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A valuable early record of Norfolk Island plants: the 1790s watercolours of convict artist John Doody and accompanying notes by William Paterson

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Abstract: An album of 50 watercolour illustrations depicting Norfolk Island plants attributed to convict artist John Doody, in the early 1790s, and associated notes apparently written by William Paterson (1755-1810), one-time commander of the military detachment on Norfolk Island, Lieutenant Governor of New South Wales, and amateur botanist, are described and assessed. Illustrated are 48 plant species growing on Norfolk Island at the time, all but three of which are indigenous. The notes and the watercolours represent the only treatment of the island's flora in the 18th century and include descriptive and ecological material for the species at the time of first European occupation. Two of the species are now extinct. Paterson's notes also include an introductory description of the flora and fauna of the Island. The importance of this material to the modern study of the Norfolk Island flora is highlighted.

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Introduction

Early European accounts of plants found in recently settled localities often provide valuable information for the modern-day botanist researching the botany of that place. These accounts are almost always made by non-botanists and generally provide few details. Usually, formal names are not available for the taxa, although detailed descriptions and/or paintings can be used today to accurately identify the species involved.

There are few detailed accounts of the flora of Norfolk Island from the 18th and 19th Centuries. Early government officials and the comments made by casual visitors gave much attention to the Norfolk Island Pine *Araucaria heterophylla* and the Flax *Phormium tenax*. These two plants, whose possible commercial potential as masts and cordage respectively, was enthusiastically promoted by James Cook upon his discovery of Norfolk Island in October 1774, are frequently mentioned in the early literature. The presence of these species to a large degree prompted the settlement of Norfolk Island by the British in March 1788, but in the end, neither species was to meet the potential importance to the British Navy originally envisaged.

From 1788, when Norfolk Island was first settled as a convict prison until 1900, there were very infrequent visits by botanists and competent naturalists. The majority of the plants only became known to science following the first published *Flora* prepared by the Austrian botanist Stephano Endlicher in his *Prodromus* of 1833. This work was based on the collections of botanical artist Ferdinand Bauer who visited the island in 1804-05; Endlicher never visiting the island. ‘Government botanist’ Allan Cunningham spent several months on the island in 1830 (Mills 2012), providing a most valuable description of the flora, three years before the work of Endlicher. Quaker missionary and naturalist James Backhouse visited in 1835 and, having the advantage of Endlicher’s *Prodromus*, provided competent commentary on the plants he observed (Backhouse 1843). The next major treatment of the flora was by Joseph Maiden (1904), who compiled an annotated list of the plants for the island after a visit in 1902. Ten years later, New Zealander Robert Laing produced an updated list of plants following his visit to the island in 1912 (Laing 1914). The current *Flora* was published in the *Flora of Australia* series and was prepared largely by Kew botanist Peter Green (Green 1994). Recent work has documented changes in the understanding of the indigenous flora and made many additions to the list of naturalised species (e.g. de Lange *et al.* 2005; Mills 2010a).

Pre-1800 descriptions of the plants occurring on Norfolk Island are particularly rare. Accounts by James Cook and his shipmates, Philip Gidley King, first commandant on Norfolk Island, and a few other naval and military officers provide brief descriptions only. Their accounts invariably mention the thick rainforest growing on the island, the rich soils and some of the more peculiar plants, at least to English eyes. This is not to say that such accounts are not valuable. The only person to prepare an account with any sort of comprehensive treatment of the plants in those early years of settlement was William Paterson (1755-1810), who

was in charge of the military detachment on Norfolk Island from November 1791 to March 1793. This paper discusses the Norfolk Island botanical notes attributed to William Paterson and the associated watercolours attributed to his servant, convict artist John Doody.

The historical material

The Paterson/Doody material is contained in an album of watercolours (call no. DL PXX 1), held by the Mitchell Library, part of the State Library of New South Wales, Sydney. The album contains sheets depicting watercolours of the plants growing on Norfolk Island in 1792; the additional sheets are due to some species having more than one sheet attached to the number. Additionally, inserted into the album are 11 pages of handwritten notes. These notes are obviously associated with the watercolours, as the species numbering on the sheets corresponds to that in the notes.

In addition to the watercolours attributable to John Doody, there are three sheets showing the Norfolk Island endemic species *Freycinetia baueriana*. Based on style and quality, these are unlikely to have been produced by Doody. On the back of the painting of the fruit is written ‘Capt King Nov. 21, 1794’, referring to Philip Gidley King, who was commandant on Norfolk Island for two periods between 1788 to 1796. While the three paintings are associated with King, there is no evidence that he was the artist. There are also four sheets in the album showing plants that do not occur on Norfolk Island; these species grow around Sydney, New South Wales and are clearly by a different artist. Based on known works, these paintings appear to be by George Raper, well known First Fleet artist, or are copies of his artwork; one painting matches a Raper painting depicted in the book by Groom (2009). These sheets require separate assessment.

