zeal for his favourite pursuit, and is at present without employment. I have, therefore, determin'd. if the Duke of Portland will grant me permission, to send him to New South Wales, where he will find an ample field for his researches.

The young man was George Caley, and he was allowed a free passage to New South Wales in the "Porpoise" (1) in October, 1798, but did not sail till September, 1799. Owing to a storm in the Bay of Biscay she returned, most of the passengers going on to Sydney in the "Speedy," but Suttor went in "Porpoise," (2). See pp. 57 and 210.

Under Secretary King the following day wrote to Governor Hunter,§ informing him that the Duke of Portland, Secretary of State for the Colonies, had approved of Caley's receiving the customary ration from the public stores, together with suitable accommodation.

Banks followed this up with a letter to Governor Hunter, 1st February, 1799, in which occurs the passage, "He is hardy and bold. His skill in botany is much beyond what his appearance promises, and he has some smattering in other sciences."

Vol. iii, "Historical Records," contains a number of letters between Banks and Caley, during the period which elapsed before Caley's ship sailed. The delay fidgeted Caley a good deal, and Banks, whose protégé Caley was, sent him remittances.

Lieut.-Governor King also came out in the "Speedy," which touched

* *Hist. Rec.*, iii, 516.

† Another Lancashire working-man botanist whom Banks encouraged was John Bradbury of Stalybridge, author of "Travels in the Interior of America," and afterwards Curator of the Botanic Garden of St. Louis, U.S.A. See the *Lancashire Naturalist* for March, 1908.

‡ *Hist. Rec.*, iii, 515. See also footnote at p. 516, giving an account of Caley prior to his leaving for New South Wales.

§ *Ib.*, 517.

|| *Ib.*, 532.

at the Cape, and arrived at Sydney on 15th April, 1800. Writing to Banks, 3rd May,* he says:—

I have fixed Cayley (*sic*) at Parramatta to which place he gives the preference and as he is well lodged there, I hope he will begin in earnest. I have marked out a botanic garden, to be under Col. Paterson's directions. It is ready for receiving plants, and Cayley has the use of Govt. House at Parramatta to dry his specimens, &c.

Caley writes to Banks under date 12th October, 1800,† chiefly detailing his requirements and plans for the future. The letter, which is a long one, contains no botanical descriptions. The chief matter of interest is his method of labelling his specimens, which may be of use to those in possession of any of them.

Caley though very worthy, seems to have been an erratic person. Both Governor King and Lieut.-Col. Paterson‡ speak of his infatuation for "a woman who has a family and came in the same ship with him." King speaks of his insulting conduct,§ and adds "He has fixed his affections on a woman with a family. I have done all in my power to prevent the connexion."

King again writes, 20th November, 1800||:—"I am afraid his head is turned." The woman was a Mrs. Wise, who, with her husband, a weaver, started for New South Wales in the "Speedy." Mr. Wise died on the voyage, and Caley appears to have married the widow at Parramatta.

Lieut. Grant, who did such good exploring work on the South Australian coast in the "Lady Nelson," and whose work was published in 1803, says that Caley often accompanied him on botanical excursions in New South Wales, but he gives no details of the botanical work accomplished.

One fails to find in Caley's letters much useful botanical information. Nevertheless, Banks and Brown seem to have been quite satisfied with his work, and they were the best judges.

King writes to Banks, April, 1801¶:—

How far he has been successful in collecting I do not know, as he keeps his counsel to himself.

Brown to Banks, 30th May, 1802, says**:—

Mr. Caley, who lives at Parramatta, I have not yet seen, but Gov. King has written him on the subject of his going with the "Investigator," which he has declined.

* *Hist. Rec.*, iv, 82.

† *Ib.*, 238.

‡ *Ib.*, 229.

§ *Ib.*, 205, 206.

¶ *Ib.*, 258.

■ *Ib.*, 35.

** *Ib.*, 779.

King to Banks, 5th June, 1802, says* of him:—

With all his faults, which he cannot help, I believe him clever and faithful, except that he certainly supplies Colville (the nurseryman) to whom I am informed he has sent parcels by the "Speedy." Notwithstanding this, and all his eccentricities, I believe fulfilling your wishes and expectations to be his constant study.

Caley to Banks gives "A short account relative to the proceedings in New South Wales from the year 1800 to 1803."†

This is a miscellaneous letter and includes references to the slovenly farming methods in vogue, to the cultivation of wheat (which is alleged to contain many weeds), maize and barley. He criticises the gardening and gives a list of the chief fruits and vegetables. He discusses all sorts of matters and events, and doubtless many of his criticisms were true enough.

King to Banks, Sydney, September, 1803,‡ says:—

Caley [King always used to spell his name in that way] is very angry because he cannot get the same boxes (as those supplied to Brown, I believe he is very angry at having Mr. Brown here, who he cannot help considering as a labourer in the field that ought to be wrought by himself. He has all he wants, but is by no means satisfied.

If this jealousy of Brown is true, which is likely, Caley had an unnecessarily exalted opinion of his own attainments.

At the same time Banks must have thought well of him, for he says; (29th August, 1804)—"I do not like to be in debt in money matters to a man whom I owe so much for literary assistance."

Again, he says in the same letter:—

Caley, who always was very useful to me, has of late sent me home many very interesting things, and seems industrious in the extreme. I feel a particular obligation to you for bearing with the effusions of his ill-judging spirit. Had he been born a gentleman he would have been shot long ago in a duel. As it is, I have borne with much more than ever you have done, under a conviction that he acted under strong tho' mistaken feelings of a mind honest and upright.

In a letter to Caley, 30th August, 1804,¶ he gives him the gentlest of rebukes and a little good advice.

"*Caley's (Caley's) observations on the Cow Pasture, which he calls Vaccary Forest, with Governor King's remarks on such parts as he has visited.*"** embodies an account of one of Caley's botanical journeys, and is a compilation by King.

* *Hist. Rec.*, v., 299.

† *Ib.*, 784.

‡ *Ib.*, 229.

§ *Ib.*, 459.

¶ *Ib.*, 460.

• *Ib.*, 45.

** *Ib.*, 718.

The following original document is interesting. It is in the Mitchell Library, was lent me by Mr. David Mitchell, and I have extracted the following notes:—

“A journey to ascertain the limits or boundaries of Vaccary Forest, in the month of February, 1804.”*

Sixty pages of MS. is in Caley's handwriting, initialled by him (at a later date), G.C. In marble paper cover, large 12mo.

At page 5, it is evidently addressed to King.

1804. Saturday, February 11.—Left Parramatta about noon, and went to Prospect. Went along the path which led to the Cow-pastures. “We went within about one mile on Cabramatta brook before we halted.”

Sunday, 12.—Set off early in the morning and arrived at the river about noon. Came to the “Cowpasture house,” a wooden hut erected for visitors to the herds (for shooting purposes). It is alongside the river. Banks of the river crowded with *Casuarina rivularis* and *McLaleucoides rivularis*.

Then proceeded to “Munangle,” which was about 5 miles higher up. “The lake or pond here, that bears the above name, and which I had before observed to be tolerably large, and to abound with ducks, &c., was now reduced to a very small compass and destitute of fowl.”
 “From whence the water had subsided was in general in a vegetating state, and furnished me with a few plants that I had not seen before.”

Monday, 13.—At daybreak went to the opposite side of the river in quest of some plants which I had previously seen on the borders of a large pond.

Page 12.—“Leaving Munangle I went S. $\frac{1}{2}$ E. 3 miles. We crossed a large flat of excellent ground, which seemed to have been flooded at different times.”

Then to “Ripponden, where I slept at on a former journey.”

Page 13.—“On my right hand was a very high range of hills which I travelled over in a former journey. At that time I imagined the river washed the foot in places, and that it was impracticable to travel with a horse in that direction, but on my descending the range and meeting with a large cattle track which led to Poppy Brook,”† &c.

* The map to illustrate this is published in *Hist. Records*, v. 724. This is doubtless the original from which King compiled his report above referred to. It contains the names Parramatta, Prospect, Dove Dale, Munangle, Ripponden, Scirpus Mere. Dove Dale is mentioned in B.F.L. i, as the place where *Hibbertia hermannifolia*, DC., was found by Caley, a plant which has not been found since.

Dove Dale is a beautiful place in Derbyshire, but a few miles from Manchester, and to this day it is a favourite resort for Manchester men. No doubt Caley had pleasant recollections of botanical explorations of the Dove Dale near his home.

† Wentworth's map has the Poppy Creek of Caley. It is not Stonequarry Creek, but one just to the north of it. See also *Hist. Rec.*, v. 724.

Page 16.—“ Travelling we came to a small stream, which I before noticed in my former journey on descending the high range; for the sake of distinction I shall call it Little Brook.”

Page 17.—“ By the road being much travelled [by the wild cattle.—J.H.M.], and being an important one, I have called it the London Road.”

Tuesday, 14. Page 18.—“ An *Hedysarum* with pink flowers, which I had not got a sufficient quantity of specimens of, I expected now to be furnished with, but in this I was disappointed,” &c.

“ I intended to begin my survey at the termination of the range where I begun my S.W. course on the discovery of *Scirpus Mere*.”

Page 4.—“ Owing to the natives conducting Mr. Barrelier to Naytoy* (which was afterwards made a station on his second journey)” . . .

Page 24.—“ I asked the natives several questions respecting the source of the River Hawkesbury, and they pointed to the south-east. I questioned them about the bearing of Naytoy, the place where Mr. Barrelier’s station was, and they pointed to the west by north.”

Page 53.—“ Mr. Barrelier’s party give an account of travelling over a large tract of forest ground beyond Naytoy, but between this and Vaccary Forest they (the natives) say is very rocky.”

Page 29.—“ The place we had chosen to pass the night, by its greenness, had a pleasant appearance, when a contrast was taken with the adjoining parts. It was rocky in places. The cattle came here for water. This is the place I have called *Green Dingle*.”

Page 39.—“ When I was travelling upon the North East course, between the creek and the outer range, I saw a tree, &c. The above creek I shall call *Brush Creek*, and the present one *Bull Creek*.”

At pages 57, 58.—Caley has “ Explication of the Map.”

Governor King has at page 724 (*Hist. Records*, v), “ Explanation of Caley’s Map.”

His particulars are a copy of Caley’s with the exceptions:—

D. (“ or Stonequarry Creek ” is added) in *Hist. Rec*.

M.M. Should read—“ A brush, and rocky at the end of the north-west course.”

N. Bulbinmatta, not Balbinmatta.

P. Caley adds—“ Which I discovered in January, 1805.” . . .
“ Shows void of space or the tract so much shorter than what was expected.” Caley here alludes to the fact that his rough observations did not close by the space indicated.

* *Naytoy* is Caley’s spelling of *Nattai*. See also *Nayti* and *Natai*. *Hist. Rec.*, v. 723.

It is requisite to explain some local words, which are frequently used, in order to attain a more clear idea of the country.

A *Brush* is a dark impenetrable looking thicket, consisting frequently of both shrubs and herbaceous plants. The . . . [erased] and herbaceous plants on the banks of rivers, &c., bear also this name. This sort of land is oftentimes of a good quality, owing to being a vegetable mould.

A *Scrub* consists of the most part of shrubs of low growth. The soil is of a bad quality, containing small gravelly ironstones, and in general rocky. Also small detachments of *Brushes* are so called. I have seen many instances of a *Scrub* running into a *Brush*. They both may with propriety be called the underwood of the forest. But it is not unfrequent upon the sea-coast for the *Scrubs* to be void of trees.

Forest land is such as abounds with . . . , and is the only ground which is fit to graze. According to the local distinction, the . . . [erased] is the discriminating character, and not the trees, for by making use of the former, it is clearly understood as different from a *Brush* or *Scrub*.

A *Creek* is locally applied to all brooks and small rills, that are deeply seated in the ground, and the sides or banks very steep.

A *Lagoon* is a large pond of stagnant water, and erroneously used instead of the latter. It is moreover corrupted into *Galoon*. (Extract from Caley's MS.).

Then we have the results of another exploration in "Extracts from Mr. Caley's observations on his journey to the Carmarthan Mountains, and his observations respecting the practicability of passing the mountains in that direction."* This is signed by King, and was evidently written for Banks.

In the "Historical Records" is a copy of Caley's map of this expedition, in which Mount Banks is clearly shown, also a sheet of bearings by Caley "from Fern-tree Hill and Mount Banks."

Mount Banks is also shown in Surveyor Charles Grimes' Map of (?) 1806,† but the name of the mountain has since been superseded by the name Mount King George, which is an injustice to the memory of Banks. This has now been rectified; *infra*, pages 225-6.

Caley's Repulse.

Caley's journey was obviously along the valley of the Grose from Richmond, and he ascended Mount Banks, which was, at that time, certainly a memorable feat. He was not on the Blue Mountains proper, but, owing to some confusion of ideas, Governor Macquarie, in his journey over the Blue Mountains in January, 1815, referred to a certain pile of stones in the following terms:—

Near to the 18th mile mark (it is to be observed the measure commences from Emu Ford) a pile of stones attracted attention. It is close to the line of road, on the top of an abrupt and rugged ascent, and is supposed to have been placed by

* *Hist. Rec.*, v, 725.

† *Ib.*, vi, p. 410.

Mr. Cayley* as the extreme limit of his tour. Hence the Governor gave this part of the mountain the name of Cayley's Repulse. To have penetrated even so far was an effort of no small difficulty.

(The erroneous name "Caley's Repulse" was retained for over eighty years.)

Let us now turn back for a little while.

Blaxland† says, under date 18th May, 1813:—

The following day was spent in cutting a passage through the brushwood, for a mile and a half further. They returned to their camp at five o'clock, very much tired and dispirited. The ridge, which was not more than fifteen or twenty yards wide, with deep precipices on each side, was rendered almost impassable by a perpendicular mass of rock, nearly 30 feet high, extending across the whole breadth, with the exception of a small broken rugged track in the centre. By removing a few large stones, they were enabled to pass.

On Wednesday, the 19th, the party moved forward along this path; bearing chiefly west, and west-south-west. They now began to ascend the second ridge of the mountains, and from this elevation they obtained for the first time an extensive view of the settlements below. Mount Banks‡ bore north-west; Grose Head, north-east; Prospect Hill, east by south; the Seven Hills, east-north-east; Windsor, north-east by east. At a little distance from the spot at which they began the ascent, they found a pyramidal heap of stones, the work, evidently, of some European, one side of which the natives had opened, probably in the expectation of finding some treasure deposited in it. This pile they concluded to be the one erected by Mr. Bass, to mark the end of his journey. That gentleman attempted, some time ago, to pass the mountains, and to penetrate into the interior; but having got thus far, he gave up the undertaking as impracticable; reporting, on his return, that it was impossible to find a passage even for a person on foot. Here, therefore, the party had the satisfaction of believing that they had penetrated as far as any European had been before them.

Lawson,§ under date 19th May, of the same year, says:—

At half-past nine o'clock, struck our tents and proceeded W.S.W. $\frac{1}{8}$, W. $\frac{1}{2}$, W. by S. $\frac{1}{4}$. Here is a very narrow pass not more than 15 yards over, with steep, rocky gullies on each side. Ascended a high mountain, W. $\frac{1}{4}$, N.W. $\frac{1}{4}$; Mount Banks‡ bore N.W.; Grose Head, N.E.; Prospect Hill, E. by S.; Seven Hills, E.N.E.; Windsor, N.E. by E. From this mountain we had a beautiful view of the whole of the settlement. Here we found a large heap of stones piled up. No doubt it was done by Doctor Bass, some years ago, as he went in this direction, and did pile a heap of stones at the end of his journey.

(The bearings and distances are in fractions of miles.)

* Governor Macquarie follows Governor King in this erroneous spelling of Caley's name.

† Blaxland, Lawson, and Wentworth set out to cross the Blue Mountains, which they successfully accomplished for the first time. Gregory Blaxland's work is entitled "A Journal of a Tour of Discovery across the Blue Mountains in New South Wales, in the year 1813."

‡ *Nota bene.*

§ Communicated by Mr. F. M. Bladen.

Wentworth* has the following entry:—

For the first twenty miles these gullies are really terrific, being in some places nearly perpendicular for several hundred feet. I consider them utterly impracticable for cattle, and should have pronounced them as utterly impracticable for man, had we not discovered, about 10 miles west of Jamison's farm, a large pile of stones, undoubtedly the termination of Bass' excursion. Nothing could have afforded a stronger proof of the indefatigable perseverance of the man than his surmounting these almost insurmountable barriers.

Assistant Surveyor G. W. Evans, who followed in November of the same year (1813), has the following entry on the second day after leaving the Nepean:—

The morning very much overcast, with a thick fog. However, I had the horses loaded, and travelled on, mostly on ridges overrun with brush. At about 11 o'clock I passed the pile of stones alluded to by the former party. Soon after we were on a very high hill.

The position of the cairn of stones is distinctly marked on Evans' map of the country west of the Blue Mountains, surveyed in the year 1813. The cairn is placed on the map at three days' journey from the Nepean. (Map published in "Sydney Mail," 13th May, 1903.) Unfortunately Evans did not mark the mileages, substituting dates showing the limit of each day's progress.

Extracts from the diary of William Cox, J.P.†:—

Sunday, September 4th, 1814.—Removed forward to the bridge. Removed forward to Caley's Pile. No water for the stock near the bridge, nor a blade of grass. Went forward to *Caley's Pile*, and from thence up the rock to Evans' cave you get a view of the country from north-west round to south-west as far as the eye can carry you. Windsor and various parts of cleared land is seen from this.

September 9th and 10th.—The bridge rises very fast, quarrymen well on with the stone work.

September 11th.—Went forward three miles to examine the road. From the bridge it continues rocky over two or three small passes to *Caley's Pile*, from thence at least two miles further, the mountain is nearly a solid rock, at places high broken rocks, at others very hanging or shelving, which makes it impossible to make a level good road.

Extract from Major Antill's diary‡ of Governor Macquarie's journey across the Blue Mountains, starting 25th April, 1815:—

Thursday, April 27.—From this spring and the surrounding forest the Governor gave the name of Springwood to this station. We did not leave this place till 12 o'clock, the day cool and pleasant, our road was stony, and some

* "A Statistical, Historical, and Political Description of the Colony of New South Wales, and its Dependent Settlements in Van Diemen's Land, London, 1819."

† Sydney, William Brooks & Co., 1901.

‡ Published in *The Australian Field* (Sydney).

very severe and short hills for the loaded carts. About 5 miles further on (or 52 in all) we came to a very extensive prospect from a lofty spot, *when we found a heap of stones*, supposed to have been placed there by an adventurer who had penetrated thus far with much difficulty in his endeavour to cross the mountains.

He had arrived at it from a different direction from the one we had now taken, and with much more difficulty, but finding from this place no end to the mountains, and the country looking most unpromising around him, and his provisions being nearly expended, he gave up what he thought a fruitless attempt, and retraced his steps, after erecting this pile of stones, to which the Governor gave the name of "Keely's" (Caley's) Repulse, &c.

And again:—

Near to the 18-mile mark (measuring from Emu Ford) a pile of stones attracted attention. It is close to the line of road on the top of a rugged and abrupt ascent, and is supposed to have been placed by Mr. Caley as the extreme limit of his tour. Hence the Governor gave that part of the mountain the name of "Caley's Repulse."

The following notes referring to Caley are taken from Allan Cunningham's manuscript journal which he kept when on Oxley's Expedition in 1817:—

Near the 18th Mile Mark,* in an open, and extremely bleak barren part, near the roadside, upon a small eminence of the rugged ascent, stands a pile of stones, supposed to have been erected by the indefatigable and persevering botanist, Mr. George Caley, and suspected to be his furthest advance westwards, in a grand botanical excursion which he had undertaken with a view of crossing these mountains. His Excellency in passing this place on his route to Bathurst in the year 1815, called it Caley's Repulse. (9th April, 1817.)

According to the following statement, the cairn was in existence in 1826.

Caley's Repulse.—The late Dr. Lang thus refers to the above in his history. The place was pointed out to me by a respectable settler of the Bathurst district, on crossing the mountains for the first time in 1826. It is certainly a most remarkable locality, nothing being visible in any direction, but immense masses of weather-beaten sandstone rocks towering over each other in all the sublimity of desolation. Quite a deep chasm intersecting a lofty ridge covered with blasted trees, seemed to present an insurmountable barrier to all further progress.†

It is certain that the name "Caley's Repulse" was a misnomer, for there is no evidence that Caley was ever on the Blue Mountains proper; but whose cairn was it?

Governor King says‡:—

Some men, exploring the mountains from the junction of the Hawkesbury and Grose, saw the heap of stones said to have been placed there by Mr. Bass as the bounds of his excursion in that direction.

* From Emu Ferry.

† "Australian Explorers," by Revd. George Grimm.

‡ *Hist. Rec.*, v, 725.

To which Mr. Bladen adds, in a footnote—

If the course given by these men, viz., due west from the junction of the Grose and Hawkesbury is correct, this cairn of stones cannot be the same as that found by Blaxland, Wentworth, and Lawson in 1813, and surmised by them to have been erected by Bass.*

A curious story belongs to an important journey westward by Caley in 1805. Ten years after its performance Governor Macquarie opened the Bathurst route in 1815, and named one spot having a cairn upon it "Caley's Repulse," concluding it to mark Caley's furthest. Blaxland, who discovered it in 1813, had awarded it to Bass. The Governor's misnomer stood for eighty years, for just ninety years elapsed when Governor King's abridgment of Caley's journal,* with tracing of his route, was recognised and published—Caley took the north side of Grose River from Richmond Hill. He found rugged, broken country, intersected by valleys or chasms being almost impassable, lying generally north and south. Ultimately crossing Table Hill he arrived on the 12th at Mount Banks, by near approximation, now identified with Mounts Tomah and King George. The Governor (King) had provided Caley with full equipment and four picked men, and states that Caley's great bodily strength and enthusiasm were severely tried.†

There is nothing to show why Macquarie differed from Blaxland, Lawson, and Wentworth, in thinking that the pile of stones was placed there by Caley. There is, however, some evidence to indicate that Bass was not on the ridge which divides the Grose and the Cox. In fact, according to Flinders (Vol. I, Introduction, page ev, and Atlas, plate 8) he seems to have been confined to the valley of the Grose, and the course of the river as so charted resulted from one of Bass's excursions. I am under the impression that Caley also was never on the highlands. He certainly penetrated very high up the Grose.

Mr. F. M. Bladen informs me that he thinks it probable that the stones were placed there by Wilson, who did a good deal of unrecognised and forgotten exploration in Governor Hunter's time. The journal mentioning Wilson is quoted in a footnote,‡ and, speaking of it, Ernest Favenc§ says:—

Wilson was a notorious character of the early days, and his adventures amongst the natives, ending finally in his death at their hands, were many and varied.

Wilson's reputation for bushcraft led to Governor Hunter sending him out with two men to prove the falsity of a rumour, current amongst the convicts, that there was a settlement of white men across the mountains. It is on the strength of this trip that it is claimed for him and his companions that he ascended the mountains and reached western-flowing waters. The groundwork for this belief rests in a diary kept by a young fellow, a servant of Hunter's, who formed one of the party, and was, says Hunter, an intelligent lad.

* *Hist. Rec.*, v, 725.

† "The Blue Mountains; Early History and Exploration"; by Thomas Whitely.

‡ Compare *Hist. Rec.*, iii, 825.

§ *Sydney Morning Herald*, 25th March, 1905.

It has also been suggested that the cairn was erected by Jo'm Hacking,* boatswain of the "Sirius" (after whom Port Hacking was named), in the year 1794, but I know of no evidence to support this.

Dr. Houson, Messrs. Frank Walker, J. P. McGuanne, and myself, members of the Australian Historical Society, have made several visits to the Blue Mountains specially to hunt for traces of the cairn, but we can find none that satisfy us. We are of opinion that the site of the cairn is between Linden and Woodford, but the ridge here is narrow and the many deviations to both road and railway would probably have caused the utilization of loose stones long ago. Mr. Bladen has made many local examinations independently.

In the compilation of these notes on "Caley's Repulse," I have been much indebted to Messrs. F. M. Bladen and Frank Walker, members of the Australian Historical Society.

Caley to Banks, Parramatta, 9th April, 1806,† reports his movements as follows:—

Norfolk Island, 14th Oct., 1805, to 2nd Nov. Landed in Hobart 29th Nov. Went on shore at Slopen Island (Frederick Henry Bay) from 21st–27th Dec. On 28th, sailed for Achuntoon Bay. Sailed from there on 31st. On 8th Jan., 1806, went on shore at Kent's Group, left same day and anchored in Sydney Cove on 23rd.

He gives an interesting account of a visit to the summit of Mount Wellington, Hobart.

He also visited Western Port,‡ Victoria; I do not know at what date, except "March and April."

Caley to Banks, 7th July, 1808.§—Writes at very great length on the arrest of Governor Bligh, and of the state of the colony generally. He flatly says "I declare him an unfit man for a Governor of the Colony." He gives racy accounts of public men and comments on various things, winding up with an account of his explorations.

Banks, writing 25th August, 1808,|| censures Caley for his attitude towards Governor King in refusing to deliver up the plants entrusted to him by Brown. Banks offers him an annuity of £50, and releases him "from all services to me beyond what you voluntarily wish to perform."

Caley writes, 28th October, 1808,¶ giving a further account of the deposition of Governor Bligh, and subsequent events, and at the close gives a brief account of his botanical labours and states he has found two species of *Boronia*.

* "A pilot named Hacking, from whom the first information of it had been received." Flinders, Vol. i, cil.

† *Hist. Rec.*, vi, 65.

‡ *Trans. Linn. Soc.*, xv, 298, 245, 321.

§ *Hist. Rec.*, vi, 685.

|| *Ib.*, 704.

¶ *Ib.*, 795.

I have no further details of his botanical work in New South Wales. The date of his leaving New South Wales is not quite clear. It was in 1810, and I have seen an Australian specimen collected by him on 5th February in that year.

Cash (*op. cit.*) states that on his return to England he, with rugged honesty, astonished the Treasury officials by declining some of the money offered him, as he stated he was not entitled to it. He rejoined the Middleton Botanic Society, near Manchester, and became very intimate with Edward Hobson, also a botanist in humble life.

Later, Caley became Curator of the Botanic Garden, St. Vincent, West Indies.* He arrived at St. Vincent 1st August, 1816, resigned his post 25th December, 1822, and returned to England May, 1823.

He thereupon settled at Bayswater, London, but he continued to correspond (as he had done during his absence in the West Indies) with his Middleton friends. He lived on his slender savings and, probably, Banks' annuity. On 5th February, 1826, he wrote to Hobson urging him to compile a Flora of Manchester.

He was survived by an Australian cockatoo which he had brought home in 1810; he bequeathed a small annuity to his pet. He had a slave, whom he had brought from St. Vincent; he bequeathed him his liberty.

He seems to have been a physically strong, somewhat uncouth man, but of sterling honesty, and faithful to his few friends.

The Magazine of Nat. Hist., Vol. 1829, 310; 1830, 226, which contains many biographical details,† says that he died at Bayswater, 23rd May, 1829, and was buried in St. George's burial-ground, Hyde Park, near Captain Flinders.

In *Trans. Linn. Soc.*, xii, 587, is a list of subscriptions, by Fellows of the Linnean Society, headed by Sir Joseph Banks, amounting to £220 14s. The President announced that the Society, under date 25th May, 1818, had with this sum purchased "an extensive and valuable collection of Quadrupeds, Birds and Reptiles, made by Mr. George Caley in New South Wales."

Vigors and Horsfield began the description of the birds in the above collection, with ornithological notes (with vernacular and aboriginal names), but they never completed it. (*Trans. Linn. Soc.*, xv, 1827.) There is a complimentary dedication to Caley at p. 186, and there is no doubt that he was an excellent collector and observer of birds.

"A series of specimens of the native woods collected in New Holland by the late Mr. George Caley. Presented by the Executors of the late

* See *Kew Bulletin*, April, 1892, p. 97.

† See also *ib.*, 1891, 393; *Gard. Chron.*, xxiv, 263 (1885); Britten and Boulger, p. 30

Mr. George Caley," is recorded in *Trans. Linn. Soc.*, xvii, 597 (1832.) It would be interesting to know if these specimens are still in existence. They form the earliest collection of colonial timbers of which I have any record.

Brown commemorated him in the Orchidaceous genus *Caleya*. His name is also honoured in:—*Dodonæa Caleyana*, G. Don.; = *D. boroniæ-folia*, G. Don.; *Viola Caleyana*, G. Don.; *Acacia Caley*, A. Cunn.; = *A. podalyriæ-folia*, A. Cunn.; *Anadenia Caley*, Br. = *Grevillea ramosissima*; Meissn.; *Banksia Caley*, Br.; *Grevillea Caley*, Br.; *Persoonia Caley*, Br.; *Persoonia Caley*, F.v.M.; = *P. chamæpeuce*, Lhotsky; *Prostanthera Caley*, Benth.

Recently I dedicated a New England Ironbark, *Eucalyptus Caley*, to his memory, to remind botanists of his discovery of hybridisation in the genus, in which he showed an Ironbark to take a part.

Following is Allan Cunningham's testimony to Caley:—

Mt. Caley.—This mount has been named in honour of Mr. George Caley, a most accurate, intelligent, and diligent botanist, who laboured on the eastern coast of this continent with considerable success a number of years, and who well merits a mark of distinction. (2nd June, 1817. Allan Cunningham's MS. Journal.)

Mount Caley is at the southerly extremity of Peel's Range, lat. 34° 10', long. 146°. See page 53, "Journal of Oxley's Expedition" and map.

As regards his botanical work, both Banks and Brown never hesitate to speak of the value of it and of the ability of Caley. Robert Brown speaks of him as "Botanicus peritus et accuratus."

Besides the Proteaceæ described or noticed in this paper, I am acquainted with several very beautiful species, chiefly of *Grevillea* and *Persoonia*, discovered in New Holland by *Mr. George Caley*, a most assiduous and accurate botanist, who, under the patronage of Sir JOSEPH BANKS, has for upwards of eight years been engaged in examining the plants of New South Wales, and whose numerous discoveries will, it is hoped, be soon given to the public, either by himself, or in such a manner as to obtain for him that reputation among botanists to which he is well entitled.*

But this was a vain hope, and a very serious loss of information. Of his botanical notes and names, nothing, that I know of, was published.

Robert Brown further says†:—

Mr. Caley has observed within the limits of the colony of Port Jackson nearly 50 species of *Eucalyptus*, most of which are distinguished, and have proper names applied to them, by the native inhabitants, who from differences in the colour, texture, and scaling of the bark, and in the ramification and general appearance of these trees, more readily distinguish them than botanists have as yet been able to do.

* "Robert Brown's Collected Works," Ray Society, ii, p. 191.

† *Ib.*, i, 18.

In spite of his erratic nature and of the fact that he published nothing, it is probable that, next to Brown, we owe more to Caley for diffusing a knowledge of New South Wales plants in Europe than to anyone during the first two decades of the infant colony. All his collections went to Banks, and appear to have been distributed among British and foreign collections without a record, in most cases, of the name of the collector.

I was, therefore, very pleased a few years ago* to come across a number of Caley's plants in the Vienna Herbarium, and the material is sufficient, in almost every case, for identification. Caley gives the aboriginal names of the trees in most cases; we now possess a number of records of the language of extinct tribes which may be of philological as well as botanical interest. The specimens were all mounted on a paper bearing the water-mark of the year 1810, and bear the herbarium stamp "Herb. Maille, Dupl. Banks."

I have made some comments in regard to the specimens, and in a few instances have pointed out that the same names (allowing for reasonable differences in spelling) were in use by the Cumberland or Camden blacks, according to the list published by the late Sir William Macarthur† half a century after Caley's time; I believe that Caley's names had never previously been published.

5. ALLAN CUNNINGHAM‡.

He was born at Wimbledon, near London, in 1791, and received a good education, his father intending him for the law; but he preferred gardening, and obtained employment at Kew, under Mr. W. T. Aiton, who was then engaged on his "Hortus Kewensis." Aiton wrote to Banks,§ asking that collectors might be despatched to collect for Kew, such work having been interrupted for a number of years on account of the war.

Banks replied under date 7th June, 1814:—

Should you be allowed to send to the Cape of Good Hope and to New South Wales, I have no doubt of being able to give such instructions to the Governors of those countries as will enable His Majesty's collectors to visit, at a very reasonable expense, countries hitherto unexplored, and they will add to the Royal collection riches beyond the most sanguine expectations of those who have had less experience in the produce of those countries than has fallen to my lot.

By Treasury letter of the 13th September, 1814, Banks was informed that the persons he had nominated to this service would be appointed,

* *Agric. Gazette, N.S.W.*, 1903, v. 988.

† Catalogue of New South Wales Exhibits, Paris Exhibition, 1855, and London, 1862.

‡ Abbreviated from articles by the author in the *Public Service Journal*, Sydney, 1903.

§ "Report of the Committee on Botanical Work," 1901, p. 84.

and thereupon Allan Cunningham was sent to Brazil in 1814, where he made large collections. Here he remained two years, collecting in the vicinity of Rio, the Organ Mountains, San Paulo, and other parts of Brazil, making large collections of dried specimens, living plants, and seeds. Sir Joseph Banks wrote that his collections, especially of orchids, bromeliads, and bulbs, "did credit to the expedition and honour to the Royal Gardens."

When this service came to an end, he was nominated for service in New South Wales. Cunningham's "Manuscript Journal" is marked 1814 on the outside, and was doubtless obtained for Brazil. The Sydney entries begin at page 139, and he refers to "Rio, September 20th, 1816," and records that he landed at Port Jackson, 21st December, 1816. At page 148, he collects at Woolloomooloo. The instructions of the Secretary of State (Earl Bathurst), dated 18th April, 1816, as regards vegetable products, are as follows, and these instructions Cunningham attended to in his "Journal":—

The vegetables, and particularly those that are applicable to any useful purpose, whether in medicine, dyeing, etc., any scented woods, or such as may be adapted for cabinet work, or furniture, and more particularly such woods as may appear to be useful in shipbuilding; of all which it would be desirable to procure small specimens, labelled and numbered, so that an easy reference may be made to them in the "Journal," to ascertain the quantities in which they are found, and the situations in which they grow.*

Exclusive of yourself and Mr. Evans, I have deemed it advisable to permit Mr. Allan Cunningham, one of the King's botanists (lately sent out to this country for the purpose of collecting plants and seeds for His Majesty's Gardens at Kew), to accompany the expedition. (Governor Macquarie's instructions to Oxley, dated 24th March, 1817.)†

Under the same date, *op. cit.*, p. 362, Governor Macquarie gives the designations:—"Mr. Allan Cunningham, King's Botanist; Charles Fraser, Colonial Botanist." Oxley's expedition left Sydney on 6th April, 1817, and arrived at Bathurst on the 14th. The chart which accompanies Oxley's "Journals," &c., is dated. The expedition painfully explored the Macquarie and Lachlan Rivers, returning to Bathurst on 29th August. In this expedition Cunningham collected about 450 species of plants, many of which are still extant. Mt. Cunningham was called after him (Oxley, "Journals," &c., pages 29-34), and at page 164 is a record of the journey over the Blue Mountains: on 9th April they came upon the heap of stones supposed to mark the furthest limit of Caley's progress over the Blue Mountains, and which Governor Macquarie, in his journey over the mountains in 1815, had erroneously named "Caley's Repulse."

* Oxley, "Journals, &c.," p. 369.

† *Ib.*, 356.

Under date 30th May, 1817, Cunningham records:—

“Coming through this thicket, which we have named Euryalean Scrub,* after one of the Gorgons, &c.”; and a number of the plants procured in this arid area are referred to in the “Flora Australiensis,” and elsewhere.

At p. 58.—Yesterday, being the King’s birthday (June 4th), Cunningham planted under Mount Brogden, acorns, peach, and apricot stones and quince seeds, with the hope rather than the expectation that they would grow, and serve to commemorate the day and situation, should these desolate plains be ever again visited by civilised man, of which, however, I think there is very little probability.

This planting of useful seeds in out-of-the-way districts was a pleasing practice that Cunningham frequently carried out.

I now give particulars of the five voyages—four, if the comparatively unimportant one to Van Diemen’s Land (Tasmania) be excluded. Cunningham’s movements from 22nd December, 1817, to 25th April, 1822, are thus accounted for. I have taken the particulars from the “Narrative of a Survey of the Inter-tropical and Western Coasts of Australia, performed between the years 1818 and 1822, by Captain Phillip P. King, R.N.” The first four voyages were taken in H.M. cutter “Mermaid,” a little tub of 84 tons, or about the size of a small ferry-boat. Allan Cunningham was the botanical collector, and it is marvellous to find what good surveying work Lieutenant (afterwards Captain) King performed in this little boat, and what excellent botanical results were achieved by Cunningham, under circumstances which would have damped the ardour of most men. He went prolonged voyages in this little boat; the food must have been very poor, and the inconveniences for botanical work exasperating. He had little space to dry his plants, his papers got wet, and rats and cockroaches ate the specimens. Yet the fruits of his industry are in the herbaria of Europe to-day.

I have given precise localities of the spots touched by Allan Cunningham, as they are absolutely necessary in order that we may understand his herbarium labels; I have given the dates because from personal experience, without a connected narrative I have found it difficult, if not impossible, to follow many fragmentary accounts of Cunningham’s wanderings that have been published.

First Voyage.—H.M. cutter “Mermaid,” of 84 tons, Lieut. P. P. King, R.N. Botanical Collector, Allan Cunningham. Went on board on the 21st, and left Port Jackson on 22nd December, 1817.

* About midway between Narrandera and Hillston

Visited Twofold Bay, passed through Bass Straits, along the south coast to King George's Sound. Thence to North-west Cape, and a survey of the coast between this cape and Depuch Island was made, including examinations of Exmouth Gulf, Curlew River, and Dampier's Archipelago. On 6th March, 1818, Depuch Island was left; Rowley's Shoals were examined, and a passage made to the north coast. The Goulburn Islands, Mountnorris, and Raffles Bays were surveyed, and Port Essington was explored. Popham Bay was visited, and examination made of Van Diemen's Gulf, including Sir George Hope's Islands and Alligator River; the northern shore of Melville Island and Apsley Strait were surveyed, Luxmoor Head, Port Hurd, and Clarence Strait were visited; Australia was then left behind and they arrived at Timor on 5th June, 1818. On the 13th Lieut. King left Timor for the north-west coast of Australia again, visiting the Montebello Islands and Barrow Island. Little happened till the small craft passed through Bass Straits, and returned to Port Jackson on 24th July, 1818.

At King George's Sound traces of Capt. Vancouver's garden were sought for in vain, and Cunningham formed another garden. This voyage seems to have yielded very few novelties, for, in a letter to Mr. Heward, he says that the aggregate of his collections made on the coasts of Australia did not exceed 300 species.

Second Voyage.—24th December, 1818, left Port Jackson, and the vessel arrived at Hobart on 2nd January, 1819; examined the entrance of Macquarie Harbour, and visited other places. Returned to Hobart on 30th January, and returned to Port Jackson 14th February, 1819. Valuable botanical notes of this trip will be found in King's narrative.

Third Voyage.—Left Port Jackson 8th May, 1819, and commenced a running survey of the east coast. Port Macquarie and the Hastings River were made in company with the "Lady Nelson," colonial brig, and assisted by Lieut. Oxley, R.N., the Surveyor-General of the colony. The "Lady Nelson" then returned with Oxley to Port Jackson, while King, in the "Mermaid," with Cunningham aboard, went north. The Barrier Reef was entered at Breaksea Spit; Rodd's Bay was discovered, the Percy Islands visited, Whitsunday Passage was passed through, and

the "Mermaid" anchored in Cleveland Bay. The coast was examined towards the Endeavour River, anchoring at Rockingham Bay, Fitzroy Island, Snapper Island, and Weary Bay. Arrived off the Endeavour River (where Cook and Banks were in 1770) on 27th June, 1819. On the 11th of the following month the river was left, and exploration of the coast continued. The cutter anchored among Howick's Group and under Flinders' Group; Princess Charlotte's Bay was explored, and the islands and reefs as far as Cape York, anchoring at various parts of the coast. Then the Gulf of Carpentaria was crossed, and the survey of the north coast resumed at Wessel's Islands; Castlereagh Bay and Crocodile Islands were visited, and Liverpool River discovered and examined. Goulburn Island was visited, Cape Van Diemen passed, and the survey of the coast resumed at Vernon's Islands, in Clarence Strait. Paterson Bay, Peron Island, Anson Bay, and Port Keats were visited and Cambridge Gulf discovered. Thence the coast was traced to Cape Londonderry. On 1st October was begun the examination of the coast between Cape Londonderry and Cape Voltaire, including the surveys of Sir Graham Moore's Islands, Eclipse Islands, Vansittart Bay, Admiralty Gulf, and Port Warrender. At Cassini Island the coast was left for Coepang, in Timor. Leaving Coepang, they arrived at Port Jackson, *via* Bass' Straits, on 12th January, 1820.

Fourth Voyage.—14th June, 1820, left Port Jackson, visited Port Bowen (Queensland), passed through the Northumberland, and round the Cumberland Islands, and anchored at the Endeavour River. Cunningham visited Mount Cook, where he made a great haul of seeds and plants. After leaving Endeavour River, Lizard Island was visited, also Cape Flinders and Pelican Island, also Haggerston's Island, Sunday Island, and Cairncross Island. Cape York was passed and Endeavour Strait, and the "Mermaid" anchored under Booby Island.

The Gulf of Carpentaria was crossed, and the ship anchored at Goulburn's South Island. The survey of the coast was resumed at Cassini Island. A survey was made of Montague Sound, York Sound, and Prince Frederic's Harbour, also Hunter's and Roe's Rivers, Port Nelson, and Coronation Islands. At Careening Bay they stopped for repairs, and Cunningham again made a haul. Brunswick Bay and Prince Regent's River were visited, and home *via* the west and south coasts. Bass' Straits were passed in safety, but the "Mermaid" was nearly wrecked near Botany Bay; however, on the 6th December, 1820, she safely anchored in Port Jackson, having circumnavigated the continent.

Fifth Voyage.—The “Mermaid” was then condemned as unseaworthy, and H.M. Storeship “Dromedary,” was rechristened the “Bathurst,” and placed under the command of Lieut. P. P. King, with Allan Cunningham, Botanical Collector, as before. She left Port Jackson on 26th May, 1821, followed the east coast, and passed round Breaksea Spit, visited Percy Island, anchored under Cape Grafton, Hope Islands, and Lizard Island. Passed Cape Flinders, anchored in Margaret Bay and under Cairncross Island; passed through Torres Straits, and visited Goulburn Island. Passage was then made from Cape Van Diemen to Careening Bay, and Prince Regent’s River was visited. Anchored in Half-way Bay, and Munster Water and Hanover Bay were explored in a boat. Then Port George the Fourth, Red Island, Camden Bay, Buccaneer’s Archipelago, Cygnet Bay, Cape Leveque, Cape Latouche Treville were successively visited. The brig being found in a dangerous condition, the Australian coast was then left, and a course steered for Port Louis, Mauritius, to refit, where she arrived on 27th September, 1821. Mauritius was left on 15th November, and King George’s Sound, Western Australia, reached on 24th December. A stay here enabled Cunningham (who found no trace of the garden he had been at great pains to form in 1818) to make fine collections. The brig then commenced a survey of the west coast at Rottnest Island. The coast was then examined to the northward, and Cape Leschenault, Lancelin Island, Jurien Bay, Houtman’s Abrolhos, and Red Point were in turn visited, and the brig anchored in Dirk Hartog’s Roads at the entrance to Shark’s Bay. Then the coast was examined to the North-West Cape, Barrow Island, and Montebello Isles. Rowley’s Shoals and Cape Leveque were passed, and the brig had a dangerous experience among the islands of Buccaneer’s Archipelago. After an examination of Cygnet Bay, a course was shaped for Port Jackson, which was reached on the 25th April, 1822. Here ended the voyages of Cunningham with Captain P. P. King. The excellent maps that accompany Captain King’s volume enable us in most cases readily to ascertain the precise places where Cunningham made his collections. Cunningham was very happy in his commander, who was an accomplished man in many respects. Doubtless owing to his association with Cunningham he turned his attention to botany and horticulture.

Allan Cunningham published a sketch of the botany of the coast surveys under the following title:—

“A Few General Remarks on the Vegetation of Certain Coasts of Terra Australis, and More Especially of its North-Western Shores,” by Mr. Allan Cunningham, Collector to the Royal Gardens at Kew.

It is to be found in Captain P. P. King's "Narrative of a Survey," &c., vol. ii, pp. 497-533, and a few copies were separately printed for private circulation.

Captain King's work was published in 1827, and a resumé of Cunningham's work was published in German, under the following title:—

"Einige allgemeine Bemerkungen über de Vegetation, vorzüglich der Nordwestküste von Australien. Oken, Isis, xxi, 1828, col. 172-175."

Cunningham kept a journal of voyages, which he inscribed "Journal More Particularly Referring to Botanical Subjects, Formed During Voyage of Discovery on the N. and N.W. Coasts of Australia, on board H.M.'s cutter 'Mermaid,' P. P. King, Esq., Lieutenant and Commander."

A rough draft of a portion of this journal is in the Public Library, Sydney, having been presented by the Director of the Royal Gardens, Kew, but the complete, annotated journal, replete with botanical data, is in the library at Kew, and if it had been published fifty years ago it would have been of great value to Australian botanical science, and would have increased Cunningham's reputation. But, although the ground he traversed is no longer "terra incognita," it would be a valuable contribution to Australian historico-geographical literature if a rich man would arise and publish the Kew volumes, with explanatory notes, after the fashion of the Hakluyt Society.

In March, 1820, in an interval between these voyages, Cunningham accompanied the naturalist, M. Stein, and the painter, M. Karneyeck, of a Russian expedition. They crossed the Blue Mountains, and were absent ten days.

Banks wrote to him, 14th April, 1820, a few weeks before his death:—

I have received safe and in good condition the numerous things you have sent me, and the Royal Gardens have materially benefited by what we had from you. . . . I write you a short letter because I am not well. I know of nothing more to say to you than that I entirely approve of the whole of your conduct, as does also our worthy friend, Aiton, at Kew.*

Cunningham says of this letter:—

This I shall guard as I would the essential points of the religion in which I have been educated; it is the word of a dying nobleman, whose liberality had fallen alike on the just and unjust, whose kindness none of us can any more experience; and if, from a sight of it, I can from time to time call up the courteous spirit of its illustrious writer to regulate my own frame of mind in the "jostlings of the world," literally I shall be a happy man.†

In August, 1822, Cunningham again visited Illawarra to collect living plants. Towards the end of September he started on an expedition over the Blue Mountains, arriving at Bathurst on the 14th October. He botanised on the Macquarie, Cudgegong, and other districts, and

* *Kew Bulletin*, 1891, 309.

† *Ib.*, 310.

returned to Parramatta, 4th January, 1823. He suffered privations, principally owing to poor food, even on this journey, which formed the basis of the following paper:—

“A Specimen of the Indigenous Botany of the Mountainous Country Between the Colony Round Port Jackson and the Settlement at Bathurst; being a Portion of the Result of Observations made in the Months of October, November, and December, 1822. Disposed according to the Natural Orders by Mr. Allan Cunningham, Botanical Collector for His Majesty’s Gardens at Kew.” See Barron Field’s “New South Wales,” pages 325–365.

This is a purely botanical paper, and contains descriptions of a number of new species, with references to the occurrence of some described previously. Then comes a “Journal of a Route from Bathurst to Liverpool Plains in New South Wales, Explored by Mr. Allan Cunningham, His Majesty’s Collector for Kew Gardens,” with a map (see Barron Field, pages 131–192), which is a modest record of the following important expedition.

He left Sydney 31st March, 1823, and returned to Bathurst. On the 21st July he returned to Parramatta.

In this memorable journey he discovered Pandora’s Pass, through the formidable Liverpool Range into the Liverpool Plains. This Pass, though marked in the map accompanying the journal, is not referred to by name in the journal itself, but at page 174 of Barron Field’s work it is alluded to. At page 49 of Heward’s “Memoir,” which is copied at page 403 of Favenc’s “History of Australian Exploration,” it is stated that Cunningham wrote a memorandum on parchment, and buried it under a marked tree in the Pandora Pass. The document was dated 9th June, 1823, and is given in full by Heward.

In November, 1823, he again left Sydney on another expedition. On the 26th he left Mr. Bell’s farm, saw a beautiful prospect, which he called “Bell’s View” (doubtless the Kurrajong Heights), and shortly afterwards reached a mountain named by the aborigines “Tomah.” Here he discovered the beautiful little yellow-flowered climber around tree ferns which he named *Fieldia australis* (Barron Field, page 363). He returned to Parramatta on 10th December. His journey was, doubtless, the forerunner of a portion of Bell’s line of road from Richmond to Bathurst.

In January, 1824, he went to Bathurst, and on his return he met the officers of the French discovery ship “La Coquille,” Captain Duperry, and furthered the botanical work of M. Dumont D’Urville, the botanist of the expedition, and also assisted M. Lesson, the zoologist.

In March, 1824, Cunningham went south through the counties of Camden and Argyle, visited Lakes George and Bathurst, the head

waters of the Murrumbidgee, the Monaro, and Shoalhaven gullies. He returned to Parramatta the first week in May. In July and August he was again at the Illawarra.

On 1st September he left Sydney with Lieut. Oxley for Moreton Bay, where they arrived on the 11th. The object of the expedition was to see if the vicinity was suitable for the establishment of a branch of the colony. He returned to Sydney on the 14th October, and before the end of the year was again at Bathurst.

He then set out on another expedition. Leaving Parramatta at the end of March, he crossed the Hawkesbury at Richmond, proceeded to the Wollombi, thence to Mount Dangar, and made for Pandora's Pass, already discovered by him. Thence he descended to the Liverpool Plains. On the 18th May he commenced his homeward journey, arrived at Bathurst on the 7th June, and Parramatta on the 17th.

The three last months of 1825 were spent in the vicinity of Wellington Valley, and he botanised about a hundred and fifty miles on each side of the Macquarie River.

From the end of February, 1826, he occupied six months in collecting in his favourite localities of Cox's River and the Illawarra.*

On the 28th August, 1826, he left for New Zealand, arriving on the 9th September at Paihai, the Church Missionary Society's Station in the Bay of Islands. Heward gives a long account of this trip, which was terminated on the 29th December, and he landed in Sydney on the 20th January, 1827.