There are several documents at the Mitchell Library associated with the above album; these are:

- i) a typed list and some notes in a folder, loosely held in the album;
- ii) an album of black and white photographs of the watercolours;
- iii) various notes on the watercolours in a separate folder (call no. PXn 196);
- iv) a scanned copy of the album available on the State Library of NSW online site;
- v) online State Library notes compiled by SLNSW staff.

The album was bequeathed to the SLNSW in 1952 by William Dixson, Sydney businessman and major benefactor of the State Library of NSW, as part of his very large private collection of Australian historical material. There is apparently no earlier confirmed information on the provenance of the Paterson/Doody material. As discussed below, it is thought that the notes and paintings were originally sent by William Paterson to Joseph Banks in England around 1794.

William Paterson (1755-1810) and John Doody (fl. 1790s)

The watercolours have been attributed to convict John Doody, based on a letter from William Paterson to Joseph Banks on 12 December 1794. Paterson at the time was Lieutenant Governor and acting administrator in Sydney, a position he held from December 1794 to September 1795 prior to the arrival of John Hunter as Governor of the Colony. In a postscript to the letter of 12 December, Paterson writes "The drawings are done by a young man who came out in *Barrington* with me, a Convict, he has been my servant ever since & is known I believe to Mr Latham, to whom he has wrote, to any person collecting he might be made very useful; his name is Jno. Doody."

Although not a terribly competent botanist, Paterson was a keen natural historian and artist and in regular correspondence with the influential botanist and President of the Royal Society, Joseph Banks in London. He had been sending Banks various natural history objects, writings and paintings for many years; Paterson's book on his African exploits was dedicated to Banks (Paterson 1790). Paterson's aim was to obtain the support of Banks for his admission as a fellow to the Royal Society. In his letter to Joseph Banks of 12th December 1794, Paterson writes "In a letter to Gov^r King you are so good to offer me your assistance in publishing the natural history of Norfolk Island, but my sudden return from that place put it out of my power to finish what I intended viz. the Birds and Fishes. However, with the drawings &c that accompany's this you will be in possession of the Botanical part, and from the few specimens of the strata which were sent before, you will be able to judge of the formation of the island. Should you think the memorandums worth publishing or if it could be done by offering them to the Royal Society I would consider the Honor still greater, at the same time may I beg to solicit your interest of becoming a Fellow of the Society & hope by my attention to Natural History you will think me deserving of that honor."

In a letter to Paterson on 1st March 1797, Banks replied "I note your wishes to become a Fellow of the Royal Society but during your residence abroad I believe it to be impossible when you return your chance of receiving that & the Literary honors must depend upon the benefit science has received from your Labors while abroad and as the elections into that body are carried on by Ballot I shall have no doubt of your success provided the Members are convinced that you deserve their white balls." A white ball was a yes vote from members for admission as a fellow of the Society, while a black ball was a vote against admission. Paterson's ambition to become a Fellow was not achieved until he returned to England on sick leave in 1798. He eventually returned to Port Jackson to become Lieutenant Governor from 1800 to 1808 including four years as Commandant of Van Diemens Land (Tasmania). He died off Cape Horn on 21 June 1810 on his way to England.

John Doody was sentenced to seven years transportation as a convict on 10th December 1788. He arrived in the

fledgling colony of Sydney on the *Admiral Barrington*, part of the Third Fleet, on 16th October 1791. He soon became the servant of William Paterson and arrived with him on Norfolk Island on 4th November 1791. Doody left the island with Paterson some 16 months later, on 9th March 1793. Two years later, Paterson, then administrator at Sydney, granted Doody, by then a free man, 30 acres of waterfront land up river from Sydney. The location was originally called Doody's Bay and later became known as Gladesville, after John Glade, a later owner of the land. No other information on John Doody could be located. The fern genus *Doodia*, of which there are two species recorded for Norfolk Island, is named after English botanist Samuel Doody (1656-1706); there is no connection to the convict John Doody.

Paterson's Descriptive Notes of the Flora and Fauna of Norfolk Island

The individual plant notes are preceded by several paragraphs containing descriptions of some of the plants and animals of Norfolk Island; a verbatim transcription of the notes appears below, in italics. These notes are reproduced exactly as Paterson wrote them; punctuation, spelling and grammar are all faithfully reproduced as in the original manuscript. For better understanding of the notes, the currently accepted names of the plant and animal species being referred to are inserted within square brackets.

Though the soil and Climate of Norfolk Island are very favourable for most plants, notwithstanding this vegetation has many enemies to encounter, first the Grub very destructive to the roots of most plants & often get into the cobbs of the India Corn which they seldom leave till the whole is destroyd it is to be hoped that the discovery of lime on this Island will in some degree put a stop to their doing so much mischief. Second a great variety of Caterpillars distroy almost every Garden vegetable, particularly at this Season when we have no rain The Easterly winds are also very bad where the land is not sheltered but the worst of all is a small Insect which I have calld the Locust of Norfolk Island, this year they made their appearance early in November I observed on the skirts of the woods where the Ground had been cleared (between Sydney Bay & Queensburgh) and planted with India Corn which promised to be a very fine crop the Insects were very little larger than a Gnat with small tufts of a white downy hair they adhered to a species creeper very common in the woods & in such numbers that they compleatly covered the leaves & twigs of the plant when I touched the branch they sprung all about me they are a species of Grilla and I believe the smallest of that tribe - Early in December they made their appearance on the leaves and stalks of the India Corn they have now four transparrent wings & the whole Insect including the wings was little larger than ¼ of an Inch from tip to tip, their powers of suction are so strong that in a few days the whole juice of the plant is nearly extracted and hangs upon the leaves a sweet glutonous substance which partly puts a stop to Vegetation and prevents the Cobb being properly formed.

This plant [*Freycinetia baueriana*] is chiefly found in the woods in most parts of the Island when growing clear of trees it is seldom higher than thirteen feet but when among Trees it climbs as high as fifty feet or upwards & the leaves are nearly as strong as that of the Ananas [the pineapple genus] & from three to four feet long growing in a spiral manner in three rows up the stem and terminates in a large Crown within which is enclosed the flower The Calyx (if it may be so called) is composed of six leaves much broader than the rest tinged of a flesh colour towards the bottom and a dark green towards the top, they intersect the spines within them are six flesh coloured Petals placed in right angles. The spathe are five in number though I have found them often with three & four irregularly placed and inserted in five of the Petals they are about six inches in length & covered to the top with a very thin dark buff coloured Farina the leaves of the flower are so very fleshy that they cannot be dried the specimen and drawing will I hope be sufficient to describe the plant. Most of the arboreal plants of this Island produce either a resinous or gummy substance. The Pine Tree [*Araucaria heterophylla*] produces vast quantities of a thick resin which they here call Turpentine and hitherto has not been used to any purpose except an ingredient in Soap it is rather singular that the wood does not in the least partake of the resin the whole is in the bark and in the knots This is the largest Tree in the Island and grows in great numbers some of them has been found 250 feet high and a beautiful wood of a much closer grain than our fir it is chiefly used for building the knots of this Tree appears not to be the least perishable for those that have been blown down and the whole trunk mouldered to dust you find the knots quite fresh and almost transparent from the quantity of resin they contain and burn as clear as a Candle - The other trees have as yet been little used what they have named the yellow wood the black wood and the mahogany appear to be excellent for Cabinet work. There is a species of the Hibiscus [*Lagunaria patersonia*] that grows to a large Tree which I think is a new plant it produces a quantity of Gum in appearance and quality to that of the Gum Arabic, the flower is a light red and the leaves a very light green and downy -

The Blood Tree [*Baloghia inophylla*] is remarkable when wounded a watery substance issues from it very much like blood experiment has hitherto been made but I think it might be useful in Varnish or Staining wood & perhaps in dyes. The foliage of all the plants and the Flowers are elegant there are two species of *Solanum* that will be a great acquisition to our Green houses in England the one bears beautiful clusters of most delicate snow white flowers and continues in flower and fruit most of the year [*Solanum bauerianum*] the fruit is a small dark red berry hanging in large clusters and adds much to the elegance of the plant it grows to about six feet the other has very large dark green jagged leaves and bears a large purple flower in clusters the fruit about the size of a plum [*Solanum laciniatum*] oval and a deep Orange colour - there is also a species of *Vaccinium* [a genus of shrubs in the plant Family Ericaceae] a beautiful shrub and bears a deep Orange coloured berry

[probably *Alyxia gynopogon*] - the *Convolvulus*'s are many and elegant. *Passiflora* [*Passiflora aurantia*] also a very beautiful *Jasminum* [*Jasminum simplicifolium*] two species of *Piper* the one with a large cordated leaf the fruit of an Orange colour when ripe and very pleasant to the taste [*Macropiper excelsum* subsp. *psittacorum*], the other is a very minute plant with small oval succulent leaves and in general found growing upon the trunks of decayed trees [*Peperomia urvilleana*], I have also discovered a new species of *Morus* [*Streblus pendulinus*].