Following are accounts from his pen of the important botanical results achieved by Cunningham in New Zealand on this and other visits he paid to that colony:—

“*Floræ insularum Novæ Zelandiæ præcursor*; or, A Specimen of the Botany of the Islands of New Zealand,” (Hooker’s “Companion to the Botanical Magazine,” ii, 1836, pages 222–233, 327–336, 358–378); “*Annals of Natural History*,” i, 1838, pages 210–216, 376–381, 455–462; ii, 1839, pages 44–52, 125–132, 205–214, 356–360; iii, pages 29–34, 111–115, 244–250, 314–319; iv, pages 22–26, 106–111, 256–262.†

He then undertook the command of another most arduous expedition, in which he skirted the Liverpool Plains, crossed the Peel and Dumaresq Rivers, made the famous discovery of Darling Downs and Peel’s Plains, and after making various detours, returned to the Hunter River, and thence by a new route to Parramatta and Sydney. He departed on this expedition from Segenhoe, on the Upper Hunter (a few miles from the present town of Scone), on the 30th April, 1827,

* See MSS. at Kew, referring to *Hortus trianonus* this year, 1826. Fol.

† See also MSS. at Kew, lettered A. Cunningham, Pl. N. Zeal. “*Floræ insularum Novæ Zelandiæ præcursor*,” &c. 4to. Another vol. similarly lettered, consists of memoranda. 8vo.

returning to Segenhoe on the 28th July. He received high compliments from the Governor on the 17th November, and it is to be regretted that this most accomplished explorer, the greatness of whose geographical discoveries dwarfs those of his botanical discoveries, great as the latter were, rarely received anything else but compliments. Considering the beggarly equipment with which he was always provided, and the mere handful of men who always formed his parties, the results that he obtained were remarkable, and redounded to the development and prosperity of Australia. It is difficult to apportion merit among the grand army of Australian explorers, but I know of none superior to Cunningham, and therefore hail Allan Cunningham as the prince of Australian botanical explorers.

For details of this memorable journey see the *Australian Quarterly Journal* for January and April, 1828 (see also Lang's "Cookland," pages 60, 69, and 76). The titles of his papers are:—

"Brief View of the Progress of Interior Discovery in New South Wales. By Allan Cunningham, Esq." Read 27th February and 12th March, 1832, before the Geographical Society, and published in its "Journal" for that year, pages 99–132 (with a map).

In the *Proceedings of the Geological Society of London*, vol. ii, 1834–1835, No. 38, is the following entry:—

"December 17th.—The reading of a paper on the physical and geological structure of the country to the west of the Dividing Range, between Hunter's River (lat. 32° S.) and Moreton Bay (lat. 27° S.); with observations on the geology of Moreton Bay and Brisbane River, New South Wales, by Allan Cunningham, Esq., and communicated by W. H. Fitton, M.D., F.G.S."

The title of the published paper is:—"On the Physical and Geological Structure of the Country to the West of the Dividing Range, between Hunter's River (lat. 32° S.) and Moreton Bay (lat. 27° S.), with Observations on the Geology of Moreton Bay and Brisbane River, New South Wales" (1834). *Geol. Soc. Proc.*, ii, 1838, pages 109–111.

The remaining portion of the year, and January and February, 1828, were occupied in journeys to Bathurst, the pine ridges on the Macquarie, and to the Illawarra.

In a "Journal of a Two Months' Residence on the Banks of the Rivers Brisbane and Logan, on the East Coast of New Holland," by C. Fraser, Colonial Botanist (Hooker's "Botanical Miscellany," vol. i, pages 237–269, 1830), we find some notes of a further journey by Cunningham—this time accompanied by Fraser. They had, of course, been fellow-explorers in Oxley's first expedition. They left Sydney, 7th June, 1828. Under date 1st July, Fraser says:—"At 7 o'clock in the morning proceeded across Moreton Bay, in company

with Mr. Allan Cunningham, the Government Botanist; entered the Brisbane River at 10 o'clock, and reached Brisbane Town at 3 o'clock, 6th July. At 10 o'clock I proceed with Captain Logan and Mr. Cunningham to the southern extremity of Glenmoriston's Range."

July 18.—"Proceeded, in company with Captain Logan and Mr. Cunningham, to Stradbroke Island, and reached Dunwich at 1 o'clock in the afternoon."

On the 22nd July the same party proceeded to Mount Warning. The adventures of the party were interesting, although arduous. They included an expedition to Mount Lindsay. Under date 11th August Fraser writes:—"A strong desire to return by the first vessel to Port Jackson, carrying thither the largest possible collection of living plants from the banks of the Brisbane River, induced me to quit the party this morning, and to accompany Captain Logan back to Brisbane Town. Mr. Cunningham, with three men and two oxen, proceeded to the westward, in order to connect his former survey with the present one. From the period of my return till I embarked for Port Jackson I was busily employed in securing my collection of dried plants, completing that of living ones, and laying out the rest of the New Garden" (at Brisbane). Some of the trees collected by Cunningham and Fraser on this expedition are still in the Botanic Gardens, Sydney.

Fraser adds a final note, dated Sydney, 5th February, 1829:—"Since the above was written Mr. Cunningham has returned, having accomplished his object of connecting his route and observations of last year with those made during the present. This he did without any difficulty, thus establishing beyond doubt the practicability of forming a road from the shores of Moreton Bay to the immense open country west of the Dividing Range."

Cunningham left Brisbane on 29th October, and arrived in Sydney on the 4th November, 1828.* See his paper on this journey in the *Journal of the Royal Geographical Society*, vol. ii, page 99, already referred to.

In January, 1829, he again set out for Bathurst, and this journey, undertaken in an especially dry season, yielded but few seeds and plants. In May of this year he undertook a third voyage to Moreton Bay; visited the headwaters of the Bremer and Campbell's Range, and returned to Sydney, laden with plants, towards the end of September (1829).

On the 10th May, 1830,† Cunningham proceeded to Norfolk Island, and a most interesting account of his expedition is given by Heward. He returned to Sydney on the 28th September. Heward's record

* See MSS. at Kew:—Queensland. Map of Brisbane River by Allan Cunningham. Part of New South Wales, interior, by the same. MS. Four detail maps, by the same. Chart of the Rivers Murray and Moorumbidgee, by the same.

† Heward omits the year, but I believe it to be as stated.

gives an account (*inter alia*) of Cunningham's adventure on Phillip Island in his own words. I also give an account of it from a manuscript by an unknown hand, which is in my possession.

"On the 10th May, 1830, Mr. Cunningham, the botanist, arrived in the "Lucy Anne," and on the 21st proceeded in a whaleboat to Phillip Island on a botanical excursion, taking with him an overseer and two men. The party landed, and the boat returned to the settlement. On the same night, at a late hour, eleven convicts escaped from the camp, broke open the commissariat store, taking away a quantity of provisions and wine, forced open the door of the boatshed, and made their escape in a whaleboat. They were challenged by two sentinels as they were launching the boat. One of the convicts stood forward, and said that they were going to Phillip Island for Mr. Cunningham, and at the same time hastened back to the boat, which was immediately launched. The sentry fired, but the boat crossed the bar and was soon lost sight of. They proceeded to Phillip Island, robbed Mr. Cunningham of his chronometer, a brace of pistols, provisions, water, and tent, which they converted into a sail, and pulled out to sea. At the expiration of six weeks they were picked up in a most exhausted state by the "John Bull," whaler. In a few days their strength returned, and with it their spirit of enterprise; they took possession of the vessel and scuttled her. The whole of them landed on Pleasant Island, which, with one exception, they all left by whalers. The crew of the "John Bull" is supposed to have perished. Some of the convicts have since been heard of in England, others in America. The one who remained on Pleasant Island became a great favourite with the natives for his daring courage, and was eventually elected their chief. The murders and outrages committed by him on white men were monstrous. He was consequently expelled from the Island, and when last heard of was working in irons at Manilla."

The Governor of the day refused to replace any of Cunningham's instruments, &c., which were stolen, on the ground that he was an Imperial officer, and he had to make them good out of his pittance.

On his return to Sydney, he botanised about Parramatta (where he usually resided), and in December, 1830, he visited Illawarra and Broken Bay, the latter expedition for a supply of the beautiful *Grerillea Caleyi*, whose seeds, he remarks, appeared to be a favourite food of the black cockatoo.

On the 6th January, 1831, he made another journey to Cox's River, and then began to make active preparations to depart from New South Wales, leave to visit his native land having reached him during the previous November. He left Sydney in the "Forth," on the 25th February, and reached London about the middle of July, with his health much impaired as the result of the arduous life he had been leading.

It would appear from the following letter that the recall of Cunningham arose, at least, owing to a desire to curtail expenses:—

“Of late years the means of maintaining this garden (Kew) appear to have been considerably reduced, one or two collectors sent abroad in 1814 for collecting seeds and plants, and communicating with similar establishments in other countries, having been recalled in 1823, and the other in 1830.” (Letter from office of Woods, &c., 24th April, 1839, to Treasury, quoted at page 99 of “Report of Committee on Botanical Work, 1901.”)

On the death of Fraser (31st December, 1831) the office of Colonial Botanist was offered to Allan Cunningham, which he declined in favour of his brother Richard, who, bearing a strong recommendation from Robert Brown, received the appointment from the Colonial Office. A few months after his brother Richard's lamentable death in April, 1835, Allan was again offered the appointment, and accepted it.

The intervening years were spent at Kew Green naming and arranging his plants, doubtless with some remuneration from Aiton (Director of Kew).

Following are two papers he wrote during this period:—

“Synopsis des espèces du genre *Alyxia*, de la famille des Apocynées,” *Ann. Sci. Nat.* iv (Bot.), 1835, pages 302–307.

“Synopsis du genre *Calythrix* de la famille des Myrtacées” (1834),* *Ann. Sci. Nat.* iv. (Bot.), 1835, pages 305–07.

He sailed for Sydney in October, 1836, to take up his new post. He arrived on 12th February, and his appointment was announced in the New South Wales *Government Gazette*, of 1st March, 1837, as “Colonial Botanist and Superintendent of the Botanic Garden.”

A few months later, dissatisfied with the large amount of vegetable-growing he was required to do for the officers of the colony, which took him away, he stated, from his legitimate botanical duties, he sent in his resignation.

Relieved of the cares of the Botanic Garden, Cunningham then, with the disease that carried him away evidently firmly fixed upon him, made preparations for a further scientific expedition to New Zealand. Writing to friends in England under date 15th January, 1838, he said:—“Tell all that I have discharged the Government cabbage-garden in disgust, and am now to enter with all my might, mental and corporeal, on a more legitimate occupation for a few months.”

He delayed his departure until the arrival of Governor Sir George Gipps, on the 23rd February. His Excellency was inclined to take a great interest in the Botanic Garden, and made a genuine effort to

* See MSS. at Kew, for work of his during the present year:—*Congestiones plantarum minus cognitarum Australasie, &c.* 1834. 8vo.

retain Cunningham's services as "Government Botanist," a purely scientific appointment, including travel in the colony, leaving the gardening portion of the duties, hitherto attached to the position, to Mr. James Anderson, as Superintendent. Cunningham demanded the salary of £450 clear, and His Excellency, pointing out the high price "of house-rent and every article of life," said the salary was not to be objected to; but still the matter was not pressed in the Legislative Council, and learning this, Cunningham finally "washed his hands" of the Garden in April, 1838.

He left Port Jackson in the French corvette, "L'Heroine," Captain Cecille, on the 15th April, for New Zealand, on a further botanical expedition, returning to Sydney on 13th October, 1838, "in a deplorable state of health." The warmer air of Sydney added no new strength to his debilitated frame, and in 1839 he was reluctantly compelled to decline accompanying Captain Wickham on his survey to the north-west coast.

The end was not far off, and Heward gives the following account of Cunningham's last moments:—

"On the 24th of June, 1839, he was removed from his lodgings in Sydney to the cottage in the Botanic Garden, for change of scene and air. . . . On Thursday, the 27th . . . his last breath was sighed away in the arms of his faithful friend, James Anderson" (his successor in the superintendence of the Garden). He died of consumption, a martyr to geographical exploration and botanical science, in the 48th year of his age.

An admirable life of Allan Cunningham was written by his friend and executor, Heward,* which contains a lithograph portrait by J. Robinson, from the original in the Linnean Society.

Allan Cunningham is my ideal amongst Australian botanists. His was a noble character, and he literally worked himself to death for the advancement of his favourite science. As a geographical explorer the present generation knows but little of the debt Australia owes to him. He is better appreciated in Queensland at the present day, and an admirable account of his explorations in what is now Queensland is contained in a paper by the Hon. Arthur Morgan, M.L.A.† Sir J. D. Hooker, the late Director of Kew, says:—

Cunningham's botanical travels are by far the most continuous and extensive that have ever been performed in Australia, or, perhaps, in any other country. His vast collections were, for the most part, transmitted to Kew, whence they

* Biographical sketch of the late Allan Cunningham. Esq., F.L.S., M.R.G.S., &c., by Robert Heward, F.L.S. This was published in part in Hooker's *London Journal of Botany*, vol. iv, pp. 107-128, 263-290 (1842).

† "The Discovery and Early Development of the Darling Downs," read before the Royal Geographical Society of Australasia (Queensland Branch), at its Warwick meeting, 7th May, 1902, and published in its Proceedings.

See also Russell's "Genesis of Queensland," 59, 77, 127; also *Kew Bulletin*, 1891, p. 309.

were transferred to the British Museum. A very complete set was, however, given to Sir W. J. Hooker, and his own private herbarium was left to his early and attached friend, R. Heward, Esq., F.L.S.

As an Australian botanist he may not have been as brilliant as Robert Brown or Mueller, but who could tell what he could have published had he been given the opportunity. As he himself said, with his dying breath, he was always on his legs—a wanderer. Expedition succeeded expedition, and he rarely had any time to deliberately sit down and write descriptively of the treasures which were first brought together by his endeavours.

6. ANTHONY PANTALEON HOVE, M.D.

A Pole, who was employed by Sir Joseph Banks and Kew to collect plants in India, 1787-9.* Collected also in Persia and the Crimea. See "Tours. . . . in Guzerat, Kattiawar, and the Conkuns, in 1787-88," published by Alexander Gibson for Bombay Government, 1855.†

The beautiful Australian leguminous genus *Hovea* was dedicated to him by Robert Brown.

The following, although not formally appointed collectors, collected more or less for Banks.

7. DENIS CONSIDEN.

Denis Considen was assistant-surgeon to the colony, under White, at its inception. He was one of the few British officers who investigated the natural history of the place. He writes to Banks, under date Port Jackson, 18th November, 1788,‡ sending various zoological specimens. He also sends herbarium specimens, grass-tree gum, and, speaking of the "large peppermint tree" (*Eucalyptus*) says: "If there is any merit in applying these and many other simples to the benefit of the poor wretches here, I certainly clam it, being the first who discovered and recommended them."

In commemoration of this pioneer work with *Eucalyptus* I have dedicated *Eucalyptus Consideniana*§ to his memory.

Secretary of State Dundas wrote,|| 14th July, 1792, granting leave of absence to Considen to return to England, should the state of his health continue to require it. I know nothing further concerning this worthy.

* *Kew Bulletin*, 1891, p. 297.

† Britten and Boulger, 87.

‡ *Hist. Rec.*, i (2), 220.

§ *Proc. Linn. Soc. N.S.W.*, 1904, p. 475.

|| *Hist. Rec.*, i (2), 632.

8. DAVID BURTON.

Governor Phillip* says he was brought up as a gardener, and was sent out in the "Gorgon" (22nd September, 1791) as a "Superintendent."

He was styled "the public gardener" at Parramatta, and it is stated that he was sent out by Banks, but I have seen no Banksian memorandum about him.

"The following parcels of land were in cultivation at Parramatta, in November, 1791, The above grounds were measured by David Burton, the public gardener, who observes that the soil in most places is remarkably good, and only wants cultivation to be fit for any use, for the ground that has been the longest in cultivation bears the best crops." (Hunter, page 562.)

A report by Burton on some land near Parramatta, will be found at *Hist. Rec.*, i (2), 599.

He was killed 13th April, 1792, by a gun-shot wound when duck-shooting on the banks of the Nepean. He was evidently much esteemed.

"This young man, on account of the talents he possessed as a botanist, and the services which he was capable of rendering in the surveying line, could be but ill spared in this settlement." (Collins, 1st ed., 205; 2nd ed., 164.)

He is credited in Aiton's "Hortus Kewensis" with having introduced *Podolobium trilobatum* to cultivation.

Britten and Boulger, page 28, quote Salisbury, "Parad. Lond.", f. 73, as giving a reference to Burton. The *Burtonia* of Salisbury is *Hibbertia*. The *Burtonia* of Robert Brown is a leguminous genus.

* *Hist. Rec.*, i (2), 599.

PART IV.

BANKS, THE PRESIDENT OF THE ROYAL SOCIETY, AND FRIEND OF AUSTRALIA.

1. BANKS' PRESIDENCY OF THE ROYAL SOCIETY.
2. BANKS' BROAD SCIENTIFIC SYMPATHIES.
3. BANKS AND THE AUSTRALIAN WOOL INDUSTRY.
4. BANKS' INTEREST IN THE PROGRESS OF AUSTRALIA GENERALLY.
5. SOME FURTHER CORRESPONDENCE OF BANKS.

Ellis, the younger Linnæus, J. E. Smith, Dr. Johnson; Governors Hunter, King and Bligh; Lieut.-Governors Collins and Paterson; Lieut. Clerke, and Capt. Flinders; Messrs. Richards and Enderby, and Wilson; Messrs. Suttor and Burder.

I. Banks' Presidency of the Royal Society.

IN 1778 Sir John Pringle resigned the Presidency of the Royal Society. "A general opinion prevailed that no one was better qualified to occupy the vacant chair than Sir Joseph Banks. He was, as we have seen already, on the Council of the Society, and took a warm interest in its affairs. He was accordingly elected President, and immediately devoted himself with great zeal to the discharge of his duties."*

Sir Joseph Banks often declared that of all the honours he had received, that of being elected President of the Royal Society gave him by far the greatest satisfaction.

As President, Sir Joseph took a considerable share in the striking of the medal† in commemoration of the illustrious Cook, Commander of the "Endeavour," and at Weld ii, 141-143, we have the graceful letters written by Banks to Mrs. Cook and to Dr. Franklin, presenting these medals. Indeed, Sir Joseph was a charming letter writer—the practiser of an art which seems to claim fewer who excel as time rolls on.

Sir Joseph watched over the interests of the Society in the most earnest manner. Amongst other things, he investigated the method of election into the Society, which appeared to have got somewhat lax. He held the opinion that members should consist of the two classes—the scientific workers (and he insisted on a high standard of work for membership), and the patrons of science, men conspicuous from their influence and position in society.

He took a personal interest in all elections, not hesitating to speak to members about the qualifications of the candidates. It is not surprising that such conduct was distasteful to some.

In 1783 the smouldering discontent broke out into activity under the following circumstances. Dr. Charles Hutton, Professor of Mathematics at Woolwich, was Foreign Secretary of the Society, and it was alleged (partly, perhaps, because of his distance from London) that he had neglected the duties of his office. Sir Joseph was one of those who held that view. Certain acrimonious debates occurred, which are

* Weld, ii, 112.

† Mr. Alfred Lee, of Bonli, has recently acquired possession of one of these almost unique medals (in gold).

referred to in Weld's "*History of the Royal Society.*" Dr. Horsley, afterwards Bishop of St. Asaph, and a bitter opponent of Banks, joined in the fray, and he and his followers made the statement that the cause of Banks' antagonism to Dr. Hutton was because the President knew nothing of mathematics, and only favoured his own pursuit of natural history.

No. 40.—SIR JOSEPH BANKS. Wedgwood Medallion. Said to have been modelled by Flaxman.

By January, 1784, feeling had run high, and a motion was submitted "that this Society do approve of Sir Joseph Banks as their President, and mean to support him in that office." A stormy discussion ensued, but it was carried in the affirmative by 119 to 42. The discontented minority found other opportunities for venting their dissatisfaction with the President, but they were again decisively defeated (139 to 39) on a crucial motion on 5th May, 1784.

Dr. Horsley and some of his friends withdrew from the Society, and Banks' position as President was never again challenged. See p. 171.

The year 1784 is also memorable for the discussion as to the claims of Cavendish, Watt, and Lavoisier to the merit of the discovery of the composition of water.

In the same year the Council of the Royal Society petitioned the King to provide funds to commence a geodetical survey, with the immediate object of establishing a trigonometrical connection between

NO. 41.—SIR JOSEPH BANKS. Painter (?) George Dance; Eng., Ridley.
(“European Magazine,” 1802.)

the Observatories of Paris and Greenwich in order to determine the difference of longitude. This work was proceeded with under General Roy, and Banks took a very great interest in it.

In 1785 Banks, as President, laid before the King the scheme of Herschel, the astronomer, for the construction of a reflecting telescope of colossal dimensions. The King approved of the work, and the instrument was completed in 1789.

In 1793, Volta communicated to the Royal Society his important discovery of the development of electricity on metallic bodies, produced by the contact of two metals. The explanation why Volta chose this

No. 42.—SIR JOSEPH BANKS. After a picture by Thos. Lawrence. Drawn by W. Evans. Eng. by A. Cardon, 1810.

Society for communication of his discovery is because when on a visit to England in 1782 he had made the acquaintance of Sir Joseph Banks, who showed him a good deal of attention. This discovery gave rise to others, which eventually led him, in 1800, to invent what is now called the Voltaic pile or compound Galvanic circle. The paper communicating this invention was also sent to the Royal Society, and is printed in the 90th volume of the *Transactions*, in the form of two letters to Sir Joseph Banks.*

In 1794, Volta was awarded the Copley Medal of the Royal Society, and Sir Joseph Banks made the presentation at the anniversary of that year, and referred to the discoveries in his address.

In 1796 Count Rumford wrote to Sir Joseph Banks offering the Royal Society £1,000 to found a biennial prize for discoveries on heat and light, and the correspondence on the subject is quoted by Weld.†

It is interesting to learn that the first meeting for founding the Royal Institution, which has done so much for diffusing a knowledge of science, was held at the house of Sir Joseph Banks, on 9th March, 1799, and this noble institution was incorporated on the 13th March following.

In his anniversary address in 1809, referring to the formation of the Society of Animal Chemistry, Sir Joseph Banks gave his views‡ as to the establishment of Societies other than the Royal Society.

Earlier in the same year we find Sir Joseph Banks taking action, with others, with the view to promulgate a "Plan for consolidating the Geological with the Royal Society as an Assistant Society."§ The geologists preferred to have an independent Society, doubtless to the advantage of science. Sir Joseph Banks' views show that he had very lofty ideals of the functions of the Royal Society, and throughout his long Presidency we have abundant evidence of his whole-hearted devotion to the interests of the Royal Society, and of science in general.

In 1816 we find that he was a member of a Committee "to consider of the proper means of ascertaining the length of a pendulum vibrating seconds in the latitude of London."

In 1819 he was appointed member of a Commission of Inquiry, with the view of establishing and preserving a uniform system of weights and measures.

Turning to the various pendulum experiments with the view of determining the figure of the earth, reference may be made to the very handsome manner in which M. Biot speaks of the courtesy and kindness which he experienced from Sir Joseph Banks and other Fellows of the Royal Society when he visited Britain with the

* Weld, ii, 202.

† *Op. cit.*, 214, &c

‡ *Op. cit.*, 242.

§ *Op. cit.*, 246.

No. 43.—SIR JOSEPH BANKS. After a picture by Thos. Lawrence.
Eng. by H. Robinson.

view of proceeding with Colonel Mudge to Scotland, to connect the measurement of certain degrees of the meridian with those already measured in Spain and France. Biot's complimentary references to Sir Joseph Banks, given in the *Memoires de l'Institut* for 1818, are quoted by Weld,* who adds, "This tribute to the President of the

No. 44.—SIR JOSEPH BANKS. Tassie medallion. Original of glass, white on a black ground.

Royal Society is valuable, as illustrative of the constant care and attention which Sir Joseph Banks evinced for all matters respecting science."

In 1817 the Council of the Royal Society resumed the consideration of the practicability of a North-west Passage, and Sir Joseph Banks wrote a very interesting letter† to the First Lord of the Admiralty (Lord Melville) on the subject. Sir Joseph Banks wrote, "that a considerable change of climate, inexplicable at present to us, must have taken place in the circumpolar regions, by which the severity

* *Op. cit.*, ii, 271.

† *Op. cit.*, ii, 274

No. 45.—SIR JOSEPH BANKS, AS PRESIDENT OF THE ROYAL SOCIETY, 1812. By Thomas Phillips. Eng., N. Schiavonetti.

of the cold, that has for centuries past enclosed the seas in the high northern latitudes in an impenetrable barrier of ice, has been, during the last two years, greatly abated."

The Admiralty approved of the fitting out of the expedition, and the Royal Society was consulted in regard to the scientific instruments necessary therefor.

In 1819 it was proposed to form an Astronomical Society, and this met with the determined opposition of Sir Joseph Banks, who thought, as in the case of the Geological Society, that its establishment would injure the Royal Society. We can respect the President's misapprehensions, but they were groundless nevertheless.

"In May, 1820, declining health led the venerable President to wish to retire from the chair. At a very full meeting of the Council, specially summoned on the 18th of the above month, Sir Everard Home informed the members, that "they were called together by desire of the President, who, in consequence of the failure of his general health, felt himself too much oppressed longer to perform the duties of President, and had, therefore, with the deepest regret, requested Sir Everard to give to the Council his resignation of that most honourable office, which has constituted the pride and happiness of his life."

This communication was received in a manner highly complimentary and flattering to Sir Joseph Banks. Instead of accepting his resignation, the Council resolved, "That they do with one voice express their most ardent wishes that the President should not withdraw from the Chair of the Society, which he has filled so ably and honourably during a period of forty-two years." It was at the same time resolved, "That the Lord Bishop of Carlisle be requested to transmit to the President the above unanimous resolution of the Council, and to report his answer thereon."

At the next meeting of the Council, the following communication from the President was read by the Bishop of Carlisle:—

"Sir Joseph Banks begs leave to inform the Council of the Royal Society, that his motive for offering his resignation of the office of President, was a conviction that old age had so far impaired his sight and his hearing as to render him by no means so well able to perform the duties of that respectable office as he has been. He is gratified in the extreme by finding that the Council think it possible for him to continue his services without detriment to the interests of the Society, and he begs leave to withdraw his resignation, assuring the Council that his utmost exertions shall never be wanting to conduct, so far as may be in his power, the affairs of the Society."*

Sir Joseph Banks' apprehensions as to the state of his health were, however, too well founded: the last time he occupied the chair was at the ordinary meeting on the 16th March, 1820—on Monday, the 19th June, he died.

* Weld, ii, 300, 301.

2. Banks' Broad Scientific Sympathies.

THIS has been abundantly shown in the preceding chapter; it only remains for me to enumerate a few of his other activities not referred to therein.

The memoranda and botanical collections of the great Linnæus were offered to Banks for the sum of £1,000, but, and it seems strange to us, he declined to buy them, and told J. E. Smith, then a medical student, who was an attendant at his Thursday breakfasts, of the offer. Smith obtained the money from his father, and his acquisition of the collections and the foundation of the Linnean Society are a matter of history. Banks was one of the founders of this society in 1788.

Although he must have known that the transference of the Linnean collections to England to any ownership than his own must cause a rivalry with the Banksian Herbarium, Banks encouraged Smith to make the purchase, and never showed any jealousy in the matter, although he was quite aware that the Linnean herbarium in a measure eclipsed his own. Jealousy seems to have been foreign to Banks' nature.

Great as his services to science are known to have been, these will never be fully realised till his correspondence in the British Museum and elsewhere shall have been thoroughly searched. That they were not confined to natural history is evident. He was an assiduous promoter of the Association for the Exploration of Tropical Africa, and it was under his auspices that Mungo Park, Clapperton, and others were sent out. He was one of the committee to investigate the subject of lightning conductors. His letters to Josiah Wedgwood show his keen appreciation not only of the work of the great potter, but of his other ingenious contrivances; among the mass of papers left by him on his death was an illustrated dissertation on the history and art of the manufacture of porcelain by the Chinese. He took a deep interest in the coinage, and was in close communication with Matthew Boulton on questions of minting. On applying for information on this latter point to Dr. Roberts-Austen, that gentleman informed the editor that, though not officially an officer of the Mint, Banks had probably served on some departmental or Parliamentary commissions charged with mint questions; and further, that he had presented the mint with a really fine library, embracing all the books it possessed relating to numismatics and coinage questions generally, together with a valuable collection of coins. In reference to this the editor has also found, on looking over some Banksian MS. in the British Museum, that these included a draft code of regulations for the conduct of the officers of the Mint.

His interest in manufactures was also constant; could his letters be brought together, a flood of light would thereby be thrown upon the progress of arts and sciences in Europe during his long tenure of the presidency of the Royal Society.

As an instance of his zeal for science may be mentioned the interest he took in Sir Charles Blagden's experiments to determine the power of human beings to exist in rooms heated to an excessive temperature. Sir Joseph Banks was one of the first who plunged into a chamber heated to the temperature of 260 Fahr., and was taken out nearly exhausted.*

The reference to Wedgwood is amplified in the following quotation from Barton. This clay is referred to in a despatch by Governor Phillip to Lord Sydney, 29th September, 1788 :—

It ("Phillip's Voyage, 1789") contains a curiosity in the shape of an "elegant vignette" on the title-page, representing Hope standing in classical attire on the shores of Sydney Cove, and addressing words of encouragement to Art and Labour, attended by Peace. This vignette was engraved from a medallion, "which the ingenious Mr. Wedgwood caused to be modelled from a small piece of clay brought from Sydney Cove." The clay had been sent by Phillip through Lord Sydney to Sir Joseph Banks, and had been handed by him to Wedgwood for the purpose of being chemically analysed . . . An opinion was expressed that it might certainly be made the basis of a valuable manufacture for our infant Colony. The idea thus suggested was illustrated by the medallion; and in order to give further effect to it, the aid of poetic inspiration was sought in the person of Dr. Erasmus Darwin—"a mighty master of unmeaning rhyme," as Byron called him, and an old friend of Wedgwood's—who wrote the prophetic lines describing the "Visit of Hope to Sydney Cove, near Botany Bay," published with the vignette in Phillip's Voyage.†

There is a learned dissertation by Josiah Wedgwood "On the analysis of a mineral substance from New South Wales"‡; and in a footnote it is mentioned that "along with the mineral here analysed, Mr. Wedgwood was presented by Sir Joseph Banks with some clay, which Mr. Wedgwood found to be an excellent material for pottery, adding that it might certainly become the basis of a valuable manufacture for our infant colony there." Mr. Wedgwood's analysis of the mineral substance referred to in Phillip's despatch of 6 November, post, p. 356, showed that it was "a mixture of fine white sand, a soft white earth, some colourless micaceous particles, and a few black ones, resembling black mica or blacklead"; and the result of his experiments was that, in his opinion, "this substance is a pure species of plumbago or blacklead, not taken notice of by any writer." The clay analysed by Mr. Wedgwood was made into a medallion; ante, p. 244.§

Wedgwood's cameos are still further referred to by Darwin in the following lines, and footnote :—

From the poor fetter'd Slave|| on bended knee,
From Britain's sons imploring to be free;
Or with fair Hope the brightening scenes improve,
And clear the dreary wastes at Sydney Cove.¶

* "Journal of the Right Hon. Sir Joseph Banks," edited by Sir Joseph D. Hooker, xxxiii. (Biographical Sketches). See Weld, ii, 114, for further particulars.

† "History of New South Wales from the Records," Barton, Vol. i (1783-1789), p. 243-4.

‡ *Phil. Trans.*, xvi, 667 (1790).

§ Barton, *op. cit.*, p. 340, footnote.

|| Alluding to two cameos of Mr. Wedgwood's manufacture; one of a slave in chains, of which he distributed many hundreds, to excite the humane to attend to and to assist in the abolition of the detestable traffic in human creatures; and the other a cameo of Hope attended by Peace, and Art, and Labour, which was made of clay from Botany Bay; to which place he sent many of them to show the inhabitants what their materials would do, and to encourage their industry. A print of this latter medallion is prefixed to Mr. Stockdale's edition of "Phillip's Expedition to Botany Bay."

¶ Erasmus Darwin, "The Botanic Garden," p. 87.

No. 46.—SIR JOSEPH BANKS. Painted by Thomas Phillips, 1820.

when you have not a duplicate
 a small branch or part taken from your
 specimens may serve without damaging it
 so much I shall be able & willing to make
 returns in things which you cannot easily obtain
 elsewhere
 Yours with all due attention

Your Affectionate
 & Faithful Servant
 Jos. Banks DRS

The Navy Board, 21st March, 1799, consulted Banks as to the appliances necessary "for the purpose of trying for coals at a more convenient place than where the present mine has been discovered."*

Mineral specimens of some sort or other were often sent to Banks. Governor King, 28th September, 1800, sent† a "box of stones" to him, and Banks sent out a miner named John Allen as a member of the scientific staff of the "Investigator," under Flinders.

Lieut. Wm. Kent (H.M.S. "Buffalo") sent to Banks from London, 16th October, 1801,‡ specimens of iron "extracted in the foundry at Gosport, from the ironstone found in the vicinity of the town of Sydney, which I am told is superior to the finest Swedish iron." He reverts to the matter on 1st November,§ and refers to his services to the infant colony. He brought some live emus to Banks,|| and also a pair of black swans, for which he had paid fifty guineas to a Hawkesbury settler.

An expert opinion on the iron ore brought by Lieut. Kent was given by a Mr. H. Vernon.¶

For notes on the zoological collections acquired and distributed by Banks, see Fletcher.** From various circumstances Banks abandoned the detailed study of zoology, confining his scientific interest mainly to botany. But Banks' Journal shows that his knowledge of zoology was anything but superficial. Zoological specimens were sent to him from the infant colony from time to time, *e.g.*, bird-skins.††

Brown, as naturalist of the "Investigator," sent to Banks zoological as well as botanical specimens, though we can well imagine that his heart was not in zoology.

Banks was one of the founders of the Royal Institution in 1799.

In 1802 he was chosen a member of the National Institute of France, and his letter of thanks in response to the honour was the occasion of a bitter anonymous attack by an old opponent, Dr. Horsley, Bishop of St. Asaph, and a disappointed candidate for the Presidency of the Royal Society, who taxed him with want of patriotic feeling. He corresponded with the Institute with the view of securing the release of Flinders.‡‡ (See p. 206).

Banks was one of the persons named in the Charter of the Horticultural Society in 1809. Of the latter society he was elected an honorary member, and shortly after his death the society established the Banksian Medal. (See p. 238).

* *Hist. Rec.*, iii, 649, 651.

† *Ib.*, iv, 207.

‡ *Ib.*, 595.

§ *Ib.*, 608.

|| *Ib.*, 629.

¶ *Ib.*, 631.

** *Proc. Aust. Assoc. Adv. Science*, 1900.

†† *Hist. Rec.*, iv, 360.

‡‡ *Ib.*, v, 412, 418, 646.

3. Banks and the Australian Wool Industry.

BANKS failed to realise, at all events at the beginning, the suitability of Australian conditions to the growth of sheep and wool. It seems to me that this is the only important matter, affecting Australia, in which his judgment was at fault. Indeed the suitability of the Australian climate and pastures to the merino could hardly have been predicted; the knowledge had to be obtained by experiment.

First of all, his personal knowledge of Australia was confined to the coast, and such situations, as a very general rule, are favourable to the growth of coarse tussocky and running grasses, unsuitable for sheep.

Then there was the personal element. He conceived a dislike to Captain John Macarthur. Now Captain Macarthur's services to Australia, particularly in regard to the wool industry, were unquestionably very great; he was enterprising and full of resource, a man of high aspirations, a good family man; but it will be conceded that he was a difficult man to get on with. The number of men with whom he quarrelled, and the litigations in which he was engaged, were large, and there is no doubt that he was both exacting and domineering. Sir Joseph Banks was an amiable and benevolent gentleman of high standing, perhaps somewhat autocratic, one who was accustomed to deference being paid to him, and it appears probable that Macarthur withheld from Banks those courtesies and that deference which a younger man might well pay to an older man of superior rank. In a word, Banks and Macarthur, to use an expressive vulgarism, did not "cotton" to each other.

And so, with one misunderstanding and another, the relations between these two masterful men became strained and even worse.*

Then it must be remembered that Banks was the most loyal of friends to his protégés, and Bligh was a protégé in whom he took especial interest. As regards the relations between Bligh and Macarthur, I think the former was grossly indiscreet, and unfitted by temperament for the management of men—he was tactless and vain. Banks was puzzled doubtless, but he threw his influence on the side of Bligh, and his antagonism to Macarthur increased.

* e.g., *Hist. Rec.*, vi, 691.

NO. 48.—CAPTAIN JOHN MACARTHUR. (1767-1834.)

While Banks undoubtedly took much interest in the wool industry, and did much to forward it, it is absolutely necessary to understand that his attitude to Macarthur must have biassed him in regard to some of his utterances and judgments pertaining to its development in New South Wales.

The Rev. Samuel Marsden was chaplain to the colony, and also interested himself in farming pursuits. He writes to Banks, 27th April, 1803,* asking him to use his influence to get two good English rams.

Major Johnston brought out one ram, Captain Kent another, but they have been so badly chosen as to be of little or no value here . . . Nothing can be of greater importance than the improvement of our breed of sheep. The climate and soil both seem to agree well with sheep, and the wool promises to be very good.

He began his letter with the compliment—

I flatter myself you will excuse the liberty I have taken in addressing these few lines to you. Tho' I have not the honor of any personal knowledge of you, yet, sir, from your known ardent wish to promote the good of the colony, I have presumed to trouble you with this sheet.

Later on, 13th January, 1805, he writes† to Banks, stating that there were in the colony the Spanish, Southdown, and Teeswater breeds of sheep, and informing Sir Joseph of his desire to obtain Leicesters and Lincolns.

Banks wrote to Capt. Waterhouse under date 8th July, 1806,‡ asking for accurate information as to the introduction of the Spanish breed of sheep into Port Jackson. Quoting Capt. Kent in this matter, Capt. Waterhouse replies, 16th July,§ in a very interesting letter well worth perusal, stating how the Spanish sheep were purchased by him and Capt. Kent at the Cape. They were progeny of Spanish sheep imported by Colonel Gordon.

Captain Waterhouse to Sir Joseph Banks (Banks' Papers).

Great Armitage, 16 July, 1806.

Sir,

Having hurt my hand on my way down here is the reason I have not answered yours sooner, respecting the Spanish sheep in New South Wales.

In 1797, I arrived in the "Reliance" at the Cape of Good Hope, together with the "Supply" (Captain Kent) and "Britannia," transport. On board the "Reliance" was the Commissary, for the purpose of purchasing cattle for the settlement; on board the "Britannia," Gov'r King and Colonel Paterson, on their way to England, both which gentlemen had been acquainted with Colonel Gordon, who lost his life there. Col. Gordon had imported a few Spanish sheep to the Cape which had increas'd to thirty-two. Mrs. Gordon was then going to England, and, for some reason, did not choose to leave anything that had

* *Hist. Rec.*, v, 99.

† *Ib.*, 543.

‡ *Ib.*, vi, 109.

§ *Ib.*, 110.

belonged to her late husband at the Cape. She gave three Spanish sheep to Gov'r King and three to Col. Paterson. The remainder, I understood, were offered to the Commissary, but he declin'd to purchase them on the part of Government. They were then offer'd to me. As I could not afford to purchase the whole, Capt. Kent (that they might not be lost to the colony) offered to take half. We each receiv'd thirteen, and I took Gov'r King's on board the "Reliance." Col. Paterson took his to England to present to Sir J. Sinclair.* We paid Mrs. Gordon four pounds apiece for them. The expences on delivery was about one pound a head more. The expence for food, &c., for the voyage was very considerable. Unfortunately, Gov'r King's sheep had been brought to the Cape Town some time before ours and put with some others, by which they became diseas'd and communicated it to ours. His three died soon after they came on board. I do not recollect the number I had alive when I arriv'd at Port Jackson, but think more than half.† Capt. Kent, who I understood shared his with Lieut. Braithwait, I believe lost all, from the circumstance of his applying to me for one immediately on my arrival. I do not recollect if Lieut. Braithwait had one or two alive.

I offer'd all mine to the Governor, but I suppose he was satisfy'd as they were in the colony, as he declin'd purchasing them.

Captain McArthur then offer'd me fifteen guineas a head, provided I would let him have the whole. This I declin'd, wishing to distribute them.

I suppli'd Capt. Kent, Capt. McArthur, Capt. Rowley, and Mr. Marsden. As the Spanish ewes had lambs—none but Spanish rams running with them—I supplied Mr. Williamson, Mr. Moore, Government, and, in fact, any person who wish'd to have them. I never had any other but Spanish rams with my flock, and on quitting the colony sold the flock to Mr. Cox, the Paymaster, with the exception of a few to Captain McArthur. Most who had Spanish sheep were partieular about them, and I took pains to disperse them; and I can assert that several of the Spanish sheep I originally brought from the Cape, together with their produce, was in the flock I left behind. If you will look to *Sydney Gazettes*, Sir Joseph, you will find often the price of Spanish sheep at the sales. I apprehend most of those who turn'd their mind to raising sheep have some of the real Spanish breed amongst them.‡ I believe, Sir, you have fleeces of the different crosses that were sent Home to you. As I do not understand wool, I could only speak from report. Major Johnston took out with him a Spanish ram this last time he went out, presented to him by the Duke of Northumberland.

I believe this (is) all, Sir Joseph, you wish'd to know respecting the Spanish sheep—how they were dispers'd; but if I have omitted anything, will you have the goodness to let me know?

I remain, &c.,

H. WATERHOUSE.

Banks required information for the preparation of a statement in regard to the history of the introduction of improved sheep in New South Wales, and this statement may have been intended as a rejoinder to Capt. Macarthur.

* The first President of the Board of Agriculture.

† According to Governor King (vol. iv, p. 662), three Spanish rams were landed in 1797. He, however, could only have been speaking from hearsay, as he was in England at the time.

‡ In the "Observations on Sheep in New South Wales," found in the Alnwick Library (post, p. 179), the writer alleged that there was reason to believe that the rams imported by Waterhouse and Kent in 1797 were not of the true merino breed, being much larger. Evidently Waterhouse thought otherwise.

It is no part of my plan to attempt a recapitulation of the chief events in regard to the introduction of an improved breed of sheep into New South Wales. Opinions may differ as to the proportion of praise to be awarded to Macarthur as compared with other claimants in this connection, but all impartial people will admit that his services were of the very greatest advantage to the young colony, no matter whether he received adequate reward or not.

The Brabourne papers (published in the "Historical Records" in their place) contain several letters showing Sir Joseph Banks' interest in the wool industry.

He received fleeces from Captain Macarthur,* and was urged by Governor King to send out wool-cards.† Macarthur's wool, sent to Banks as President of the Royal Society, was reported upon by an expert—H. Laycock.‡

Banks writes§ to Mr. Fawkenor, of the Office for Trade, Whitehall, September, 1803, in regard to the prospects of the wool industry in New South Wales. He writes in a depreciatory tone—he has not seen any New South Wales wool to equal the best Spanish, the grass of New South Wales is inferior, and the freight of wool from New South Wales considerable. He thought Captain Macarthur's view of the industry too sanguine.

He writes a letter,|| 31st March, 1804, presumably to Macarthur, on pastoral pursuits. He suggests the temporary occupation of land as sheep-runs. This letter contains what now appears to us a remarkable paragraph:—

I doubt much the propriety of granting land in perpetuity to a scheme which embraces nothing but the feeding of sheep. The run over land suited for that purpose is all that can be wanted, and as your sheep will retire as the colony increases, no inconvenience can possibly derive from such an arrangement; and at all events I think you may be certain that the tops of the hills represented by Capt. Waterhouse as such excellent sheep pasture cannot be wanted for the plough in less than four or five centuries.

Banks writing to King, under date 29th August, 1804,¶ says:—

I do not think you need to trouble yourself about getting possession of the fine-woolled sheep for Government. If the project for breeding them succeeds, they must soon become so abundant that the genius of your people, who will not let a potato stay under ground till it is ripe, will soon spread them over the country.

A proposal has been made to institute a company here with capital of £10,000 for the purpose of increasing the breed of sheep, which are to become the property of the subscribers—the wool, I mean—and the mutton to remain that of Mr.

* *Hist. Rec.*, iv, 208.

† *Ib.*, 207.

‡ *Ib.*, v, 80.

§ *Ib.*, 225.

|| *Ib.*, 365.

¶ *Ib.*, 459.

McArthur, the manager. Government have been applied to to make grants of land for that purpose. I have advised that a grant be made of a million of acres in such parts as Captain McArthur shall chuse, at a proper distance from all settlements for the sole purpose of feeding sheep, resumable at the will of the Government, whenever any part of it may be appropriated to tillage or other purposes, on satisfaction being made for any stock-houses on the premises resumed, and an equal quantity of land granted at a more distant point, 100,000 acres at first and 100,000 more when 100,000 fine-wooll'd sheep are actually in existence on the first 100,000, and so on.

This letter is evidence that Sir Joseph desired to be of real service to Captain Macarthur.

Then we have a statement by Banks concerning Macarthur, entitled³: "Some circumstances respecting Captain Macarthur, late of the New South Wales Corps, stated for further investigation previous to the granting of any further indulgence to him by Government on the plea of his having established a flock of fine-woolled sheep at Sydney."

This statement shows that, later on, Banks heartily disliked Macarthur, and he severely reported on him and his transactions concerning sheep and wool to the Government. Banks concludes with a recapitulation of the introduction of fine-woolled sheep into New South Wales, doubtless based on the information supplied by Captain Waterhouse, in his letter, given at p. 174.

³ *Hist. Rec.*, vi, 698.

4. Banks' Interest in the Progress of Australia Generally.

WHAT is considered by many as the most important document connected with the early history of Australia is the map or chart which R. H. Major called the Dauphin Map.

"It belongs to a type of manuscript Lusitano-French planispheres, which is represented by several specimens, all of which are copies from a prototype which has either been destroyed or has not yet been found."

The Dauphin Map is the most fully detailed of these maps, and is probably the oldest. It was probably executed in the time of Francis I of France, for his son the Dauphin, afterwards Henry II. The assigned date is 1530-6.

The chart formerly belonged to Edward Harley, Earl of Oxford, and many years after his death it was purchased by Sir Joseph Banks and presented by him to the British Museum in 1790.

Space forbids me to more fully refer at this place to the map, which is illustrated and fully described by Collingridge,* and the purchase and placing in safe custody of this priceless relic is but one of the innumerable services rendered by Banks to Australia.

Another service of the same character rendered by Banks, was the purchase by him of a document which he handed over, on the return of the "Endeavour," to Alexander Dalrymple, hydrographer to the Admiralty, by whom it was published. This was a copy of the instruction to Commodore Abel Yansz Tasman for his second voyage of discovery.

That distinguished commander had already, in 1642, discovered not only the island now named after him, Tasmania (but more generally known as Van Diemen's Land, in compliment to the then governor of the Dutch East India Company at Batavia), but New Zealand also; and passing round the east side of Australia, but without seeing it, sailed on his return voyage along the northern shores of New Guinea. In January, 1644, he was despatched on his second voyage; and his instructions, signed by the governor-general, Antonio Van Diemen, and the members of the council, are prefaced by a recital, in chronological order, of the previous discoveries of the Dutch.*

* "The Discovery of Australia," by George Collingridge; Sydney, Hayes Brothers, 1895. (See Chapter xxx.)

* Collingridge, *op. cit.*, p. 239.

Father Tenison-Woods* suggests that Banks procured this document on the occasion of the visit of the "Endeavour" to Batavia on the way to England after the discovery of New South Wales.

Collingridge† has reprinted the instructions, with critical notes, in his very valuable work.

The same author‡ offers remarkable evidence that Banks knew of the existence of Torres Straits before he embarked on the "Endeavour," and that there was a friendly difference of opinion (afterwards removed) between him and Cook on the subject. It is additional testimony to the merit of Banks as an explorer.

I give the quotation:—

But although Dalrymple's Historical Collection of Voyages, &c., 1770, appeared too late to form part of the "Endeavour's" library, Captain Cook and Sir Joseph Banks were in possession of the information contained in that work when they passed through Torres Straits. This would appear from a letter written by Dalrymple to the editor of "Cook's Voyages." We do not know whether this letter has been published in any English work, but it was published in 1774 in a translation of Dalrymple's work by M. de Fréville, entitled "*Voyages dans la mer du Sud*." From page 469 to 502 of that work, there is a long letter from Dalrymple to Hawkesworth, in which Dalrymple states that he gave to Mr. Banks (since Sir Joseph Banks) a collection of the discoveries attempted in the Pacific Ocean, with a map of those discoveries drawn by himself, and which he published only after the return of M. de Bougainville. Dalrymple also states that he had marked Torres' track on his map from information contained in Arias' memorial, and that the track thus marked determined the course of the "Endeavour" between New Guinea and New Holland. Opinions, he says, were at first divided: Captain Cook, on the authority of Mr. Pingré, pretended that Torres had sailed to the north of New Guinea; Mr. Banks, on the contrary, maintained that he had left New Guinea on his right-hand side. The route marked on my map, says Dalrymple, was, at last, unanimously adopted, &c.: "*Il n'est pas moins vrai, que la route de Torres que j'avois dessinée sur ma carte d'après le mémoire d'Arias, déterminait l'Endeavour à passer entre la Nouvelle Hollande and la Nouvelle Guinée. Les opinions avoient d'abord été partagées; le Capitaine Cook, s'appuyant sur l'autorité de M. Pingré, prétendoit que Torres avoit fait voile au Nord de la Nouvelle Guinée; M. Banks soutenoit au contraire qu'il avoit laissé la Nouvelle Guinée à droite. La route dessinée sur ma carte réunit enfin les suffrages.*" And Dalrymple adds that his map was not compiled from conjectures, but from facts.

On Sir Joseph Banks' return from his voyage round the world, he was looked upon as an authority upon the countries he had visited. The country in regard to which the greatest interest was taken, was the vast, undefined territory of New Holland; and Britain, having recently lost most of her American colonies, looked about, according to the views held at that time, for a land in which to dispose of certain of the occupants of her prisons.

Examined as a witness before a Committee of the House of Commons, appointed in 1779 to inquire into the state of the gaols and the question

* *The Australian Monthly Magazine*, iii, 440 (1866).

† *Op. cit.*, 240.

‡ *Op. cit.*, 200.

of transportation, Sir Joseph Banks spoke strongly in favour of Botany Bay as a field of operations, arguing that its soil and climate were such as would soon enable a settlement to become self-supporting. His evidence is quoted by Barton.*

In James Maria Matra's proposal in 1783—"For establishing a settlement in New South Wales†" he does not omit to say, "Sir Joseph Banks' high approbation of the scheme, which I have here proposed, deserves the most respectful attention of every sensible, liberal, and spirited individual amongst his countrymen." He proceeds to pay him even greater compliments.