The Cryptogamias are both numerous and beautiful particularly of the ferns. The fern tree [*Cyathea brownii*] is elegant & useful it is excellent food for the stock particularly Hogs and many of the Inhabitants eat it when there is necessity of reducing their allowance of provisions (which has often been the case) The Cabbage Palm [*Rhopalostylis baueri*] is also found to be a very useful plant but from the quantity of Ground cleared & the many People constantly cutting it for use in a short time it will become very scarce but it is to be hoped Garden Vegetables will sufficiently supply its place it grows from thirty to forty feet has a naked stem with a large Crown of leaves at the top in appearance much like the Coco Nut tree -

Quadrupeds

There has only one kind been found upon the Island the Rat [*Rattus exulans*] which differs only in size from our Common Rat in being much smaller -

Birds

The birds peculiar to the Island & useful are 1st the Pigeon are in vast numbers a beautiful plumage & much larger than the English wood Pigeon [*Wood Pigeon Hemiphaga novaeseelandiae sadicea*] very good to eat & easily killed. 2nd a large Parrot [*Norfolk Island Kaka Nestor productus*] with brown red & dirty coloured yellow plumage also good to eat there are also some beautiful Doves [*Norfolk Island Ground Dove Gallicolumba norfolciensis*] but seldom got a species of Carlew [? *Whimbrel Numenius phaeopus*] - Parroquites green with a red head [*Green Parrot Cyanoramphus cookii*] -

The Mount Pitt bird (species of the Petrel) [*Providence Petrel Pterodroma solandri*] is the most useful the season of their coming to this Island is in March and it is supposed they come from New Caledonia but that is merely conjecture, they however come in vast numbers Mount Pitt is the principal part of the Island to which they resort and the soil being of a deep light Earth is more adapted for their making their holes in the day time they go to Sea and return regularly when it becomes dark on the Island when the People are generally waiting their arrival they catch them by means of a torch which is made of the pine knots the birds come down to the light and are immediately seized and put into a bag, some Thousands have been taken in one Night If it was not for these birds at this small allowance of Provision many of the Convicts must Die for want Those that are not able to go into the woods receive a Certain proportion from the others.

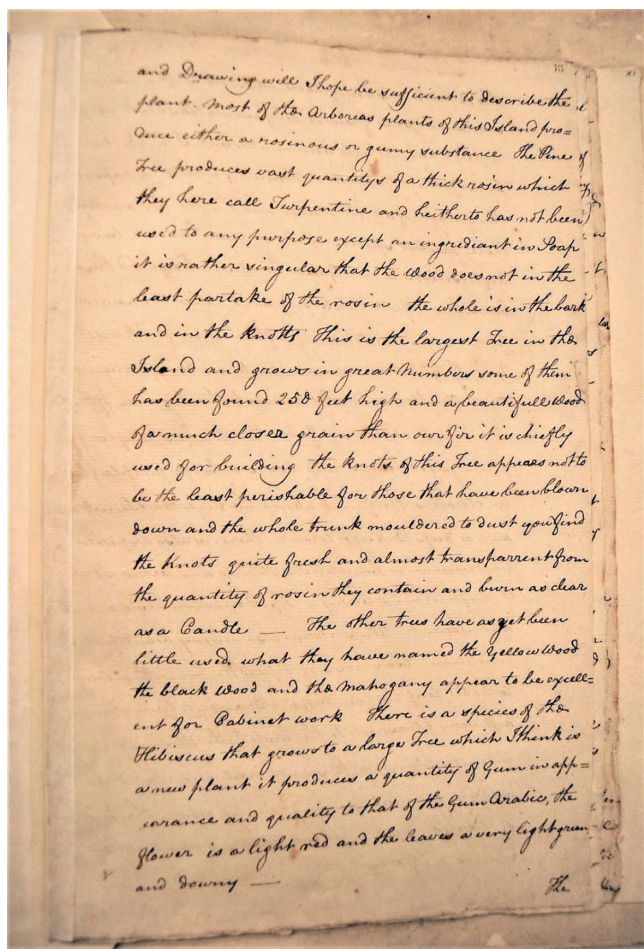


Fig. 1. Page 3 of William Paterson's notes. Mitchell Library, call no. DL PXX 1.

Doody's Norfolk Island watercolours and Paterson's individual plant notes

The main set of watercolour illustrations in the album is numbered from 1 to 50 and depict 48 plant species; two species are illustrated twice and separately numbered. The watercolours are painted on large drawing paper about 47 cm by 60 cm. Some sheets exhibit paintings of more than one plant species, while several illustrate different parts of the plant, such as cross-sections of flowers or fruit. The watercolours have apparently been numbered at the time of their production but are not signed or dated. Various plant names appear on the sheets, but very few are given a binomial name, as no names were available at the time for most of the plants depicted. On many of the sheets, there are pencil notes, often of a single genus name. These were almost certainly added later by someone with botanical knowledge, but before 1833 when most of the species were formally described and named. Some of these pencil notes are followed by a stylised letter 'B', possibly indicating the botanist who made the note.

Notes held at the Mitchell Library in Sydney (call no. PXn 196), state that Owen Evans, a Norfolk Islander with an intimate knowledge of the island's natural history, visited the Library in 1970 and identified the species illustrated. The

list of species identifications is contained with the notes; the species are correctly identified although some of the names used in the list have since been superseded.

Among the documents listed above, several different numbering systems are used for the watercolours. The original numbering system, from 1 to 50, corresponds to the notes by Paterson and is the numbering system used here. Number one in the series is the only one out of sequence in the album; these three sheets appear at the end of the album rather than the beginning.

Each of the plants illustrated are discussed below, under the sheet number, with current taxon name, family and current common name, priority being given to the local Norfolk Island name. The plant notes made by William Paterson pertaining to each of the Doody watercolours are in italics; these are brief descriptions and/or names given to the plants depicted and provide interesting contemporary descriptive and ecological information. Additional comments are provided by the author. Scanned copies of the watercolours are available online at <http://archival.sl.nsw.gov.au/Details/archive/110371293>.

No. 1 (3 illustrations) *Freycinetia baueriana* Endl. (Pandanaeae) Mountain Rush

No 1 Two of the Male & Female plants the stem of which is about three inches in circumference and of an equal thickness to the top it Climbs up the Trees from 80 to 100 feet high & throws out roots at every joint when it is clear of woods it seldom grows above 13 feet high - The leaves grow in a spiral manner on the stem about three or four feet long and terminates with the flower on the top as represented the numbers of Male or Female on one plant are very irregular sometimes six and in some only three - The fleshy leaves of the flower are very pleasant to the taste the fruit is very Gluttonous and I believe very nourishing but having no pleasant flavor is but little used except by the Convicts who go in the woods in search of birds - This plant grows in vast quantities about Mount Pitt. Flowers in Nov^r and the Fruit is ripe in May

One drawing is numbered '1', although the next two in the album are clearly part of a set of three. This Norfolk Island endemic produces the spectacular flower heads depicted in the painting; see Figure 2. The pencil note 'Pandanus inclinans?' refers to the New Zealand species now known as *Freycinetia banksii*. The watercolour shows flowering and fruiting spikes, and cross-sections of flowering parts, as well as the large red bracts of the inflorescence and the plant's leaves.

No. 2 *Myoporum obscurum* Endl. (Scrophulariaceae) Popwood

No 2 Grows to about 30ft high the flower is white with purple spots in the inside the berry is of a deep purple with one stone the leaves are a very dark green & shining

This small tree is endemic to the island; wild plants are very rare today, although it is being planted around the island. The main painting illustrates a stem with flowers and fruits, and there are smaller sketches of a flower, the developing fruit and a cross section of a mature fruit.



Fig. 2. No. 1 Inflorescence of *Freycinetia baueriana* (Pandanaeae), an endemic monocot. Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 3 *Celtis paniculata* (Endl.) Planch. (Cannabaceae)
Whitewood

No 3 Grows to a Tree it is rather scarce on the Island the wood of it has not as yet been used I have not been able to find any more perfect than what is represented in the Drawing

This relatively common tree on Norfolk Island, particularly at lower altitudes, also occurs in eastern Australia and New Caledonia. ‘*Celtis*’ is written in pencil on the lower part of the sheet. The watercolour shows a stem and leaves, with panicles of small fruits, which are blackish when ripe, and a small cross-section of a fruit. This same species is also illustrated in painting No. 19. The type specimen of this widely occurring tree comes from Norfolk Island.

No. 4 (2 illustrations) *Coprosma baueri* Endl. (Rubiaceae) Coastal *Coprosma*

No 4 Male & Female plants It grows only where exposed to the Sea & seldom above 12 feet high the Fruit is good to eat

This endemic shrub is rare on Norfolk Island, and is now mostly found on nearby Phillip Island where it is relatively common. There are scattered plants around the Norfolk Island coast and it is in cultivation there. The paintings, both labelled ‘No. 4’, show stems and leaves, as well as male and female plants, the latter showing the orange-coloured fruit of the species. The pencil note appears to be ‘*Erythroxyllum*’; *Erythroxyllum* (family Erythroxyllaceae) is the Coca genus of South America.