Banks' relations with British Ministers concerned with the administration of the Colony of New South Wales were, as a very general rule, influential, and it is a matter for congratulation that a man of such sterling worth took an interest in New South Wales, as it is difficult to find any Minister or British statesman for whom the subject of New Holland appeared to have any attraction.

Banks advised the Governors of New South Wales on matters of penal administration, *e.g.*, Governor King enlisted Banks' sympathy when efforts were being made to evacuate Norfolk Island‡; gently found fault,§ or praised as he saw necessity. One cannot but be struck with the robust common sense and the high tone which permeates his deliverances.

All the Governors—from Phillip to Bligh—continuously corresponded with him, and while rendering official reports to the Secretary of State, wrote chatty letters, full of news and suggestions, to Sir Joseph Banks. And not only the Governors, but many of the military and civil officers wrote to him. He was like a father of a big family—indeed his position was as unique as it was beneficial to the young colony. He was the only man of eminence who had visited New South Wales; he held a unique position as President of the Royal Society and personal friend of the King; he thus had commanding scientific influence, while his wealth and social position lifted him from any suggestion of self-seeking in colonial affairs.

He was indeed a sort of general adviser of everybody concerning the welfare of the colony—the referee on matters of all kinds.

In June, 1806, he prepared "Some remarks on the present state of the colony of Sydney, in New South Wales; and on the means most likely to render it a productive, instead of an expensive settlement,"||

* *History of N.S.W. from the Records*, i, xlv.

† *Hist. Rec.*, i (2), 1.

‡ *Ib.*, v, 448.

§ *E.g.*, His advice to King on convict management, *Ib.*, v, 460.

|| *Hist. Rec.*, vi, 86.

an interesting and thoughtful statement, written at a time when the East India Company's Charter was felt to be cramping the trade activities of the young colony.

One would expect a document of this kind to have been prepared by the Secretary of State instead of being the product of the benevolent watchfulness of a private gentleman, holding no post of profit, for such he was.

Of Banks' refreshing optimism in regard to the colony we have many instances. For example,* writing to Governor Hunter, on 30th March, 1797, he says:—

The climate and soil are in my own opinion superior to most which have yet been settled by Europeans. I have always maintained that assertion, grounded on my own experience

I see the future prospect of empire and dominion which now cannot be disappointed. Who knows but England may revive in New South Wales when it has sunk in Europe?

A little later, writing to Hunter, in February, 1799,† likewise during a time of grave national anxiety, he says:—

Your colony is already a most valuable appendage to Great Britain, and I flatter myself we shall before it is long see her Ministers made sensible of its real value. Rest assured in the meantime that no opportunity will be lost by me of impressing them with just ideas of the probable importance to which it is likely before long to attain, and to urge them to pay to it that degree of attention which it clearly deserves at their hands.

He early saw that this vast continent must be explored, and was not new to the subject, since he had taken an active part in the exploration of Africa (he was a member of the African Association).

On 15th May, 1798, he proposed to Under Secretary King‡ to send Mungo Park, recently returned from West African explorations, to explore the interior of New Holland. The plan was to penetrate the interior "by its rivers or otherwise." "He will want a deck'd vessel of about 30 tons, under the command of a lieutenant, with orders to follow his advice in all matters of exploring." Banks suggested this co-operation with Park to be undertaken by Flinders, but the suggestion to employ the former came to nothing.

Banks says, in the letter quoted:—

We have now occupied the country of New South Wales more than ten years; and so much has the discovery of the interior been neglected that no one article has hitherto been discovered, by the importation of which the mother country can receive any degree of return for the cost of founding and hitherto maintaining the colony.

* *Hist. Rec.*, iii, 202.

† *Ib.*, 532.

‡ *Ib.*, 383.

It is impossible to conceive that such a body of land, as large as all Europe, does not produce vast rivers capable of being navigated into the heart of the interior; or that, if properly investigated, such a country, situated in a most fruitful climate, should not produce some native raw material of importance to such a manufacturing country as England is.

Mr. Mungo Park, lately returned from a journey in Africa, where he penetrated farther into the inland than any European before has done, by several hundred miles, and discovered an immense navigable river running westward, which offers the means of penetrating into the centre of that vast continent offers himself as a volunteer to be employed in exploring the interior of New Holland, by its rivers or otherwise, as may, in the event, be found most expedient.

He is very moderate in his terms; he will be contented with 10s. a day and his rations, and happy if his pay is settled at 12s. The amount of his outfit for instruments, arms, presents, &c., will not, I think, exceed £100.

But he was not to be one of the heroes of Australian exploration, and shortly afterwards he was drowned in a West African river.

It was to Banks that Governor Hunter sent the journals of the expedition* into the interior led by Wilson in 1798.

* *Hist. Rec.*, iii, 819.

5. Some further Correspondence of Banks.*

THE correspondence of Banks remains to be gathered together, but the following, so far as they go, are both interesting and varied.

1. He writes to John Ellis, Esq., the greatest authority on the Corallines, a distinguished scientific man in his day, and a great friend of Linnæus.

(Linnæus introduced Solander to Ellis, who introduced him to Banks.)

Burlington-street, 1st November, 1773.

. I rejoice to hear that your eyes are in a mending state; should be particularly happy if they would give you leave to instruct us a little, as in all matters of that nature even Solander is obliged to allow you the title of master. I am, your affectionate, humble servant, JOSEPH BANKS. (Vol. ii, p. 81.)

2. To the younger Linnæus:—

Soho Square, Dec. 30, 1782.

I should have answered your favour long ago had I been certain how to have directed it. But as I despaired of hitting you in the course of your flight through Germany, I resolved to wait till the time when I had reason to expect that you had returned to Upsala.

Thank you for your information concerning *Caligonum*. It has rectified a mistake, which might have led me, at some time, into a real scrape. For *Pimento* I have many specimens, both cultivated and wild, every one of which has *folia opposita*, and they are quite like the figure in Hughes' "History of Barbadoes," drawn by Ehret.

The figure in Browne's "Jamaica" (tab. 25, f. 2) is not referred to from the letter-press. It has clearly been constructed from a bad specimen; but as that very specimen is, in all likelihood, to be met with in your herbarium,† you will do well to inquire whether, as I suspect, it is not taken from a different plant. Solander, who constituted a new genus under the name of *Myrcia*, very soon indeed after he came to England, meant that with opposite leaves, which flowers, you know, in our gardens, and is highly aromatic.

I have been always inclined to think that the blunder which originated in Browne, from a bad specimen, has been followed since by every writer. I should like, therefore, to hear Mr. Ortega upon the subject, though, I confess, I esteem him but as a nettle‡ in the garden of botanic science. Be so good as to send me the title of his essay.

Van Royen sent me a grass long ago as *Bobartia*, which proved quite unlike it, and so trifling that I really forget what it was. Pray send me some information about the Danish *Bobartia*. The generation of Eels may be seen at large in

* All these letters, with the exception of those referring to Johnson, are taken from "Selections of the Correspondence of Linnæus," by Sir J. E. Smith. 2 vols. 1821.

† It does not exist there. The leaves in the figure are alternate, which is the blunder adverted to in the subsequent part of this letter. (Smith's note.)

‡ Alluding to the meaning of his name in Spanish.

Vallisneri. He discovered it in 1707, and published it in 1710, with a figure. I have not the book, but it is copied in his "*Opera omnia*," and in "*Valentine Amphitheatrum Zootomicum*," where you may see it.

The compliments of Christmas attend you from all our family. We shall think of you when we cut the Twelfth cake on Monday. Indeed, we should sincerely rejoice if future fortune would allow you once more to partake of it.

Yours faithfully, JOS. BANKS.

To the younger Linnæus:—

Soho Square, December 5, 1778.

With pleasure I received your favours, and the first edition of your learned father's "*Systema*,"* for which I return you my thanks. I always had the highest respect for that valuable man, and shall pay every duty to his memory which gratitude can dictate. I have invariably studied by the rules of his System, under your learned friend Dr. Solander, so that the plants in my intended publication† will be arranged according to his strictest rules. Such as are of genera described by him will have his names. The new ones, which I think will almost outnumber them, will be named either in honour of distinguished botanists, or, according to rules in the "*Philosophia Botanica*," by names derived from the Greek.

Uninterruptedly, however, as I have applied to the work of engraving for near five years, I have not yet advanced above half of my intended progress. About 550 plates are engraved,‡ and I think, if circumstances as yet unexpected do not oblige me to cut it short, it will extend to double that number. Understand by this how impossible it will be for you to quote it in a work intended for publication in the course of this year.

The plants which you so kindly sent me by Mr. Troille I fear are lost. The ship has not been heard of, though more than a year has elapsed since she sailed.

In one thing it will be in your power to oblige me much, and I shall not want for gratitude; if you will kindly undertake to supply me with as good a collection of Mutis's plants as you can spare, without damaging your own collection.§ A small bit, you know, is of great use to a botanist. When you have not a duplicate, a small branch, or part, broken from your specimen, may serve, without damaging it too much. I shall be able and willing to make returns, in things which you cannot easily obtain elsewhere. (See specimen of handwriting, p. 170.)

I am, with all due attention, your affectionate and faithful servant,

[Vol. ii, pp. 574–5.]

JOS. BANKS, P.R.S.

3. To Sir J. E. Smith (owner of the herbarium of Linnæus, founder of the Linnean Society. He described a number of Australian plants):—

Soho Square, December 25, 1817

My dear Sir James,

My chief reason for troubling you with this is to tell you that I have paid obedience to your mandate, by reading your article on Botany, in the Scotch "*Encyclopædia*," which, conceiving it to be an elementary performance, I had neglected till now to peruse.

* "*Systema Naturæ*." 1st edition, Leyden, 1735. The 13th edition had just (1778) been published at Leipzig.

† Apparently a reference to the botanical results of the voyage of the "*Endeavour*" to be published by himself and Dr. Solander, but not published by him.

‡ See above p. 60.

§ These wishes the editor had the pleasure of fulfilling after he acquired the Linnean Herbarium, n 1784.

I was highly gratified by the distinguished situation in which you have placed me, more so, I fear, than I ought to have been. We are all too fond of hearing ourselves well spoken of, by persons whom we hold in high regard. But, my dear Sir James, do not you think it probable that the reader, who takes the book in hand for the purpose of seeking botanical knowledge, will skip all that is said of me, as not at all tending to enlarge his ideas on the subject?

I admire your defence of Linnæus' natural classes. It is ingenious and entertaining, and it evinces a deep skill in the mysteries of classification; which must, I fear, continue to wear a mysterious shape, till a larger portion of the vegetables of the whole earth shall have been discovered and described.

I fear you will differ from me in opinion, when I fancy Jussieu's natural orders to be superior to those of Linnæus. I do not, however, mean to allege that he has even an equal degree of merit in having compiled them. He has taken all Linnæus had done as his own; and having thus possessed himself of an elegant and substantial fabrick, has done much towards increasing its beauty, but far less towards any improvement in its stability.

How immense has been the improvement of botany since I attached myself to the study, and what immense facilities are now offered to students, that had not an existence till lately! Your descriptions, and Sowerby's drawings, of British plants, would have saved me years of labour, had they then existed. I well remember the publication of Hudson,* which was the first effort at well-directed science, and the eagerness with which I adopted its use. Believe me, &c.

JOS. BANKS.

Then follows Sir J. E. Smith's eulogy of Banks, inspired by the above letter:—

"The last letter, coming from a man of such distinguished talents and experience, is so valuable a commentary on several leading subjects of the present volume, that the editor could not withhold it from the publick. He must rely on the favor of his readers, not to attribute to a foolish vanity this exposure of what gives an important sanction to his own sentiments, while it displays at once the knowledge, the indulgence, and the assuming candour of the writer. The hand that traced these lines is no longer held out to welcome and encourage every lover of science; and the homage of the motley crowd, of which science formed but the livery, has passed away.

"The lasting monument of botanical fame, of whose judicious and classical plan so interesting a memorial is left us, in the first of Sir Joseph Banks' letters to the younger Linnæus, has been sacrificed to the duties incumbent, for almost half a century, on the active and truly efficient President of the Royal Society. Its loss would ill have been supplied by ever so stately a mausoleum of marble; and even this mausoleum has been suffered to crumble, in embryo, into dust. The names of Banks and of Newton are indeed, alike independent of an abortive or a mutilated monument; and inscriptions on brass or on marble now resign their importance and their authority to the more faithful records of history and science, perpetuated for ever, if they deserve it, by the phoenix-like immortality of the press." (Vol. ii, pp. 577–80.)

* In 1762.

4. From Dr. Samuel Johnson:—

From Dr. Samuel Johnson, to Joseph Banks, Esq.

Perpetua ambita bis terra præmia lactis

Hæc habet altrici Capra secunda Jovis.*

Sir,

I return thanks to you and to Dr. Solander for the pleasure which I received in yesterday's conversation. I could not recollect a motto for your goat but have given her one. You, sir, may perhaps have an epic poem from some happier pen than, sir,

Your most humble servant,

SAM. JOHNSON.

Johnson's Court, Fleet-street, Feb. 27, 1772.

"A gentleman having come in who was to go as a mate in the ship along with Mr. Banks and Dr. Solander, Dr. Johnson asked what were the names of the ships destined for the expedition. The gentleman answered, they were once to be called the 'Drake' and the 'Raleigh,' but now they were to be called the 'Resolution' and the 'Adventure.'† Johnson: 'Much better; for had the 'Raleigh' returned without going round the world, it would have been ridiculous. To give them the names of the 'Drake' and 'Raleigh' was laying a trap for satire.' Boswell: 'Had not you some desire to go upon this expedition, Sir?' Johnson: 'Why, yes; but I soon laid it aside. Sir, there is very little intellectual in the course. Besides, I see but at a small distance. So it was not worth my while to go to see birds fly, which I should not have seen fly; and fishes swim, which I should not have seen swim.'

"The gentleman being gone, and Dr. Johnson having left the room for some time, a debate arose between the Reverend Mr. Stockdale and Mrs. Desmoulins, whether Mr. Banks and Dr. Solander were entitled to any share of glory from their expedition. When Dr. Johnson returned to us, I told him the subject of their dispute.

"Johnson: 'Why, Sir, it was properly for botany that they went out; I believe they thought only of culling of simples.' "‡

5. A letter from Banks to Dr. W. Roxburgh (the celebrated Indian botanist, then at the Cape), will be found at *Hist. Rec.*, iii, 527.

* Thus translated by a friend:—

In fame scarce second to the nurse of Jove,

This Goat, who twice the world had traversed round,

Deserving both her master's care and love,

Ease and perpetual pasture now has found.

[Boswell's "Life of Johnson" (Malone), 1848.] The goat evidently accompanied Cook and Banks in the "Endeavour."

† Evidently Cook's second expedition.

‡ Boswell's "Life of Johnson" (Malone), p. 184.

SOME OF BANKS' CORRESPONDENTS (MAINLY AUSTRALIAN).

THE Brabourne Papers consist of Letters and Correspondence of Sir Joseph Banks, acquired by the New South Wales Government; a Summary of their contents, 8vo., pp. 48, was published, Sydney, 1886.

The collection includes letters from Cook, Phillip, Dr. White, Hunter, King, Flinders, Marsden, Bligh, and a few sketches and charts.

The extent of Sir Joseph Banks' correspondence with people in Australia (officials and others), and those in England interested in Australia, will never be known. From time to time letters by him come to light, by which we get further indications of his wonderful activities. He was a sort of Honorary Secretary of State for New Holland.

The following references to correspondence are suggestive, and by no means complete. Other correspondence will be found under the head of "Wool."

They are arranged as follows:—Governors Hunter, King, and Bligh; Lieut.-Governors Collins and Paterson; Lieutenant Clerke and Captain Flinders; Messrs. Richards and Enderby, ship-owners; Messrs. George Suttor and Burder; and finally a convict.

The following volumes of manuscripts, written by or to Banks, are in the Library of the Royal Gardens at Kew:—

1. Correspondence—I, 1766–1789; II, 1790–1820. 2 vols. fol. (A few drafts and memoranda by Banks, but chiefly letters addressed to him—about 720 in all.)
2. A third volume of letters addressed to him. 4to.
3. Copy of a letter from Dr. Solander, M.D.; also of a letter from W. Anderson, Cape of Good Hope, 24th Nov., 1776; and of a letter from A. Cunningham, Timor, 8th Nov., 1819. (Originals in possession of Mr. Enys.)
4. Volume lettered "Hemp, 1764–1810." 70 pp. fol. (Memoranda by Banks, drafts of his letters, printed statements, accounts, &c.)

May I hope that the above may be printed some day, after the fashion of the "Historical Records of New South Wales," and so become available to students?

Since this work was written, the Lee collection of Banksiana has been purchased by the late Mr. David Mitchell, and is now in the Mitchell Library

Evidence of the desire of Banks to obtain information from as many reliable sources as possible is given in the following extract from his letter to Caley, of 30th August, 1804* :—

I am obliged to you for your opinions relative to the state of the colony. It is very convenient to me to learn these of other persons beside the Governor and those in authority.

1. *Captain John Hunter, R.N.*† He was born at Leith, near Edinburgh, in 1737. He was the second Governor of New South Wales. From a letter to Sir Joseph Banks, July 31st, 1781, thanking him for thinking of the ram for his brother-in-law, Mr. Lambert, of Woodmanston, Surrey, the ram of the Spanish breed to be the father of Lord Derby's flock, &c., it would appear that he knew Sir Joseph long before he came out to Port Jackson with Phillip in the First Fleet.

Although few letters between Banks and Hunter appear to be extant, we know that Banks respected Hunter, and the latter posted Banks in regard to his troubles with the intriguing New South Wales officers, who were interested in hindering the moral welfare of the young colony.

Banks to Hunter, 30th March, 1797,‡ gives an interesting account of himself :—

I am a bird of peace. My business as an encourager of the transport of plants from one country to another is suspended during war, and then, as I am no politician, I am least employed when all other people are in hurry and bustle.

Speaking of New South Wales, he adds, (and here we have a good instance of the way in which he used to put in a good word for the infant colony).

The climate and soil are, in my opinion, superior to most which have yet been settled by Europeans. I have always maintained that assertion, grounded on my own experience, but have been uniformly contradicted except by Governor Phillip till your last favours have taken away all doubts from the minds of those who have been permitted to peruse them.

And again, see the extract from the letter to the same, 1st February, 1799,§ “Your colony deserves at their hands,” already quoted at p. 181.

Banks does not figure much in the correspondence of Phillip and Hunter. Some of Phillip's letters are in the collection of Mr. Alfred Lee (now in the Mitchell Library, Sydney). Banks to Hunter, in the letter of 1st February, 1799,|| already quoted, says :—

You have been very friendly in writing to me the very particular account I have received from you of the state of things in your colony.

* *Hist. Rec.*, v, 461.

† For a sketch of his life see Bladen, *Proc. Aust. Hist. Soc.*, Part 3.

‡ *Hist. Rec.*, iii, 202.

§ *Ib.*, 532.

|| *Ib.*, 532.

No. 49.—GOVERNOR PHILLIP (1788-1792).

He adds,

If the bitter frost which has now vexed us for near a month while the ship (H.M.S. "Porpoise") has been out of my reach, has not destroyed them, you will have grapes of most of the sorts from which the valuable wines of Europe are made. These, I hope, will encourage you to plant vineyards, and some of them surely will produce marketable wine.*

This hope was not destined to be realised until after his death.

To Hunter (in the midst of his troubles with the intriguing and disloyal officers at Sydney), Banks says:—

Persevere, however, my good sir, in the manly, honest, and open conduct you have hitherto held, and you must in time prevail.†

2. *Captain Philip Gidley King, R.N.*—Was born at Launceston, Cornwall, 23rd April, 1758. He was the third Governor of New South Wales, and was a protegé of Banks, whose good opinion he assiduously cultivated. While not a brilliant he was a pure-minded man, who worked with a single eye to the welfare of the infant colony, in this respect an honourable contrast to many of the Government officers located in New South Wales. He came to Port Jackson in the First Fleet.

King, under date 3rd May, 1800, announces‡ to Banks his arrival at Sydney, and gives his impressions of the state of things there, certainly a dark-coloured picture. He adds, "there are many, very many things I shall have to say by the 'Buffalo.'" He refers to his first difficulty with the military. He says, "I have fixed Caley (Caley) at Parramatta, to which place he gives the preference, and he is well lodged there; I hope he will begin in earnest. I have marked out a botanic garden, to be under Col. Paterson's directions. It is ready for receiving plants, and Caley has the use of Government House at Parramatta, to dry his specimens, &c." This he knows will please his correspondent.

Under date 28th September, 1800,§ King writes to Banks telling him his troubles—Hunter had been easy-going, and had relied on officers who had deceived him. He gives an account of Caley and his matrimonial proposal. He sends Banks a platypus, "a fruit growing round Port Stephens, two warratarrs, &c.," together with two boxes of specimens from Caley. He also sends some coals and "stones" (ores), together with one large box of fleeces from Captain Macarthur. He says, "Do pray, send us out wool-cards."

The letter dated April, 1801|| (finished 21st Aug.), from King to Banks, is an excellent specimen of the lengthy and newsy letters

* *Hist. Rec.*, iii, 533.

† *Ib.*, 532.

‡ *Ib.*, iv, 82.

§ *Ib.*, 205.

|| *Ib.*, 353.

No. 50.—GOVERNOR HUNTER (1795-1800).

King loved to pen to the latter. No one was kept better posted in the affairs of the colony than Banks. An enclosure of this letter contains a list of bird-skins sent to him.

King writes to Banks,* under date 5th June, 1802, in which he gives an account of Commodore Baudin's expedition, intimates that he is sending natural history specimens, discusses a natural deposit of salt, and touches on the whale industry.

Banks to King, 8th April, 1803,† speaks of the safe arrival of the "manifold packages" the latter has sent him. He remarks "The seeds from Mr. Brown make a most valuable addition to our gardens; those from Caley were this time very interesting; he had collected several new sorts from the banks of the Hawkesbury, and altogether sent home to me 170 sorts."

On 9th May, 1803,‡ King writes to Banks a very newsy letter. He refers to Brown's botanical collections, to Captain Baudin's expedition, and makes interesting references to sheep and wool. "The sheep increase and thrive exceedingly well; they also improve greatly in their wool. As yet we have got nothing better than a blanketting, of which we make a great deal." He then speaks most hopefully of the country for cattle and sheep-breeding.

He reports the successful introduction of the hop-plant, and says that a good breed of sheep-dog is badly wanted.

In a letter, King to Banks, 14th August, 1804,§ occurs the passage:—

Our crops of flax give constant employment to nine looms. We soon shall have twenty at work, and half of them on sail-cloth. From a pint of hemp-seed, sent from India in 1802, I have now sown 10 acres for Government. A specimen of the rope is round the box that Caley sends you, which I have desired may be carefully preserved. It grows with the utmost luxuriance, and is generally from 6 to 10 feet in height.

Banks to King, 29th August, 1804,|| says:—

I had a great loss in Lord Hobart's going out of office, for I had just prevailed upon His Lordship and Mr. Sullivan, his Secretary, to understand the history of your colony, and was in hopes of going on better than I ever have done, when His Lordship resigned.

I have a new task to undertake, to bring Lord Camden and Mr. Cooke into the same happy disposition.

King to Banks, 20th April, 1805,¶ states that the "Investigator" has been repaired, and that she is proceeding to England with Messrs. Brown and Bauer and their collections. Col. Paterson sent a box of seeds from Port Dalrymple. Mr. Brown left the "Porpoise's" garden in care of Caley, who "has nothing, or does not choose to send

* *Hist. Rec.*, iv, 782.

† *Ib.*, v, 835.

‡ *Ib.*, 135.

§ *Ib.*, 449.

|| *Ib.*, 457.

¶ *Ib.*, 626.

No. 51.—GOVERNOR KING (1800-1806).

anything, by the 'Investigator.'” He also sends a specimen of sandalwood from Fiji and from the Moluccas.

On 21st July, 1805,* he states the efforts he had made to secure the release of Flinders, and gives a very interesting account of the progress of the wool industry, and of Macarthur's connection therewith.

At this place Captain Macarthur's own report of the state of his flocks, “with some observations on the advantages which may be expected from the growth of fine wool in New South Wales,” dated 2nd October, 1805,† may be referred to.

3. *Captain William Bligh, R.N.* A highly important result of the Cook-Banks Voyage in the “Endeavour,” was the discovery of the bread-fruit tree in Otaheite (Tahiti). Banks drew attention to this wonderful food plant for tropical countries, and Bligh's voyage in the “Bounty” was to take a consignment of these trees to the West Indies. The bread-fruit proved a great boon to the coloured population. An official notification of the gratitude of the people of Jamaica in regard to the plant is referred to at page 58.

Bligh was born in 1753, and early joined the navy.

On 6th August, 1787,‡ Bligh writes to Banks:

I have heard the flattering news of your great goodness to me, intending to honour me with the command of the vessel which you propose to go to the South Seas, &c.

This vessel was the “Bounty.”

On 5th November he writes from the “Bounty,” at Spithead,§ and gives Banks an account of his preparations, and concludes his letter—“Difficulties I laugh at whilst I have your countenance,” &c.

On 13th October, 1789, he writes from Batavia,|| announcing the mutiny of the “Bounty,” and his arrival, in broken health, after the wonderful voyage of 3,000 miles in an open boat, in which, with certain members of the crew, he was placed by the mutineers. An enclosure of this letter gives a full account of the mutiny of the “Bounty.”

“I have not given so full an account to the Admiralty,” he says.

It is interesting to note that Bligh followed Captain Cook in putting into Adventure Bay, South Tasmania, with H.M.S. “Bounty,” in 1788, and with the “Providence” and “Assistance,” in 1792, for the purpose of obtaining wood and water.¶

* *Hist. Rec.*, v, 671.

† *Ib.* v, 707.

‡ *Ib.*, i (2), 109.

§ *Ib.*, 117.

|| *Ib.*, 267.

¶ Bligh's “Voyage to the South Seas.”

No. 52.—GOVERNOR BLIGH (1806-1808).

From a letter by Banks, dated 19th April, 1805,* we learn that he was empowered by the Government to offer the governorship of New South Wales to Captain Bligh. Banks to Bligh, 17th September, 1805,† is on the subject of Bligh's going out as a Naval Governor, and not in a civil capacity, as had been proposed.

The correspondence was continued for many years afterwards, including the period during which he was Governor of New South Wales. In one of his letters, dated 30th June, 1808, he gave his patron a lengthy "account of the Rebellion," headed by Lieutenant-Colonel Johnston. On both these occasions Bligh's first thought evidently was to place Sir Joseph Banks in possession of the facts of his case, reporting events to him with as much minuteness as if he had been writing a despatch to the official head of his department.

Banks to Bligh, 25th August, 1808,‡ assures Bligh of his unchanged friendship; he writes a cordial letter and speaks of his own failing health.

Ere this letter was received, Bligh had been deposed (26th January, 1808), by Lieut.-Col. Johnston and the officers of the New South Wales Corps. He returned to England the following year, and died in 1817.

As in Mrs. Flinders' case so in Mrs. Bligh's, Banks was a kind friend to the wife of his protege who had got into trouble.

Mrs. Bligh to Banks, 14th January, 1808,§ informs him that she hears disquieting reports that Captain Bligh has been superseded, and proceeds to "stick up" for her husband. She is an admirable letter-writer, obviously a woman of considerable education. She appeals to Sir Joseph in her trouble. See also 1st February, 1808,|| and 21st December,¶ of the same year, written during her time of anxiety, when disquieting news concerning her husband was coming from Sydney.

Banks' kind and reassuring letter to Mrs. Bligh is dated 24th December, 1808.**

Bligh was commemorated by a sapindaceous tree—"Blighiæ, novi ex Sapindæorum Ordine naturali Generis, Descriptio." Auct. C.K. (Charles König.) "Annals of Botany," ed., Chas. König and John Sims. Vol. ii, 569-74. With 2 plates of *Blighia sapida*.

4. Lieut.-Col. David Collins, Royal Marines. He was Judge-Advocate of New South Wales, author of "An Account of the English Colony in New South Wales" (1798), and subsequently first Lieut.-Governor of Van Diemen's Land (Tasmania).

* *Hist. Rec.*, v, 590.

† *Ib.*, 692.

‡ *Ib.*, vi, 705.

§ *Ib.*, 417.

|| *Ib.*, 461.

¶ *Ib.*, 815.

** *Ib.*, 816.

A full account of his colonial services will be found in the "Historical Records." He was a correspondent of Sir Joseph Banks, although I cannot find any letters of his in the Records. Following are abstracts of three of his letters to Sir Joseph (Quaritch collection):—

(a) July 8, 1800, 3 pages, 4to, written just after his return from New South Wales—

By my long and protracted residence abroad to which I was forced by the importance of the offices I held in N. S. Wales, I found on my return that I had lost the opportunity of returning to the line in which I had been bred, and applied to the Duke of Portland . . . for some appointment under Government, &c., and asks Sir Joseph to mention him to the Duke.

(b) 4 pages, 4to, dated Hobart Town, Derwent River, Van Dieman's Land, 20 July, 1804.

He mentions Robert Brown and Dryander, and sends home specimens of plants and animals, &c., the whole forming a history of the little settlement in its infant stage.

I have much pleasure in addressing you from this part of the world, on which I established the settlement, with the Government of which I had been honoured, on the 20th of last February . . . I was landed here very nearly for five months with little more than half my people, provisions and stores, yet I have got about 24 acres in grain of different sorts, and 4 acres cleared for a garden adjoining to my little town . . . I am confident my Lord Hobart will not abandon or forget his little colony, his protégé. . . . The river for these six weeks, has been full of whales . . . Three or four ships might have lain at anchor, and with ease have filled all their cargoes . . . The Derwent was found to abound with whales in Sept. last, &c.

(c) 2 full pages, 4to, Hobart Town, Van Dieman's Land, 1st October, 1808:—

You have no doubt ere this heard of the arrest of Governor Bligh by the officers of the N. S. Wales Corps upon the 26th Jany. last . . . I received a letter from him a few days since through Col. Paterson at Port Dalrymple . . . expressing his determination not to quit the Colony. He has been indignantly treated and torn from his Government . . . His honour and truth will nevertheless surmount the wicked representations of his enemies, &c. Col. Paterson proceeds to Sydney to assume command.

He (Collins) has asked the Government for leave to quit the settlement, having from its beginning established the colony, "which will very shortly become a place of material importance." He sends Sir Joseph a pair of black swans—a whale ship is just proceeding to England, having taken in this river 180 tuns of black whale oil. On 19th February, 1804, he laid the first stone of the present city of Hobart Town, and continued Governor until his death, 24th March, 1810, at age of 54.

5. *Lieut.-Governor Col. William Paterson** was born at Montrose, Scotland, in 1755. He had the reputation of being a scientific man. He was a F.R.S., and from time to time he sent specimens (chiefly

* See also *Proc. Roy. Soc. N.S.W.*, xlii, 1:6.

plants) to Banks. I cannot, however, find any reference to any observations of any value he made in regard to the natural history of New South Wales or of Tasmania (he founded Port Dalrymple, Launceston).

Most of his letters, of which there are many in the "Historical Records," do not touch upon natural history matters, and I have not abstracted them.

The following two letters to Banks, from the Quaritch collection, are not in the "Historical Records"—

(a) 3¼ pages, folio, Port Jackson, 17th March, 1795—

The new settlement on the River Hawkesbury flourishes beyond expectation, and so many people flocking to it that I sent a Serjt. and ten privates for their protection, etc.

Speaks of Governor Hunter's expected arrival, of Norfolk Island, of surveys being made, of Major Grose who had left for England, of the thriving crops, the civil growth, etc., fine account of the progress of the settlement at this early date; this letter was more than twelve months in transit.

(b) 2 pages, folio, Port Jackson, 14th June, 1795, expresses anxiety respecting the supply of provisions. Ship with cattle arrived on 1st instant from Bombay, likewise a cargo with grain from the Cape of Good Hope; he thinks in three years the Colony will be independent of imported animal food, provided Government sends a supply of salt provisions.

There is trouble in protecting that promising Settlement on the Banks of the Hawkesbury; the natives have killed seven of the settlers, &c., and he has sent two officers and sixty privates for their protection.

Lieut.-Col. Paterson writes to Banks under date 8th October, 1800,* giving him account of the evil results ensuing from traffic in spirits and various other matters. "For these last six months I have not been able to attend much to botany, and at present I have not anything worth sending, except the two accompanying drawings." He then makes a reference to Caley.

He sent Banks a live plant of the Gigantic Lily (*Doryanthes excelsa*) on 13th May, 1803.

The two following letters are not in "Historical Records":—

(a) Port Jackson, 20th August, 1801, to Sir Joseph Banks, 3½ pages, folio. Mentions his excursion to Hunter River, and also explorations in that district—coal found, plants, animals and birds, and much other information.

(b) 8 pages, 4to, to Sir Joseph Banks, from Port Dalrymple, Tasmania, Outer Cove, 7th January, 1805, when Lieut.-Governor of that place, giving "an account of what I have already done in this quarter," speaks highly of the quality of the timber for shipbuilding and for

* *Hist. Rec.*, iv, 228.

furniture, of a new farinaceous food, of kangaroos, black swans and ducks, parrots, and he hopes soon to send a further account of their discoveries, particularly that of the river to the westward, &c.

Paterson to Banks, 29th September, 1808,* from "Launceston, Port Dalrymple," discusses Governor Bligh's deposition. Mentions that he has discovered fossils. Gives an interesting account of the insect which produces manna (? lerp). "It is found only on the narrow-leaved eucalyptus (? *amygdalina*). Twenty pounds might be procured from one tree."

After some delay he returned to Sydney after the deposition of Bligh, and assumed the post of Acting Governor. He was ill when Governor Macquarie arrived, and shortly afterwards left for England, and died, 21st June, 1810, on board the "Dromedary," off Cape Horn.

The genus *Patersonia*, Irideæ, was dedicated to him by Brown, who says of him—"in Nova Cambria Australi, cuius regionis Floram summo cum ardore per plures annos investigavit" (Prod. 159).

Laqunaria Patersoni, a Norfolk Island tree was named after him.

6. The letters of *Lieut. Charles Clerke*,† of the "Resolution," show how indebted he was to Banks and how warmly he felt towards his patron. See also the letters *re* Banks' leaving the "Resolution."

See also,‡ when *Lieut. Clerke* had to appear before the magistrates, evidently on account of a debt.

He writes under date 17th August, 1779§ (he died, 22nd), a touching farewell letter to Banks. He had collected specimens for him, as well as the state of his health permitted, and bequeathed the whole of them to his patron.

7. *Captain †Matthew Flinders*, R.N. He was born at Donington, Lincolnshire, 16th March, 1774, the son of a physician. He early went to sea; he was a midshipman with Hunter, and one of his voyages was with Captain Bligh in the "Providence," to the South Sea Islands. I propose only to deal with the period of his connection with Sir Joseph Banks, his patron, likewise a Lincolnshire man. On his way to England from Australia in a little boat of 29 tons—the "Cumberland"—he was detained at the Mauritius in December, 1803, and kept there till 1810. He was an ambitious and capable explorer, and fretted his heart out. His monumental work—"Account of a Voyage to Terra Australis" was published, pitiful to relate, on the very day of his death—14th July, 1814; our author having crowded a phenomenal amount of adventure and hardship into his brief life of 40 years.

* *Hist. Rec.*, vi, 767.

† e.g., *Hist. Rec.*, i (1), 381.

‡ *Ib.*, 403, 404.

§ *Ib.*, 425.

The British Government decided to despatch a man-of-war, the "Investigator," to Australia to undertake coastal surveys and to make discoveries in natural history. Brown was naturalist to the expedition (see above, page 102), and Flinders was appointed to the command. Following is his own statement of the circumstances which led up to the voyage:—

On the arrival of His Majesty's ship "Reliance" in England at the latter end of 1800, the charts of the new discoveries were published, and a plan was proposed to the Right Hon. Sir Joseph Banks for completing the investigation of the coasts of Terra Australis. The plan was approved by that distinguished patron of science and useful enterprise; it was laid before Earl Spencer, then first Lord Commissioner of the Admiralty; and finally received the sanction of His Majesty, who was graciously pleased to direct that the voyage should be undertaken, and I had the honour of being appointed to the command.*

Flinders writes to Banks from Sheerness, 24th January, 1801,† giving an account of the equipment of his ship and of his crew. He adds, "Well knowing, Sir Joseph, how much you are interested in the voyage, I take the liberty of speaking at length upon the subject, and, if it meets your approbation, I shall continue to mention the wants we may have, and the alterations that may be necessary, hoping for your assistance in forwarding their accomplishment." Banks, of course, had the appointment of the scientific staff; he also fixed their salaries.‡

Flinders writes three other letters to Banks in quick succession, indicating matters in which the latter's influence at the Admiralty would expedite affairs for the voyage. Flinders discusses a "green-house" for the "Investigator."

Following were Flinders' official instructions in this matter; doubtless the work of Banks:—

And whereas you have been furnished with a *plant cabin* for the purpose of depositing therein such plants, trees, shrubs, &c., as may be collected during the survey above-mentioned, you are, when you arrive at Sydney Cove, to cause the said plant cabin to be fitted up by the carpenter on the quarter deck of the sloop you command, according to the intention of its construction; and you are to cause boxes for containing earth to be made and placed therein, in the same manner as was done in the plant cabin carried out by the "Porpoise" store ship, which plant cabin you will find at Sydney Cove.

You are to place the said plant cabin, with the boxes of earth contained in it, under the charge and care of the naturalist and gardener, and to cause to be planted therein during the survey, such plants, trees, shrubs, &c., as they may think suitable for the Royal Gardens at Kew; and you are, as often as you return to Sydney Cove, to cause the said plants to be deposited in the Governor's garden and under his charge, there to remain until you sail for Europe. And so soon as you shall be preparing to return home, you are to cause the small plant cabin to be removed from the sloop's quarter deck, and the one brought out by the "Porpoise" (which is something larger), to be placed there in its stead. In this last-mentioned cabin the naturalist and gardener are to place the plants, trees,

* "Voyage to Terra Australis," i (Introduction, cciv).

† *Hist. Rec.*, iv, 291.

‡ *Ib.*, 298.

No. 53.—CAPTAIN FLINDERS, R.N. (1774-1814).

shrubs, &c., which may have been collected during the survey, in order to their being brought home for His Majesty; and you are, so soon as the sloop shall arrive at any port in England, to give notice of her arrival to His Majesty's botanic gardener at Kew, and to transmit to him a list and state of the said plants, &c., which the gardener employed under your orders is to furnish you with for that purpose.*

Following is Flinders' account of his work in this matter:—

Amongst our employments was that of fitting up a green house on the quarter deck, and sawing plank to make boxes for the reception of such plants as might be found by the naturalist, and thought worthy of being transported to His Majesty's botanic garden at Kew. This green house had been received at Sheerness, and stowed away in pieces; but I saw that, when filled with boxes of earth, the upper works of the ship, naturally very weak, would be incapable of supporting the weight, and that, in bad weather, we should be obliged to throw it overboard for the safety of the ship. I therefore proposed its reduction to two-thirds of the size, and Mr. Brown being of opinion it would then contain all the plants likely to be collected in any one absence from Port Jackson, it was reduced accordingly, and the feet lowered down close to the deck. This arrangement required an alteration in the tiller, and a short one, with two arms, was fitted to the after part of the rudder head; with which expedient, and leading the main braces forward, the green house was not likely to cause much inconvenience to the working of the ship. The plants already collected on the South Coast had been landed on our arrival in good order, and deposited in the Governor's garden until such time as the objects of the voyage being completed, we should be ready to sail for England.†

On 11th February, 1801, Flinders writes‡ again to Banks: "Your letters, Sir Joseph, I always receive with pleasure, and consider each one as a fresh honour conferred upon me; but your objection to the paragraph respecting the south cape of Van Diemen's Land is particularly pleasant, as it shows the great attention you are pleased to pay to my efforts for enlarging our geographical knowledge" . . . "I now wait only for your approbation to write to the Admiralty for eight days' leave." It is remarkable in how many ways the advice and influence of Banks was sought.

On 18th February, 1801, he tells Banks§ that his commission to H.M. Sloop "Investigator" "came down here this morning, and for which, Sir Joseph, I feel myself entirely indebted to your influence and kindness. . . . As the first favour, after this great act of kindness, I have to request of you, Sir Joseph, that on your first interview with my Lord Spencer (First Lord of the Admiralty) you will be kind enough to thank him for me for the promotion which he has been pleased to give me."

On 9th March, 1801||, Flinders has other worries, and asks Banks to get them rectified.

* "Flinders' Voyage," i, p. 11.

† *Op. cit.*, i, 231.

‡ *Hist. Rec.*, iv, 39).

§ *Ib.*, 393.

|| *Ib.*, 310.

The Navy Board has ordered a four-oared boat to be built instead of five. A master is required, and it becomes a question of pay—a superior man is wanted. “Begging your pardon for beginning again so early to trespass upon your patience by recounting our wants.” But there is evidence that Sir Joseph faithfully attended to the complaints, making the proper recommendations at the various departments of the Admiralty. He seems to have been the most painstaking and kind-hearted of men.

Sir Joseph Banks was also consulted by the Admiralty in regard to the supply of certain objects to form portion of the equipment of the “Investigator,” and supplied a list, which was approved.* Indeed, it is obvious that the Government left the entire arrangements for the equipment and appointment of the special staff of the “Investigator” to Banks.†

Banks drew up the instructions to the draughtsmen,‡ and also the general instructions to the explorers, which were signed by them on 29th April, 1801.

After conducting an extensive correspondence with Flinders, Banks concluded in the following words§:—

. . . with sincere good wishes for your future prosperity, and with a firm belief that you will in your future conduct do credit to yourself as an able navigator, and to me as having recommended you, and conclude with sincere esteem and real regard.

It will be convenient to divide Flinders’ Australian voyages into three parts. He wrote an admirable account of these voyages in a fine work, from which these particulars are compiled.

First Australian Voyage.—Left Spithead on 18th July, 1801; arrived at Madeira on 3rd August, and at Cape of Good Hope 17th October. Then made Cape Leeuwin, 6th December, 1801, and coasted to King George’s Sound, where he arrived a few days later, leaving the Sound on 5th January, 1802. Then examined the coast from thence to Recherche Archipelago. Was at the head of the Great Australian Bight 26th–28th January. Discovered Lucky Bay and Thistle’s Cove, and arrived at Fowler’s Bay 28th January. Arrived at Nuyt’s Archipelago (January 30th).

At Port Lincoln February 26th, then into Spencer’s Gulf (Sir Joseph Banks’ Group is here), and during the month of March in Gulf of St. Vincent and at Kangaroo Island (22nd March); thence Encounter Bay, April 9th; Cape Northumberland, 19th April; King Island, 22nd April; Port Phillip, 27th April, and Western Port. Left Port Phillip

* *Hist. Rec.*, iv, 345.

† *Ib.*, 348 (footnote).

‡ *Ib.*, 349.

§ *Ib.*, 388.

“Account of a Voyage to Terra Australis,” 2 vols. 4to, with Westall’s plates and a large atlas of plates.

3rd May; thence Kent's Group (4th), and away to Port Jackson, which was reached on May 9th.

Thus ended Australian Voyage No. 1, and as Brown was aboard, this voyage is of special interest to Australian botanists.

Second Australian Voyage.—Flinders then left Port Jackson for the north on 22nd July, 1802, in the "Investigator," with the brig "Lady Nelson" (Lieut. John Murray) as a tender. The rendezvous was Sandy Cape, the south head of Hervey Bay, Queensland, which was reached on the 30th. Here botanical specimens were collected. On 5th August landed near Port Curtis, the botanist (Brown) collecting here till the 8th. On the 12th with Mr. Brown at eastern arm of Keppel Bay. 21st, Port Bowen (botanical work was done here). On the 25th at Northumberland Isles. Still in Shoalwater Bay on the 29th, where botanising was done, including an excursion to Pine Mount, and remained here till 4th September; at Thirsty Sound on the 5th, "the botanists landed on the east shore." On the 9th botanising at Broad Sound. Thence to Percy Isles, 28th September. Amongst the Cumberland Isles by 16th October. The last of the Barrier Reef out of sight on October 21st, then away through Torres Strait to the Gulf of Carpentaria. Murray's Islands, Torres Straits, 30th October. On 2nd November Good's Island was named after Peter Good, and botanising was done here.

The east coast of the Gulf of Carpentaria was then examined and botanising done. Coen River, 7th November; Sweer's Island, 17th. Wellesley's Islands, 1st to 7th December, where Flinders found the "Investigator's" timbers rotten, and thereupon decided to return to Port Jackson as soon as convenient, but determined to finish his survey of the Gulf of Carpentaria if possible.

By the 15th they were at Sir Edward Pellew's Group, and some collecting took place here. Then off Limmen's Bight at the close of the year, and 5th to 20th January, 1803, occupied in circumnavigating Groote Eylandt. Flinders gives several notes in regard to the collecting grounds of "the botanists" in the Gulf of Carpentaria.

At Point Blane, north of Blue Mud Bay, on 27th January, Brown was benighted whilst botanising, and found next day.

4th February, near Caledon Bay, was another botanising ground.

On leaving Caledon Bay on the 10th, course was shaped for Cape Arnhem, 11th; Melville Bay, 16th; the English Company's Islands, 19th; Arnhem Bay, 5th March; and the Wessel's Islands, 6th March; thence to Timor, arriving at Coepang 31st March, 1803.

Departure was made from Coepang on 8th April, and a westward course was shaped, Australia being thus circumnavigated. Dysentery broke out on board the "Investigator," and amongst its victims was Peter Good, who died at Port Jackson shortly after Flinders' arrival

on 9th June, 1803. Lieut. Murray, who had left with the "Lady Nelson," from the northern extremity of the Barrier Reef, had already arrived in Port Jackson.

Here the "Investigator" was condemned, and Flinders' Second Australian Voyage came to an end.

Third Australian Voyage.—Governor King offered H.M.S. "Porpoise" to Flinders to complete his surveys. He accordingly left Port Jackson in that ship on 10th August, 1803, in company with the East India Company's ship "Bridgewater" (750 tons), commanded by Captain E. H. Palmer, and the ship "Cato," of London (450 tons), commanded by Captain John Park.

It appears from the following passage* that Flinders did not command the "Porpoise," but was a passenger. He desired to return and report to the Admiralty, taking his charts.

"On July 20th Lieutenant Fowler quitted the 'Investigator,' with the crew selected for him, and took the command of His Majesty's armed vessel 'Porpoise'; and on the following day I went on board with the rest of my officers and people, to go with him as passengers."

Living Australian plants were accommodated in a green-house on the quarter-deck, and Brown sent the better half of his herbarium specimens, collected during the cruises of the "Investigator." He himself remained behind to make further investigations.

On 17th August the "Porpoise" and "Cato" were wrecked at Wreck Reef (lat. $22^{\circ} 11'$, long. $155^{\circ} 18'$); the "Bridgewater" escaped and proceeded on her voyage to India.

Flinders thereupon took command of the wrecked crew and passengers. By August 26, having launched and named a cutter—"The Hope"—he embarked in it with the commander of the "Cato," for Port Jackson, touching at Smoky Cape and Hunter River, and arriving at Sydney on the thirteenth day.

He returned to Wreck Reef with a ship (the "Rolla") and two schooners—the "Cumberland," of 29 tons, and the "Francis." The "Rolla" to take the officers and seamen of the "Porpoise" and "Investigator" to Canton, in China, whither she was bound, the "Francis" to bring back men and stores from the wreck to Port Jackson, and the "Cumberland" to enable Flinders to continue his voyage to England. On 7th October he returned to Wreck Reef, on the 10th the "Cumberland" proceeded on her journey, arriving at Coepang on 10th November, 1803. On the 14th he left Timor for the Mauritius, where he arrived at Port Louis on 17th December.

* "Flinders' Voyage," ii, 296.

Thus began Flinders' heart-breaking imprisonment at the hands of the French Governor, Major-General De Caen, which did not terminate until June, 1810. Flinders arrived in England in October.

On 20th May, 1802, Flinders writes,* from H.M.S. "Investigator," at Port Jackson, to Banks, giving an account of his voyage so far. A more detailed account will be found in Flinders' report† to the Admiralty, of 11th May, 1802, which, amongst other things, gives details of the stopping places of the "Investigator," and thus affords clues to the collecting grounds of Robert Brown.

Flinders to Banks, off Timor, 28th March, 1803,‡ gives an account of the northern coast of Australia, and of his meteorological and astronomical observations. Then follows brief abstracts of letters from Flinders to Banks during the imprisonment of the former at the Mauritius. The account given by Flinders himself in his work should be read in the original; it is a sad history of the enforced idleness of an ambitious, able, and indefatigable naval explorer.

See also Flinders to Banks, Mauritius,§ 12th July, 1804. Banks' letter|| to the Institute of France, asking its influence to secure the liberation of Flinders, then detained at Mauritius, is dated 22nd August, 1804. (*Supra*, page 171.)

Flinders to Banks, 31st December, 1804,¶ notifies from his place of captivity in the Isle of France (Mauritius), that he has sent Sir Joseph a copy of his general chart of Australia.

Also 24th February, 1805,** giving an account of his detention, of the arbitrary conduct of the Governor, and complaining that no attempts to secure his release appear to have been made in England.

At this place attention may be drawn to the manly and weighty letter written on 30th April, 1805,†† by Governor King to the Governor of the Isle of France, asking for the release of Captain Flinders, and pointing out the very different treatment that the distressed French expedition, under Captain Baudin, met at his (King's) hands, when it put into Port Jackson.

Flinders wrote again to Banks, 16th May, 1805,‡‡ sending papers and charts by Mr. Aken, his fellow-prisoner, who had been released, and also enclosing copy of a letter Admiral Linois, Naval Commander-in-Chief at the Isle of France, had written on his behalf.

Banks writes to Flinders, 18th June, 1805,§§ stating that the bitterness between England and France had prohibited the exchange of prisoners being considered, and therefore the Government could do

* *Hist. Rec.*, iv, 755.

† *Ib.*, 747.

‡ *Ib.*, v, 77.

§ *Ib.*, 396.

|| *Ib.*, 454.

¶ *Ib.*, 531.

** *Ib.*, 562.

†† *Ib.*, 612.

‡‡ *Ib.*, 623.

§§ *Ib.*, 646.

nothing. But that he had obtained leave to address the National Institute of France on Flinders' behalf, and that, in spite of delays from the absence of the Emperor and other causes, he hoped to be successful.

On 5th July,* Flinders writes further to Banks, detailing the efforts that have been made in India to intervene on his behalf, and that the rigour of the imprisonment had been relaxed.

On 28th November of the same year† he writes from Wilhelm Plains, in the centre of the island, where he had been given liberty to reside.