No. 5 *Cordyline obtecta* (Graham) Baker (Asparagaceae)
Ti

No 5 A Species of Aletris [a genus in the lily family, Liliaceae] grows in swampy ground is about 30 feet high when in flower has a most beautifull appearance & pleasant smell

This species, also occurring in New Zealand, is related to other species of *Cordyline* found through much of the southern

hemisphere and India. ‘*Dracaena terminalis*’, written on the sheet in pencil, is a synonym of *Cordyline fruticosa*, a species indigenous to tropical areas from Asia through northern Australia and extending to some Polynesian islands. The watercolour shows the large leaves and flowering head in bud and what appears to be an individual flower in the top right-hand corner of the sheet. The species was described in 1827 from a plant cultivated at the Royal Botanic Gardens Edinburgh (Green 1994).

No. 6 *Meryta angustifolia* (Endl.) Seem. (Araliaceae)
Narrow-leaved *Meryta*

No 6 Grows to about 15 feet high the leaves are a strong aromatic the wood very soft & brittle Goats are remarkably fond of this plant

This is one of two species of *Meryta* on Norfolk Island, both of which are endemic. This painting depicts the narrow-leaved species, which is today common in the forests in the national park. The watercolour shows a stem with leaves and the female inflorescence, with smaller sketches of a flower and the fruit. There is also a separate drawing of part of a male panicle. The words ‘Genus Euphorbia?’ are in pencil. The wider-leaved species, *Meryta latifolia*, is not illustrated. Both species were first described by Endlicher (1833) under the genus name *Botryodendrum*.

No. 7 (2 illustrations) *Wikstroemia australis* Endl. (Thymelaeaceae) Kurrajong

No 7 This plant grows sometimes to about 20 feet the leaves are beautifull the flower very minute bearing a small berry with a single seed the drawing of both are Magnified. The bark is very tough and usefull in tying up Torches etc but soon rots when put in water they have given it the name of the Cotton plant

One painting shows the immature leaves of the plant, which are much broader and longer than the leaves found on mature trees, and a raceme of flowers. The second shows a stem with mature leaves and fruit along with small sketches of a flower and a seed; see Figure 3. The distinctive reticulation of the veins on the leaves is illustrated on both watercolours. Also drawn are cross-sections of the tubular flower and a seed. This rare, endemic small tree has been reduced greatly in abundance over the past 30 years (Mills 2010b).

No. 8 *Ipomoea alba* L. (Convolvulaceae)
Moon Flower

No 8 A very large white Convolvulus the stalks are very usefull for feeding swine

The large white flower and climbing habit leave little doubt as to the specific identity of this plant. This is not an indigenous Norfolk Island species; it is listed by Green (1994) as introduced to the island. The painting shows the typical twining growth habit, tendrils and the characteristic flowers of *Ipomoea*. Also illustrated are smaller sketches of a bud, a flower and a style.



Fig. 3. No.7 *Wikstroemia australis* (Thymelaeaceae), an endemic tree. Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 9 *Calystegia affinis* Endl. (Convolvulaceae)
Bindweed

No 9 Convolvulus Flower & leaf natural size

This rather rare species on Norfolk Island is endemic to that island and Lord Howe Island; following further study, it may be described as a Norfolk Island endemic. '*Convolvulus*', a genus in the same family, is written in pencil on the sheet. The watercolour shows the characteristic twining stem, sagittate leaves and flowers, which in this case shown pinkish rather than the usual white.

No. 10 *Pennantia endlicheri* Reissek (Pennantiaceae)
Pennantia

No 10 Grows to a small Tree the leaves of a beautifull light green flowers white & very minute & has a very pleasant smell.

This tree is endemic to Norfolk Island and is moderately common in the rainforest in the national park. The painting shows the large leaves with their prominent veins and an inflorescence with flowers and buds; there are also two small sketches of flowers. This species was named by Siegfried Reissek in 1842 after Austrian Stephano Endlicher who prepared the first flora for Norfolk Island in 1833, and who

had included it in his *Prodromus* under the name *Pennantia corymbosa*, a New Zealand species.

No. 11 *Dendrobium macropus* (Endl.) Rchb.f. ex Lindl. subsp. *macropus* (Orchidaceae) Long-caned Orchid (syn. *Thelychiton macropus* Endl)

No 11 Natural size found chiefly on rocks or decayd Trees

This rather common epiphytic orchid grows on trees and rocks throughout the island; the subspecies is endemic to Norfolk Island. The watercolour illustrates the whole plant, including the yellowish flowers. There are also two small sketches of a flower and detail of the interior of a flower. There is a pencilled name on the sheet that may be 'Epidendrum', another large genus in the family Orchidaceae. This subspecies was recognised in 1986 when the Lord Howe Island plants were described as a separate subspecies.

No. 12 *Plumbago zeylanica* L. (Plumbaginaceae)
Native Plumbago

No 12 Natural size found only at Duncomb Bay the same is very common in the East Indias flowers in October

This is a widespread shrub, ranging from Africa through Asia, Australia and the Pacific islands. This watercolour shows a stem with leaves and the white flowers, with two smaller illustrations of flower parts. A pencil note '*Plumbago zeylanica*' correctly identifies the species. Paterson writes "found only at Duncomb Bay", where the species is still found today.

No. 13 *Elatostema montanum* Endl. (Urticaceae)
Mountain Procris

No 13 Found in different parts of the Island but in abundance about Mount Pitt the stem very succulant and the flower when magnified appears like small pieces of Sea weed stuck on I think there are Male & Female of this plant and that the Drawing is the male the leaves are very irregular as there are some three two & one from the stalk but in general only one Flowers in Nov^r

This endemic species, known also as *Procris montana*, was placed in the genus *Elatostema* by Endlicher in 1833 to where it has been returned. This is a very rare species of mountain gullies and moist rocky outcrops in the national park. The watercolour illustrates a stem and the largish leaves along with the almost sessile inflorescences.

No. 14 *Solanum bauerianum* Endl. (Solanaceae)
Bridal Flower

14 A most beautifull white Solanum flowers in Oct^r & continues in flower and fruit untill June it bears a small red berry in clusters

This is clearly one of the three species of *Solanum* recognised as once occurring on Norfolk Island. Two species have quite different leaves to this species, which are never lobed. The species illustrated is *Solanum bauerianum*, now extinct but originally found on Norfolk and Lord Howe Islands. The painting shows a stem with leaves and the white flowers. A painting of this species has been reproduced in colour using the

sketch and colour information prepared by Ferdinand Bauer who visited the island in 1804-05 (Mabberley *et al.* 2007).

No. 15 *Solanum laciniatum* Aiton (Solanaceae)

Large-flowered Kangaroo Apple

15 Purple flowering Solanum Continues in flower & fruit for about nine months.

This second species of *Solanum* is *S. laciniatum*; now extinct on Norfolk Island it still occurs in Australia and New Zealand. 'Solanum laciniatum' is written in pencil below the drawing. de Lange *et al.* (2005) identify this painting as this species rather than the closely related *S. aviculare*, which also once occurred on Norfolk Island. The watercolour shows a stem with the large lobed leaves and the blueish flowers, developing fruit and a bright red mature fruit, the latter typical of this species. This drawing is the only record of this species having occurred on Norfolk Island.

No. 16 *Melicope littoralis* (Endl.) T.G.Hartley (Rutaceae)

Shade Tree

16 Grows to a small Tree the whole a very fine Arromatic and produces a Yellow Gum, flowers in October

This tree was previously described as *Euodia littoralis* by Endlicher (1833). The painting shows a stem with the three leaflets typical of this genus and two inflorescences with small white flowers. Smaller sketches show flowers, a fruit and cross-sections of two seeds. The species name is a misnomer, as the species grows in the inland mountain rainforest rather than on the coast.

No. 17 *Pisonia brunoniana* Endl. (Nyctaginaceae)

Wai-wai, Birdcatcher

17 Grows about 12 feet high the wood is very soft flowers in Oct^r

Pisonia brunoniana occurs from New Zealand to Hawaii and is closely related to other species of *Pisonia* growing in Australia and elsewhere; the type specimen comes from Norfolk Island. The watercolour depicts the large leaves and flowering inflorescence, with smaller sketches of flower parts and the characteristic narrow fruit; see Figure 4.

No. 18 *Calystegia soldanella* (L.) Roem.& Schult.

(Convolvulaceae) Beach Calystegia

18 Convolvulus found on the Sea side flowers in October

The widespread beach plant *Calystegia soldanella* is now very rare or even extinct on the island. The watercolour illustrates the creeping habit and pinkish flowers of the species. 'Convolvulus' is written in pencil; this species was previously known as *Convolvulus soldanella*.