Flinders to Banks, 20th March, 1806,‡ from the Isle of France; still fretting at his captivity, suggests that a land exploration be made "with five or six asses to carry provisions" from the Gulf of Carpentaria, in lat. 18°, to the head of the Great Gulf (Spencer's) on the south coast, in lat. 18°, "500 miles each way would probably be sufficient."

Banks writes to King, 20th September, 1806,§ that he had at last obtained an order for the release of Flinders, through M. de Bougainville, the circumnavigator; but it was not until June, 1810, that he was allowed to leave the Isle of France.

Flinders writes to Banks, 28th February, 1809, acquainting him that he had seen a *Moniteur* of August, 1808, in which "it appears that the south coast of Australia, from the islands of St. Peter and St. Francis to Bass' Strait, is proclaimed to be a French discovery, and has received the name of Terre Napoleon." He trenchantly deals with the proposal and recounts the discoveries by Grant and himself. This matter is gone into at great length in his "Account."

Flinders to Banks, 25th October, 1810,¶ reports his arrival in England on the previous day, after an imprisonment on the Isle of France of six and a half years.

Under Secretary Barrow, of the Admiralty, writes to Banks, under date 15th January, 1811,** authorising Flinders to publish the journal of his voyage in the "Investigator," and accepts Banks' offer to supervise the draughtsmen, engravers, &c., appointed to illustrate the work.

A further letter from Under Secretary Croker, dated 1st March, 1811,†† refers to the trust that the Admiralty placed in Sir Joseph Banks in the matter of this work. This is the great work which has already been referred to as having been published on the day of Flinders' death in 1814.

So died one of the greatest of Banks' protégés, a broken-hearted man.

* *Hist. Rec.*, v, 650.

† *Ib.*, 736.

‡ *Ib.*, vi, 51.

§ *Ib.*, 118.

¶ *Ib.*, vii, 52.

¶ *Ib.*, 436.

** *Ib.*, 488.

†† *Ib.*, 500.

Mrs. Flinders to Banks, 28th March, 1808,* informs him that she has received a letter from her husband, dated 12th August, 1807, stating that an order has been received from France to set him at liberty. Alas ! he was not set free until 1810.

Brown dedicated the fine genus of Meliaceous trees (*Flindersia*) to his commander, and figured *F. australis* (which we now know as the Teak) in the botanical appendix to Flinders' work.

Allan Cunningham dedicated a *Grevillea*, *Flindersii* (?) to him.

8. *Wm. Richards, junr.*, ship-owner. Following are four letters signed in the third person, to Sir Joseph Banks (not in *Hist. Rec.*).

5th January, 1791, speaks of "the unfavourable accounts that have arrived from the new settlement for convicts at Port Jackson, and the improbability of keeping it up," &c., he has submitted a plan to deal with such under sentence of transportation.

8th January, 1791, he is of opinion that the Settlement must be given up on account of the unfavourableness of the soil, &c., every thing has been tried, but they have not been able to raise grain enough in two years and three months for the subsistence of themselves for three weeks . . . and he "supposes that Governor Phillip has wrote home the same." He fears the "Justinian," that sailed from the Downs, November, 1789, is lost.

19th July, 1791, he offers to take the whole of the business of transporting the convicts to Port Jackson for Government at such reasonable cost as will ensure proper care being taken to provide for the health and safety of the charge. Port Jackson is much in want of necessaries, sorry that such a number of convicts have died on their passage out in the three ships that sailed from England in January, 1790, &c.

29th July, 1791, he hears that another embarkation of convicts will be dispatched in September, and condemns the custom of the Navy Board in accepting the *lowest* contract, resulting as it does by creating so much misery upon the prisoners. Sir Joseph's draft reply is on the two last-named letters.—(Quaritch collection).

He submitted to Banks (Walworth, London, 8th August, 1791)† a document of some length and detail, entitled "A proposal and plan for the regulating, maintaining, and care of the convicts under sentence of transportation." Banks briefly replied on the 18th idem,‡ while Richards, on the 12th October,§ supplemented his former statement.

* *Hist. Rec.*, vi, 564.

† *Ib.*, i (2), 508.

‡ *Ib.*, 522.

§ *Ib.*, 524.

Other correspondence, of a less important character, followed. Under contract with Mr. Richards, the "Boddingtons" and "Sugarcane" were sent out in 1793 with 300 convicts from Ireland.

9. *Samuel Enderby*, London merchant and ship-owner (General Charles G. Gordon's maternal grandfather); two of his ships laden with tea in Boston Harbour, were, on the memorable November evening, 1773, dispossessed of their cargo and destroyed, thus beginning the War of Independence. Some of the six transports that conveyed the first batch of convicts to Sydney Cove in January, 1788, belonged to Samuel Enderby.

He wrote to Sir Joseph Banks, 29th May, 1801, recommending the extension of the southern whale fishery.

The whale fishery was destined to assume large proportions in Australian seas in later years. The correspondence with Captain W. Wilson (*infra*) incidentally refers to it.

10. *Captain William Wilson*. He was agent in London to Rev. S. Marsden and Messrs. Campbell & Co. In a letter to Banks he complains, 27th June, 1806,* of the officers of the East India Company seizing certain ships from Australia freighted with elephant oil, seal-skins, and beefwood. There were 100 tons of the latter (presumably *Casuarina*).

He stated that he had visited the island of Otaheite on three occasions:—

By these voyages I have learnt that both the islanders there and the colonists of New South Wales justly look up to you (Banks) as the patron and promoter of their prosperity.

And in a memorial which Wilson enclosed, praying for relief against the arbitrary action of the East India Company in seizing a ship and cargo of seal-skins and oil from the colony, he said:—

The colony of New South Wales and its dependencies, daily rising in importance to the mother country, the inhabitants, many of whom have never forfeited one privilege of British subjects, look homeward with anxiety for encouragement to the industry, which is excited among them. In their remote situation, solicitude for a conservation of their rights, and a promoter of their welfare naturally directs their attention to you, honourable sir, who from the circumstance of your assent to the settlement being made, it is hoped will, by a continuance of support, not only be instrumental in rendering the colonists comfortable in a great degree among themselves, but even be the means of carrying civilization and all the blessings connected with it to the thousands of islanders in their neighbourhood.

11. *George Suttor*, whose descendants hold a very honourable record as legislators in New South Wales, was of Scotch extraction; Sir

* *Hist Rec.*, vi, 100.

Joseph Banks introduced him to the colony. He was born 11th June, 1774, and was a lessee of land on the Cadogan Estate, Chelsea, then a suburb of London, and was given charge of a consignment of useful plants per the "Porpoise." (See p. 56.)

On his arrival in Sydney, in the year 1800, he soon went to Parramatta, and Governor King having given him a grant of land at Baulkham Hills, he planted the first orange trees there, being three he had received from Colonel Paterson.

The "Historical Records" contain some letters* referring to him. He was greatly attached to Sir Joseph, with whom he corresponded, *e.g.*—

Sydney, 10th March, 1804†, he gives an account of the Toongabbie rebellion of the convicts, and his letter contains no references to horticultural or botanical matters.

Suttor writes to Bligh, 1st January, 1809‡, recounting the troubles he underwent, even to imprisonment in Sydney Gaol, because he remained loyal to Bligh at the time of the latter's supersession. He writes in a similar loyal strain, 10th February, 1809.§

Suttor went home with Caley in the "Hindustan," and gave evidence on behalf of Bligh. He left Sydney, 12th May, 1810, and returned to Sydney, 12th May, 1812.

Caley took an Australian aborigine, "Moonate" or "Dan," to England, for which Banks censured him. Suttor brought back the man to the colony, when he returned after his absence in England as a witness in the trial of Lieut.-Colonel Johnston, in 1810, for the part he took in the deposition of Governor Bligh.

On his return to Sydney he was appointed Superintendent of the Lunatic Asylum at Castle Hill, a post formerly occupied by the Revd. Samuel Marsden. He resigned after three years.

After the discovery of the passage over the Blue Mountains, Suttor was anxious to try his fortune in the Bathurst district, but Governor Macquarie would not grant the necessary permit. Governor Brisbane, in 1822, gave permission, and Suttor, with his sheep and cattle, settled near Bathurst and prospered greatly. On 14th March, 1839, he left Sydney in the "Laura," and revisited Europe, and when in France he had the misfortune to lose his wife, who was buried at Rouen. He left Gravesend on 10th July, 1845, in the "Thomas Lowry," arriving in Sydney, 5th November.

* Vol. iii, 333, 382, 411.

† *Hist. Rec.*, v, 351.

‡ *Ib.*, vii, 1.

§ *Ib.*, 21.

No. 54.—GEORGE SUTTOR (1774-1859).

He wrote "The culture of the Grape Vine and the Orange in Australia and New Zealand, comprising historical notices, instructions for planting and cultivation; accounts, from personal observation, of the vineyards of France and the Rhine."—Smith, Elder & Co., London, 1843. 8vo. pp. 184. He was a Fellow of the Linnean Society.

He also wrote a Eulogy of Sir Joseph Banks (Parramatta, 1855), which is referred to at p. 219. After a long and useful life he died at Alloway Bank, Bathurst, 5th May, 1859, aged 83 years, and was buried at Kelso.

12. *George Burder*, Secretary of the Missionary Society, established 1794, author of "Village Sermons," writes, 6th November, 1809, to Sir Joseph Banks—

Respecting application to Government for a free passage for some missionaries to Port Jackson the Board of Transport office has engaged the ship "Canada," of 400 tons, for the conveyance of 100 women to New South Wales. the passage requested is for six persons—five women and one man.

Banks even received letters from convicts. There is a letter extant from Eyre Jackson, a convict, from Norfolk Island, Pacific Ocean, 20th July, 1792 (first portion of letter missing), to Sir Joseph Banks, giving a graphic account of the manners and customs of the natives of New Holland.

The men are tattoo'd, and have their two front teeth knocked out for ornament; the women a joint of the fore finger cut off, and are in a complete state of nature. . . . If they meet any of our people beyond the encampment into their woods they hand-fix them with their spears, roast them, and make a very delicious repast, &c.; we have penetrated not 20 miles into the country, so little can be guessed as to the number of the natives or its natural productions, &c.

This refers to Port Jackson and its vicinity. Then referring to Norfolk Island—colonized by Governor King: it contains about 1,100 persons—consisting of the "refuse of England"; all industrious; harvest promising abundance, and a variety of other matters connected with the daily occupation of the settlers.

PART V.

THE WORKS AND MEMORIALS OF BANKS.

1. WORKS WRITTEN, EDITED BY OR CONCERNING BANKS.
2. DEATH, BURIAL, CHARACTER, EULOGY.
3. MEMORIALS OF BANKS.

I. Works Written, Edited by or concerning Banks.

BANKS did not write much, or rather he did not publish much. In his early days, at least, he wrote a great deal on Natural History, and his observations were often shrewd, and indicate the true scientific spirit. He was of a very magnanimous nature—he gave away things during all his life, and these gifts included the manuscripts of his travels. From middle life to old age he was President of the Royal Society, and his self-imposed duties in regard to New South Wales, and to Kew, left him little time for literary pursuits and scientific research. At the same time a good deal has been written about him, for he was the most conspicuous scientific figure of his time.

A.—*Banks as an Author.*

1. "Report of Select Committee on Returns presented to the House of Commons respecting convicts." (Extract from *House of Commons Journal*, 1779).

Sir Joseph Banks was examined as to the practicability of a new colony, and recommended Botany Bay. He gives a general account of the country. Partly on this evidence rests Banks' claim to be considered as the founder of Australia.

2. "Journal of the Right Hon. Sir Joseph Banks, Bart, K.B., P.R.S. During Captain Cook's First Voyage in H.M.S. "Endeavour," in 1768-71, to Tierra del Fuego, Otahite, New Zealand, Australia, the Dutch East Indies." Edited by Sir Joseph Hooker, 1896.

I have already referred to this work at some length, and submit that it establishes the reputation of Banks as a naturalist. The journal, as edited, does not do him full justice, since it is abbreviated, perhaps because it was printed from a copy of a copy.

I have seen Banks' original journal, written in his own hand—a monument to his industry and to his scientific acumen. (Now in the Mitchell Library, Sydney.)

3. "A Short Account of the Cause of the Disease in Corn, called by Farmers the Blight, the Mildew, and the Rust." Nicholson, *Journ.* x, 1805, pp. 225-234; Tilloch, *Phil. Mag.* xxi, 1805, pp. 320-327; *Annals of Botany* ii, 1806, pp. 51-61.

Also published as a pamphlet, London, 1805, 8vo. 15 pp. tab. (1s. 6d. or with the plate accurately coloured 2s. 6d.). Printed with the 4th edition of Curtis' "Practical Observations on the British Grasses." It was also reprinted in the *Pamphleteer* for 1813. It reached a second edition in 1806, and was re-edited in 1807.

4. "Note on *Centriscus Scolopax* driven on the shore of Cornwall." (*Trans. Linn. Soc.* VIII, 358. (1807).

5. "An Attempt to Ascertain the Time when the Potatoe (*Solanum tuberosum*) was first introduced into the United Kingdom; with some account of the Hill Wheat of India." (1805.) *Hortic. Soc., Trans.* I, 1812, pp. 8-12.

6. "Notes Relative to the First Appearance of the *Aphis lanigera*, or the Apple Tree Insect, in this Country." (1812.) *Hortic. Soc. Trans.* II, 1817, pp. 162-170.

7. "Observations on the nature and formation of the stone incrusting the skeletons which have been found in the island of Guadaloupe, with some account of the origin of those skeletons." In a report made to General Ernouf, late Governor of the Colony, communicated by Sir Joseph Banks, 5th December, 1815. In French. *Linn. Soc. Trans.* XII, 1818, pp. 53-61.

8. "Some hints respecting the proper mode of inuring tender plants to our climate," *loc. cit.*, pp. 21-5.

9. "On the forcing-houses of the Romans, with a list of fruits cultivated by them now in our gardens," *loc. cit.*, pp. 147-56.

10. "On ripening the second crops of figs that grow on the new shoots," *loc. cit.*, pp. 252-4.

11-14. He was the author of an anonymous tract on the "Propriety of Allowing a Qualified Exportation of Wool," in 1782, and in 1809 he brought out a small work on the merino sheep, a pet subject of his, as well as of the King (George III). There are a few articles in the *Archæologia*, and a short essay on the "Economy of a Park," in vol. 39 of Young's *Annals of Agriculture*. See also his letter on the cultivation of the clove tree. Buec, William Urban.—"A Narrative of the Successful Manner of Cultivating the Clove Tree in the Island of Dominica," with an appendix (containing a letter of Sir J. Banks, &c.). London, 1797. 4to.

B.—Banks as an Editor.

1. Houstoun, William.

"Reliquiæ Houstounianæ, seu plantarum in America meridionali a Guil. Houstoun collectarum icones manu propria ære incisæ, cum descriptionibus et schedis ejusdem in bibliotheca Josephi Banks asservatis." Londini, 1781. 4to. 12 pp., 26 tab.

Ed. in *Germania prima, juxta exemplar Londinense, Norumbergæ, Raspe*. 1794. 8vo. 24 pp., 15 tab. (Pritzel.)

2. Kaempfer, Engelbert.

"*Icones selectæ plantarum; quas in Japonia collegit et delineavit Engelbertus Kaempfer; ex archetypis in Museo Britannico asseveratis.*" (Edidit Joseph Banks.) Londini, 1791. Folio. 3 pp., 59 tab. Privately printed.

3. He was requested by the Admiralty to supervise the publication of *Flinders' Journal*, 15th January, 1811. (*Hist. Rec.* vii, 488.)

4. Roxburgh, William.

"Plants of the Coast of Coromandel; selected from drawings and descriptions presented to the Hon. Court of Directors of the East India Company." Published by their order, under the direction of Sir Joseph Banks, Bart., London. Printed by W. Bulmer for George Nicol, bookseller. 1795-1819. 3 vol. fol., max.

i. 1795, viii. 68 pp., tab., col., 1-100.

ii. 1798, 56 pp., tab., col., 101-200.

iii. 1819, 98 pp., ind, tab., col., 201-300.

C.—*Works referring to Banks.*

1. Troil, Uno Von. "Letters on Iceland; containing observations . . . made during a voyage . . . in . . . 1772, by J. Banks, assisted by D. Solander, J. Lind, U. von Troil . . . with the letters of Drs. Ihre and Bach . . . concerning the Edda and Elephantiasis . . . also . . . Bergman's . . . examination of the Lava, &c." Ed. 2. London, 1780. 8vo.

The following refer to Banks' voyage with Cook in the "Endeavour."

2. Hawkesworth, John. "An account of the Voyages . . . in the Southern Hemisphere . . . by Byron, S. Wallis, Carteret, and J. Cook, in the "Dolphin," the "Swallow," and the "Endeavour," drawn up from the Journals . . . and from the papers of J. Banks." (Ed. 2.) London, 1773. 3 vols. 4to.

3. Banks, Sir Jos. and Solander, Daniel.

"*Supplément au Voyage de M. de Bougainville, ou Journal d'un voyage autour du monde, fait par MM. Banks et Solander en 1768-71, traduit de l'Anglois par M. de Fréville.*" Paris, 1772. 8vo.

4 "Parkinson's Journal," London, 1773 (see p. 62).

5. "Oberea, Queen of Otaheite, Epistle from, to Joseph Banks, Esq., translated by T. Q. Z., Esq., professor of the Otaheite Language in

Dublin, and of all the languages of the undiscovered islands in the South Seas; and enriched with historical and explanatory notes." 4to. Almond, London, 1774.

(This satire upon Banks has been attributed to Porson erroneously. According to Halkett and Lang it was written by John Scott (afterwards Waring) Major in the E. I. Co.'s service.

6. Epistle from Mr. Banks, Voyager, Monster-hunter, and Amoroso, to Oberea, Queen of Otaheite. Transfused by A.B.C., Esq., Second Professor of the Otaheite, and of every other unknown Tongue. Enriched with the finest Passages of the Queen's Letter to Mr. Banks. Printed at Batavia for Jacobus Opano; and sold in London, by John Swan and Thomas Axtell. [Lond. 1774.]

7. "Omiah—An Epistle from, to the Queen of Otaheite, being his remarks on the English Nation, with notes by the Editor." 4to. Evans, London, 1775.

8. "A letter from Omai to the Earl of Sandwich, translated from the Ulaietean Tongue, with a Proposal for Planting Christianity in the Islands of the Pacific Ocean." 1780. 8vo.

Omai was an Otaheitan Chief brought over by Captain Furneaux, the first South Sea Islander seen in Europe, returned to the Pacific with Captain Cook; a portrait of him is extant, full length, in Eastern dress, naked feet, Eastern landscape, large mezzotint by John Jacobi, after Sir Joshua Reynolds, 1777. His portrait was also painted by Dance and Hodges. He was much feted in England, and Cook thought very highly of him. (See p. 86).

This satire in his name was dedicated to Sir Joseph Banks.

9. Bowman, Hildebrand. "Travels of, into Carnovirria, Taupiniera, Olfactaria, and Auditante, in New Zealand; in the island of Bonhom-mica, and in the powerful kingdom of Lux-volupto, on the Great Southern Continent." 8vo. 1778.

A satire addressed to Banks and Solander.

The following refer to Banks' Presidency of the Royal Society. The publications issued in 1784 refer to the contest for the Presidency, to which reference has already been made, p. 158.

10. *The Remembrancer*, April, 1784, pp. 298-309.

11. *The London Review*, April, 1784, pp. 265, *et seq.*

12. *The Critical Review*, April, 1784, pp. 299, *et seq.*

13. "An Appeal to the Fellows of the Royal Society," Lond., 1784.

14. "Narrative of the Dissension in the Royal Society," 1784.

15. "History of the Instances of Exclusion from the Royal Society," Lond., 1784.

16. Kippis's "Observations on the late Contests in the Royal Society," Lond., 1784.

17. "Misogallus: A Letter to . . . Sir J. B. . . . containing strictures on his letter to the National Institute of France" (attributed to Bishop Horsley. See pp. 159 and 171). Lond., 1802. 8vo.

18. "Sir Joseph Banks and the Royal Society": A popular biography, with an historical introduction and sequel. Lond., 1844. 16mo.

19. "History of the Royal Society," with memoirs of the Presidents, by C. R. Weld, Assistant Secretary. 2 vols. Parker, London, 1848. Vol. ii, 103-118, contains a biography of Banks, contributed to by Robert Brown. For an account of the dissensions, see vol. ii, chapter vi.

The following biographical notices appeared about 1820, the year of his death.

20. *Naturalists' Library*, vol. xxix, pp. 17-48.

21. *Annual Register*, 1820, part ii, pp. 113, *et seq.*

22. *Gentleman's Magazine*, 1820, part i, pp. 574 and 637; and part ii, pp. 86 and 99.

23. *Annual Biography and Obituary*, 1821, p. 97.

24. "Nouvelle Biographie Générale," tom. iv, p. 362.

25. Home's "Hunterian Oration," 1822.

26. *The New Monthly Magazine*, Aug., 1820, p. 185. (With portrait.)

27. Lord Brougham's "Lives of Men of Letters and Science," vol. i (see also vol. ii).

"He it was," wrote Lord Brougham, speaking from his personal knowledge of the man, "who may be truly said to have planted and founded the colony of Botany Bay."*

28. Andrew Duncan. "A short Account of the Life of the Right Honourable Sir Joseph Banks," Edinburgh, 1821. 8vo. 24 pp.

29. Cuvier. *Eloge historique*, lu le 2 Avril, 1821. Paris, 1821. 8vo. 30 pp. Usually conceded to be the best eulogy on Banks.

See also :—

30. "Literary Anecdotes of the Eighteenth Century," by John Nichols, F.S.A. 2nd Edition, London, 1812-15, in 9 vols. (vii, 20, 509.)

* "Lives of Philosophers of the Time of King George the Third."

31. Hayward, J. "On the Science of Agriculture"; comprising a commentary on . . . the code of Agriculture of Sir J. B., &c. Lond., 1825. 8vo.

32. "Portraits of English Authors on Gardening," by Samuel Felton. 2nd Edition, London, 1830 (see p. 181).

33. "Correspondence of Linnæus and other Naturalists." Edited by Sir J. E. Smith, London, 1821, 2 vols. Contains Banksian letters. (ii, 574-80.)

34. Malden, H. "Distinguished Men of Modern Time." London, 1838 [Banks in vol. 4, pp. 240-248].

35. Barron's Sketches, 1849, p. 12.

36. "Memoirs, Historical and Scientific, of the Right Honourable Sir Joseph Banks, Bart.," by George Suttor, F.L.S. Parramatta, 1855. 12mo. pp. 80. Litho. portrait re-drawn from the portrait by Thomas Phillips (Nicholas Schiavonetti, engr.). Contains Cuvier's Eulogy. See 29.

Chatty and very interesting, the production of an Australian colonist who knew Banks personally.

37. "Dictionary of National Biography," iii, 129 (ed. by Leslie Stephen), Art. "Banks" (by Daydon Jackson), quoted in "History of N.S.W. from the Records," Vol. i. pp. 471-4.

38. *Cottage Gardener*, iv, 169 (the date of this serial is 1849-60; it was continued as the *Journal of Horticulture*)

39. "Historical Records of New South Wales," vol. i, part i, p. 313.

40. There is a Caricature of Banks, drawn and etched, in 1795, by James Gillray. He was represented as "The Great South Sea Caterpillar, transformed into a Bath Butterfly." (Kew Cat.)

41. Peter Pindar was the nom-de-plume of Dr. John Wolcot, satirist and poet, 1738-1819. His works were published in five volumes, 1794-1801. He appears to have been a bitter opponent of Sir Joseph Banks. Mr. Bladen, at my request, kindly traced poems by him, the first entitled "Sir Joseph Banks and the Emperor of Morocco." This is a tale in verse of about 400 lines, which contains the verse:—

"A president, in butterflies profound,
Of whom all insect-mongers sing the praises,
Went on a day to hunt this game renowned,
On violets, dunghills, nettle-tops, and daisies."

This was published in vol. 2, pages 187-206, of his collected works. The other two are poems of about ninety lines each (also in vol. 2), entitled "Sir Joseph Banks and the Thief-takers," and "Sir Joseph Banks and the Boiled Fleas," in which he endeavoured to turn the

Royal Society and its President into ridicule, by suggesting that he boiled fleas to ascertain whether they turned red like lobsters. At the end of the last-named, he makes the following note:—

“The author would not have so frequently taken the liberty of putting vulgarisms into the worthy President’s mouth had he not previously known that Sir Joseph was the most accomplished swearer of the Royal Society.” (Probably an allusion to his having to swear-in members.)

Then, further, we have—

(Wolcot, John). “Peter’s Prophecy; or, the President and the Poet; or, an Important Epistle to Sir J. Banks,” &c. Ed. 4. London, 1788. 8vo.

42. See also chapter v, Book the second—“The Founder of the Banksian Museum and Library,” pages 487-514, in “Lives of the Founders of the British Museum,” by Edward Edwards (Trübner & Co., London, 1870), a work which I only saw after my own work was written.

Many important works were dedicated to Banks, *e.g.*:—

1. Turner, Dawson. “Fuci, or coloured figures and descriptions of the plants referred by botanists to the genus *Fucus*” (1808-1819). A monumental work in 5 vols. It contains descriptions of the seaweeds collected by Banks and Brown, acknowledges the author’s indebtedness to the Banksian Herbarium; the work is dedicated to “the Patron of Science.”
2. “Herbarium Britannicum, G. Don, consisting of Fasciculi of dried British plants, with their appropriate names and particular habitats, annexed by G. Don, Associate of the Linnean Society.” Dedicated to Sir Joseph Banks, Edinburgh, July 2, 1804.
3. Bauer, Ferd. “*Illustrationes Floræ Novæ Hollandiæ.*” 1813.

2. Death, Burial, Character, Eulogy.

Towards the close of his life he was greatly troubled with gout, so much so as to lose at times the use of his limbs. He died at his house at Spring Grove, Isleworth, on 19th June, 1820, leaving a widow, but no children. By his express desire, he was buried in the simplest manner in the parish church. (Daydon Jackson.)

He was buried at Heston, Middlesex, in which parish Spring Grove is situated. The church has since been rebuilt, and now covers the spot where he was buried. A tablet with a simple inscription marks as nearly as possible the place where his body lies. By his will he expressly desires that his body be interred in the most private manner in the church or churchyard of the parish in which he should happen to die, and entreats his dear relatives to spare themselves the affliction of attending the ceremony, and earnestly requests that they will not erect any monument to his memory.*

In his death, as during his long life, he endeavoured to avoid publicity and personal honours of every kind.

Following is a sketch of his character:—

The influence of his strong will was manifest in all his undertakings and voyages; he was to be found in the first boat which visited each unknown land. After his return he became almost autocratic in his power; to him everything of a scientific character seemed to gravitate naturally, and his long tenure of the presidential chair of the Royal Society led him to exercise over it a vigorous authority, which has been denounced as despotic.

Dr. Kippis's account in his pamphlet seems very fairly to describe the disposition of Banks:—"The temper of the president has been represented as greatly despotic. Whether it be so or not, I am unable to determine from personal knowledge. I do not find that a charge of this kind is brought against him by those who have it in their power to be better judges of the matter. He appears to be manly, liberal, and open in his behaviour to his acquaintance, and very persevering in his friendship. Those who have formed the closest intimacy with him have continued their connection and maintained their esteem and regard. This was the case with Captain Cook and Dr. Solander, and other instances might, I believe, be mentioned to the same purpose. The man who, for a course of years, and without diminution, preserves the affection of those friends who know him best, is not likely to have unpardonable faults of temper. It is possible that Sir Joseph Banks may have assumed a firm tone in the execution of his duty as president of the society, and have been free in his rebukes where he apprehended that there was any occasion for them. If this had been the case, it is not surprising that he should not be universally popular."†

* Hooker's edition "Banks' Journal," xxxvi.

† "Dict. Nat. Biog."

When Lord Amherst's Embassy were on their return from China, Dr. Abel and Dr. Macloud had an interview with the fallen and once great and terrible Napoleon; he enquired if the doctors had been recommended to their appointments by Sir Joseph Banks. Dr. Abel said he had not; Napoleon expressed surprise, and said he had always thought that the British Government consulted Sir Joseph Banks in all appointments regarding natural history, and that Sir Joseph Banks was so popular in France that his name would have been a passport of welcome throughout the French nation.

The above is recorded in Dr. Macloud's history of the voyage and loss of the "Alceste" frigate.*

Following is a letter to the author from Captain J. H. Watson, a Vice-President of the Australian Historical Society:—

Whilst listening to your most interesting paper on "Sir Joseph Banks," I was reminded of my boyhood's days. At Plymouth, where I was born and spent my early life, the boys at school had a favourite way of expressing themselves when one of their number eclipsed his fellows. The one who climbed the highest tree, or who took the best back at leap-frog, or "fly-the-garter," or in any other way distinguished himself, was a "Jolly Joe Banks." This would be in the late '40's or early '50's. Banks would then have been dead 25 to 30 years, but whether there is any connection between that expression and him I cannot say.

I think it is very probable that here we have testimony to the high opinion in which the name of Banks was held.

An unstinted eulogy was pronounced by Cuvier† before the *Academie Royale des Sciences* in the April following the death of Banks. In this he testifies to the generous intervention of Banks on behalf of foreign naturalists. When the collections made by Labillardiere during D'Entrecasteaux's expedition, fell by fortune of war into British hands, and were brought to England, Banks hastened to send them back to France without having even glanced at them, writing to M. de Jussieu that he would not steal a single botanic idea from those who had gone in peril of their lives to get them. Ten times were parcels addressed to the Royal Gardens in Paris, which had been captured by English cruisers.‡

We will let him rest with this beautiful tribute, the force of which is understood by every scientific man.

* Suttor's "Life of Banks."

† *Eloge historique de Sir Joseph Banks*, lu le 2 Avril, 1821, by Cuvier before the National Institute of France; is recopied in Suttor's work, pp. 53-80. See also an earlier eulogy by M. Biot, quoted by Weld, ii, 271.

‡ "Dict. Nat. Biogr." See also Weld, ii, 117.

3. Memorials of Banks.

A.—Names of places.

1. "The new-found country ought to be named Banksia, from its discoverer, as America was from Americus." (Linnæus to Ellis, 20th December, 1771.)

2. Cape Banks (Botany Bay).

The name was given by Cook to the north head of Botany Bay, Point Solander being the name given by him to the south head. (See p. 225.)

3. Cape Banks, or West Cape Banks (South Australia).

Lieut. James Grant wrote to Banks, 31st January, 1800,* from the "Lady Nelson" in Ramsgate Harbour, to the command of which he had been appointed by the influence of Banks. He pays Banks several compliments, and, after giving an account of the merits of his vessel, concluded with requesting "leave to place your name at the head of my list, should I be so fortunate as to discover an island, bay or harbour, which is worthy to boast of such a title."

He received instructions to sail through Bass Straits (1800). In pursuance of these instructions he "came in sight of the south coast of Australia, near where the South Australian and Victorian boundary is now situated. He named the two points first sighted Capes Banks and Northumberland, and two mountains behind them Mount Gambier and Mount Schanck—names which they still bear."†

Cape Banks is shown in the "rough eye copy" of the "Lady Nelson's" (and two other vessels') track, enclosed in the letter from Governor King to Banks, dated 10th March, 1801.‡ Flinders named it West Cape Banks in the following passage—

"The addition of West is made to the name (Cape Banks) to distinguish it from Cape Banks on the East Coast, named by Captain Cook. It is to be regretted that navigators often apply names in so careless a manner as to introduce confusion into geography."§

* *Hist. Rec.*, iv, 21.

† *Ib.*, iv, 68 (note). "The first cape I called Northumberland after His Grace the Duke of Northumberland, and another smaller but very conspicuous jut of the land which we plainly saw when abreast of Cape Northumberland, I called Cape Banks." (See p. 227.)

‡ *Ib.*, iv, 311.

§ "Flinders' Voyage," i, 201 (footnote).

4. Sir Joseph Banks' Group (Spencer's Gulf).

"Three small isles had been seen from Thistle's Island, and their bearings set; and the discovery of them was now augmented by several others, forming a cluster to the eastward of Point Bolingbroke. This was called Sir Joseph Banks' Group, in compliment to the Right

No. 55.—THE TABLET ERECTED AT BOTANY BAY IN HONOUR OF COOK AND BANKS, by the Philosophical Society of Australasia, 1821.

Honourable President of the Royal Society, to whose exertion and favour the voyage was so much indebted.”*

5. Mount Banks (Blue Mountains, N.S.W.).

In the year 1804, George Caley ascended the Grose River, and made an adventurous exploration. In the Historical Records,† he writes to Banks, under date 10th December, 1804,—

* “Flinders' Voyage,” i, 142.

† Vol. v, 508.

"My journey to the Carmarthen (Blue) Mountains was a very rough one . . . The farthest of the most remarkable hills I was upon I have named Mount Banks. Being the first European in visiting these parts, I claim the privilege of giving names to a few places which appear to me the most obvious."

Governor King writes:—

"After an incredible fatigue, Cayley (*sic*) with his party got to Mount Banks the twelfth day after he left Richmond Hill."*

In Surveyor Grimes' map of (?) 1806,† Caley's name of Mount Banks

No. 56.—CAPE BANKS (named by Cook). The north head of Botany Bay.

was respected. But when Major Mitchell prepared his map of the Blue Mountains in 1834, he took the wholly unjustifiable step of removing the name given to the mountain by the original discoverer, and renamed it Mount King George. And Mount King George, Blue Mountains, it has remained ever since. Recently Mr. J. E. Carne, Assistant Government Geologist, drew my attention to the matter, and, with the approval of the Executive Committee of this Fund, I asked the late Premier (Hon. J. H. Carruthers) to have an inquiry made.

* *Hist. Rec.*, v, 726.

† *Ib.*, vi, 410.

This has accordingly been done, and a letter from the Under Secretary for Lands, dated 20th September, 1906, says:—"I am directed to inform you that the Secretary for Lands (Hon. James Ashton) has approved of the name Mount Banks being added to the mountain in question, the names to appear on the official maps thus:—Mount Banks or Mount King George."

6. Bankstown.—"A parish in the hundred of Liverpool, in the County of Cumberland, N.S.W., bounded on the N. by Cook's River, from the centre of the road, at the E. corner of J. Alford's 60 acres, to the centre of Moore's Bridge, on the Liverpool Road; and by the centre of the Liverpool Road to the centre of Bowler's Bridge, over Prospect Creek; on the W. by Prospect Creek to George's River; and by that river, on the S. by George's River to Saltpan Creek; on the E. by Saltpan Creek to the centre of the road, which forms the S.E. boundaries of Harriett Carr's 30 acres; James Morris's 120 acres; and J. Alford's 60 acres; and by the centre of that road to Cook's River; containing 48 houses, with a population of 252 souls."*

It is about 7 miles from Liverpool on the Sydney-Liverpool Road. It is at the junction of the Rookwood and Liverpool Roads, being 3 miles from Rookwood Railway Station. Upper Bankstown is 2 miles further on the Liverpool Road. Bankstown is on poor soil and is not a flourishing township, particularly since the railway passed 3 miles away from it. Bankstown is also the name for one of the original districts of the county of Cumberland, N.S.W.; "bounded on the E. side by Botany Bay district; on the N. side by the Liverpool Road; and on the W. and S. sides by Prospect Creek and George's River."†

7. Banks' Island,‡ Queensland.

The name is also given to an island in Torres Straits, between Cape York and New Guinea. See Plate xiii, Flinders' chart of *Terra Australis*.

8. Banks Peninsula, N.Z. On the east side of the Middle Island, a portion of the province of Canterbury, and in the vicinity of Christchurch.

9. Banks' Land, Arctic Circle.

10. Revesby Island. "The largest island seen is four or five miles long, and is low and sandy, except at the north-east and south ends; it

* "Gazetteer of the Australian Colonies," 1866, by W. H. Wells, p. 43.

† *Ib.*

‡ Mr. Edward Stack obligingly informed me of the following map in the Lands Department, which Mr. A. J. Hare has kindly permitted me to examine. By John Septimus Roe, R.N., lithographed by R. Clint, 1822. On this map of Port Jackson the island now known as Cockatoo is shown as "Banks Island," and the island known as Goat Island is shown as Cockatoo. What was the authority for these changes, I do not know. In the same map, Woolloomooloo is known as Palmer's Cove, and Rushcutters Bay as Blackburn Cove.

No. 57.—WEST CAPE BANKS, SOUTH AUSTRALIA.

was called Revesby Island, and names were applied in the chart to each of the other isles composing this (Sir Joseph Banks) group.”*

Revesby Island is a large island immediately to the north of the group, which is in Spencer's Gulf, and is named after Sir Joseph Banks' Lincolnshire home (see p. 229).

The Railway Commissioners of New South Wales gracefully named a station, opened on 21st October, 1906, Banksia. It is on the Illawarra suburban line.

B.—*Genera of plants named in honour of Banks.*

Banksia, Forst. (1776)=Pimelea, Banks (Thymelacæ).

Banksia, Linn. f. (1781) (Proteacæ).

Banksia, Koen. (1783)=Costus, Linn. (Scitamineæ).

Barksea, or Banksia, Bruce (1805)=Brayera, Kunth. (Rosacæ).

Banksia, Domb. (1828)=Cuphea, R.Br. (Lythriaceæ).

Josaphia, Salisb.† (1809)=Dryandra, R.Br. (Proteacæ).

C.—*Species of plants named in honour of Banks.*

Eriostemon Banksii, A. Cunn.

Musa Banksii, F.v.M.

Hemistemma Banksii, R.Br.=

Phyllanthus Banksii, Cunn.=

Hibbertia Banksii, Benth.

Neoroepera Banksii, Benth.

Hymenanthera Banksii, F.v.M.=

Piper Banksii, Miq.

H. dentata, R.Br.

Desvauxia Banksii, Br.=

Pigea Banksiana, DC.=*Ionidium*
suffruticosum, Ging.

Centrolepis Banksii, R. et S.

Drosera Banksii, R.Br.

Phaius Banksii, Spreng.=

Leptaspis Banksii, R.Br.

Helichrysum Banksii, A. Cunn.=

Thysanotus Banksii, Br. (?)

H. bracteatum, Willd.

Xerotes Banksii, Br.

Passiflora Banksii, Benth.

Eucalyptus Banksii, Maiden

Grevillea Banksii, Br.

(*Proc. Linn. Soc. N.S.W.* 1904.)

Microtis Banksii, Cunn.=*M. porri-*
folia, Spreng.

See also *Hormosira Banksii*, Dcne, figured in Harvey's "Phycologia Australica."

Also *Fucus Banksii*, figured in Dawson Turner's "Fuci."

PORTRAITS OF BANKS.‡

1. Benjamin West. (Eng., J. R. Smith.)

"Mr. Banks" (a copy of this is inscribed, "Sir Joseph Banks. Bt., President," but Banks did not attain that dignity till 1778).

* "Flinders' Voyage," i, 152.

† "Knight et Salisb., *Prot.*; Brown's *Prod. Flor. Nov. Holl.*, 396; Coll. Works (Ray Soc.), II, 11; *Journ. Bot.*, xxiv, 298.

‡ I desire to acknowledge the special help given to me by Messrs. F. M. Bladen and Hugh Wright, of the Public Library, in checking this list of portraits.

"Painted by Benjamin West, engraved by J. R. Smith." Mezzotint, 1771. (See p. xv).

Whole length, facing spectator. Covered with a South Sea Island mat, other articles from his voyage (from which he had evidently just returned) around him and in his hands.

2. *Joshua Reynolds*. (Eng., W. Dickinson.)

"Joseph Banks, Esq."

"Painted by Sir Joshua Reynolds, engraved by W. Dickinson." Mezzotint. (See p. x).

No. 58.—REVESBY ISLAND, SPENCER'S GULF (near Port Lincoln, S.A.).

As a young man, seated at a table on which is a globe. Slightly facing right. To the knees, seated at a table on which are a sphere and writing materials; face three-quarters to the right.

3. Artist (?) (Engraver, ?)

"Mr. Bankes."

From an octavo book, probably an old magazine. Profile portrait of young man, facing to right. Round.

4. Artist (?), probably *George Dance*. (Eng., Ridley)

"Rt. Honble Sr. Joseph Banks, K.B."

Oval bust, facing right. In the *European Magazine* for October, 1802. Pub. by J. Sewell, Cornhill, October 1, 1802 (see p. 160).

Suttor's work, at p. 24, quotes from the memoir of Banks in the *New Monthly Magazine* for 1820. He states that the portrait accompanying it is "a very good likeness."

5. *George Dance*. (Eng., Wm. Daniell.)

"The Right Honorable Sir Joseph Banks, K.B., President of the Royal Society."

Geo. Dance del. June 27, 1803. Wm. Daniell, fecit.

Published by Wm. Daniell, No. 9 Cleveland Street, Fitzroy Square, London, June 1, 1811.

Bust portrait, almost profile, facing to right; in wig, ribbon across figure's right shoulder. No star shown.

6. *Thomas Phillips*. (Eng., Nicholas Schiavonetti.)

"To the King's most excellent Majesty, this print of Sir Joseph Banks, Bart., President* of the Royal Society, is with His Gracious Permission (Granted in July, 1809), humbly Dedicated by His Majesty's most dutiful Subjects and Servants, Thomas Phillips and Nicholas Schiavonetti."

London. Published 1812, by N. Schiavonetti, No. 12 Michael's Place, Brompton. Copper-plate engraving.

Original in the Royal Society's rooms. To the waist, facing spectator, in the President's chair of the Royal Society, wearing the ribbon and star of the Bath (see p. 165).

7. "From a portrait by *Thos. Phillips*, R.A., in the possession of the Royal Society of London."

Reproduced in Hooker's "Banks' Journal."

8. *Thomas Phillips*. (Eng., C. E. Wagstaff.)

"Sir J. Banks."

From a Picture by T. Phillips, in the possession of the Royal Society. London. Published by Charles Knight & Co., Ludgate-street.

9. *Thomas Phillips*. (Eng., C. E. Wagstaff.)

Another copy.

"Under the Superintendence of the Society for the Diffusion of Useful Knowledge. London. Published by Charles Knight, Pall Mall East."

* The wording varies a little in different impressions.

No. 59.—*Banksia integrifolia*, "White Honeysuckle" (collected by Banks at Botany Bay).

10. *Thomas Phillips*. (Eng., C. E. Wagstaff.)

"Sir J. Banks."

"Engraved by Wagstaff from a Picture by Phillips in possession of the Royal Society.

"William Mackenzie, Glasgow, Edinburgh, London, and New York."

11. *Thomas Phillips*. (Eng., Thomson.)

"Sir Joseph Banks, Bart., P.R.S."

"Thomson, sc. Published by H. Colburn & Co., August 1st, 1820."

12. *Thomas Phillips*. (Eng., W. T. Fry.)

"Sir Josh. Banks.

"Published June, 1820, by T. Boys, Ludgate Hill. Engraved with Permission of Messrs. Colnaghi, from their large Print, after Thos. Phillips, R.A., by W. T. Fry."

With embellished border.

13. *Thomas Phillips*. (Eng., S. W. Reynolds and S. Cousins.)

"The Rt. Honble. Sir Joseph Banks, Bart., G.C.B., President of the Royal Society of London, Honorary Member of the Horticultural Society of London, &c.

"Engraved from the Original Picture in the Possession of the Horticultural Society, To whom this Print is respectfully dedicated by the Society's Obligated and Obedient Servant, Samuel W. Reynolds.

"London. Published Jany.. 1828, by M. Colanghi (for Colnaghi). 23 Cockspur St., Charing Cross."

Full-face portrait. Seated in chair, holding a "paper for reading" in right hand, right arm resting on chair arm. On his left and partly in front is a table, on which is an ink bottle with two quill pens, opened letter, two botanical drawings, spectacles and case.

14. *Thomas Phillips*. (Eng., ?)

Painted in 1820 (the year of Banks' death).

In the Council Room of the Royal Horticultural Society. See *Journ. R.H.S.* vol. xxix., December, 1904. (See p. 169).

15. *Thomas Phillips*. (Eng., W. Holl.)

"Sir Joseph Banks, Bart., P.R.S." (with fac-simile of Banks' signature).

Fisher, Son, & Co., London, 1829.

16. Another similar to above, but dated 1832.

No. 60.—*Banksia ericifolia* (collected by Banks at Botany Bay.)

17. *Thomas Phillips.* (Eng., J. Brown.)

"Sir Joseph Banks."

Engraved by J. Brown. London. Henry Colburn, 1846.

18. *Thomas Lawrence.* (Eng., A. Cardon.)

"The Right Hon. Sir Joseph Banks, Bart., K.B., President of the Royal Society."

From an original Picture by T. Lawrence, Esq., R.A., in the possession of Samuel Lysons, Esq.

Drawn by W. Evans, engraved by A. Cardon.

Facing spectator, face very slightly turned to right. To waist; thighs indicated with faint lines, fingers of left hand touching a book lettered "Royal Society."

Published January 1, 1810, by T. Cadell and W. Davies, Strand, London. See p. 161.

19. *Thomas Lawrence.* (Eng., H. Robinson.)

"Sir Joseph Banks, Bart., K.B., P.R.S."

"From the original of Sir Thomas Lawrence, in the British Museum."

"Drawn by Wm. Derby (with the Permission of the Trustees), and engraved by H. Robinson."

"London. Published January 1, 1831, by Harding and Lepard, Pall Mall East."

20. *Thomas Lawrence.* (Eng., H. Robinson.)

"Sir Joseph Banks, Bart., K.B., P.R.S. Ob. 1820."

"From the original of Sir Thomas Lawrence, in (blank)."

With ornamental border.

Reproduced from the above, but showing the top of the Royal Society's mace on the figure's left.

There is a copy of this in the Mitchell Library, but without ornamental border, and the words are printed—"in the British Museum." "Engraved by H. Robinson."

London. Published April 1, 1832, by Harding and Lepard, Pall Mall East.

21. *Thomas Lawrence.*

"Sir Joseph Banks, Bart., K.B., P.R.S."

Seated, with the ribbon and star of the Bath. Top of mace to the left.

Quoted in *Hist. N.S.W. from Rec.*, i, 78, as from "Martin's British Colonies."

Evidently compiled from Lawrence's portrait. See p. 163.

No. 61.—THE CHANTREY STATUE OF SIR JOSEPH BANKS, now in the Natural History Museum, London

22. *Thomas Laurence.* (Eng., Phillibrown).

"Sir Joseph Banks, Bart, K.B., P.R.S. Ob. 1820. Laurence Pinx. Phillibrown Sc."

Plate from an octavo book.

23. *W. M. Craig.* (Eng., H. Robinson.)

"Sir Joseph Banks, Bart, &c., &c., &c."

Portrait to waist, full face, figures left fore-arm resting on table. Star on breast, but no ribbon.

From an octavo book.

"Published by Henry Fisher, Caxton, Liverpool, 1819."

MEDALLIONS.

Wedgwood Medallions of Sir Joseph Banks (looking to left) and of Lady Banks (looking to right). See p. xxi.

He was created a Baronet in 1781, and as they bear the inscriptions "Sr. J. Banks" and "Lady Banks," they cannot be earlier than that date. Said to have been modelled by John Flaxman, R.A.

Another Wedgwood Medallion inscribed "Banks." Not a fac-simile of the preceding, but apparently modelled at about the same time.

(Black Wedgwood.)

Another Medallion (larger). (?) Wedgwood, showing him about 50 years of age. Wearing Roman toga.* See p. 159. Stated to have been modelled by Flaxman.

Tassie Medallion. Original of glass, white on a black ground. So described by Sir Joseph Hooker, who sent it to me. Shows Banks towards the close of his life. See p. 164.

STATUE, ETC.

"In July of the same year (1820) the Council of the Royal Society resolved to erect a full-length marble statue of Sir Joseph Banks, to be executed by Mr. (afterwards Sir Francis) Chantrey. A sum of £2,000 was subscribed, of which £525 was paid to the sculptor, the surplus being devoted to an engraving of the statue, copies of which were distributed to various institutions and individuals. The monument now stands in the Natural History Department of the British Museum." ("Journ. of the Right Hon. Sir Joseph Banks" by Sir J. D. Hooker, xxxvi.) See p. 235.

"Plaster cast from a bust modelled in 1818, by Sir Francis Chantrey, R.A.

"Clean-shaven face turned three-quarters to the right, neck bare." (Kew Cat.)

* Corresponds to one of Solander, who died in 1782.

MEDAL.

The Banksian Medal of the R.H.S. See *Journ. R.H.S.*, p. 230, vol. xxix. (December, 1904.) (See p. 238.)

Banks was one of the persons named in the Charter of Incorporation of this Society in 1809.

This silver medal, head profile to right, was awarded, 12th April, 1887, by the Royal Horticultural Society to the Royal Gardens, Kew, for a group of "New Holland" plants.

LANDSCAPES.

The only Botany Bay pictures I know of depicting the arrival of Captain Cook, and in which Banks of course appears, are:—

- (a) T. A. Gilfillan's painting presented to the Philosophical Institute (now Royal Society) of Victoria (see p. 19).

This picture was reproduced in "The Landing of Lieut. James Cook, R.N., at Botany Bay." *Sydney: Government Printer*, 1901.

- (b) E. P. Fox's painting "The Landing of Captain Cook," in National Art Gallery, Melbourne (see p. 16).

This picture was reproduced in "New South Wales, the Mother State of Australia: a Guide for Immigrants and Settlers." *Sydney: Government Printer*, 1906.

- (c) W. Macleod's "The Landing of Captain Cook at Botany Bay." Issued as a Christmas Supplement (coloured) to the *Town and Country Journal*, 1899.

See also;—

Browne, Gordon.

Tubourai Tamaide offended Mr. Banks.

Banks.

Original Water-colour Painting in Mitchell Library (Public Library of N.S.W.).

Native firing musket over Banks' head, Banks in act of drawing his sword.

No. 62.—THE BANKSIAN MEDAL OF THE ROYAL HORTICULTURAL SOCIETY.

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A REDUCTION OF
CAPTAIN COOK'S ORIGINAL CHART OF
EAST AUSTRALIAN COAST LINE
1770
FROM ORIGINALS IN THE BRITISH MUSEUM
NORTH SHEET

COAST LINE OF EAST AUSTRALIA
As determined by recent Surveys to 1830
This is inserted for comparison with Cook's Coast-line
The parallels of Latitude are the same for both.
Longitude is shown at bottom.

COAST-LINE OF EAST AUSTRALIA

As determined by recent Surveys to 1890.

*This is inserted for comparison with Cook's Coast-line.
The parallels of Latitude are the same for both.
Longitude is shown at top.*

A REDUCTION OF CAPTAIN COOK'S ORIGINAL CHART OF EAST AUSTRALIAN COAST-LINE 1770

FROM ORIGINALS IN THE BRITISH MUSEUM

SOUTH SHEET.

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