No. 19 *Celtis paniculata* (Endl.) Planch. (Cannabaceae)

Whitewood

19 Grows to a Tree the flower so minute as not to be described

This is the second watercolour of this tree in the series; the other is Drawing No. 3. The two illustrations are similar and show the stems, leaves, small flowers and developing fruit; No. 3 is the better painting.



Fig. 4. No. 17 *Pisonia brunoniana* Endl. (Nyctaginaceae).

Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 20 (2 illustrations) *Melodinus baueri* Endl.

(Apocynaceae) Big Creeper

20 This plant is found chiefly in the woods it climbs up the trees and some times from one tree to another for some hundreds of feet the fruit is ripe in about April & tastes something like the mespilas the plants are often twisted together like Ships Cables

There are two illustrations of this robust endemic vine, one showing a stem with the inflorescence and smaller sketches of flowers, the other showing the typical large fruit of the plant. There is also a sketch of a cross-section of a fruit, showing the flesh and seeds contained within. 'Melodinus ?' and 'Genus apocin ?' are written in pencil, the latter referring to the family name. This species is also illustrated in watercolour No. 48.

No. 21 *Lagunaria patersonia* (Andrews) G.Don

(Malvaceae) White Oak

21 Hibiscus Grows to a very large Tree flowers in November the wood is usefull in boat building and produces a Gum I think nearly equal to that of the Gum Arabic.

This is a very common tree on Norfolk Island, growing as stunted sea cliff shrubs to very large forest trees. The species also grows on Lord Howe Island. The painting shows a stem with leaves and the pinkish flowers, including smaller detailed illustrations of the petals and other flower parts. 'Hibiscus' is written in pencil, a genus in the same family. This species was named *Hibiscus patersonia* in 1803 by Henry Andrews after William Paterson.

No. 22 *Alyxia gynopogon* Roem. & Schult. (Apocynaceae)

Evergreen

22 Grows to about 10 feet high

This endemic shrub was originally named in 1786 as *Gynopogon alyxia* by Georg Forster, who visited the island with James Cook in 1774. *Alyxia* is a common shrub of the rainforest in the national park on Norfolk Island. The watercolour illustrates a stem with the four-whorled leaves,

white flowers and bright orange/red fruit characteristic of this species; see Figure 5. A pencil note says 'Alyxia'.



Fig. 5. No.22 *Alyxia gynopogon* (Apocynaceae), a Norfolk Island endemic shrub.

Attributed to John Dood, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 23 *Melicytus latifolius* (Endl.) P.S.Green (Violaceae)
Norfolk Island Mahoe

23 (*Pentandria monogynia*) grows to a tree the flowers very minute and of a light green colour

This endemic tree is quite rare and very scattered across the national park and occasionally elsewhere on the island. The species was originally placed in the genus *Hymenanthera* by Endlicher (1833). The painting depicts a stem with leaves and the small fruit of the species, which are borne along the stems. Three flowers are shown in smaller sketches. The pencil note 'Pentandria' alludes to an old category of plants; Paterson's notes refer to 'Pentandria monogynia'. The broader and somewhat darker leaves of this species, along with the lack of small marginal teeth, can be compared with *Melicytus ramiflorus* subsp. *oblongifolius* in drawing No. 43.

No. 24 *Streblus pendulinus* (Endl.) F.Muell. (Moraceae)
Siah's Backbone

24 Grows to about 20 feet high the leaves are very rough and answer the purpose of polishing wood the same as fish skin

This endemic tree is uncommon in the rainforest of the national park and occasionally elsewhere on the island. This name was until recently applied to plants from a wide area of the southwest Pacific east to Hawaii; the name now applies to the Norfolk Island taxon only (Conn 2015). The watercolour shows a stem with leaves and the distinctive long, narrow flowering catkins of the male inflorescence and the small female flower spike. 'Caturus' in pencil is a synonym of

Acalypha, in the family Euphorbiaceae; the pendulous male inflorescences of *Streblus* resemble those of some species in that genus.

No. 25 *Boehmeria australis* Endl. subsp. *australis*
(Urticaceae) Nettle tree

25 Grows near Water & about 12 feet high flowers in Nov

This is a rare tree belonging to the stinging nettle family. This Norfolk Island endemic subspecies is recognised in Australia, with subspecies *dealbata* occurring on the Kermadec Islands. These subspecies are not recognised in New Zealand, to which the Kermadec Islands belong, and where a different generic designation is recognised, *Pouzolzia australis*. The painting shows the rather large, thin, serrated leaves of the species and the clustered axillary flowers.

No. 26 *Geitonoplesium cymosum* (R.Br.) A.Cunn. ex R.Br.
(Hemerocallidaceae) Scrambling Lily

26 Flower & fruit natural size it is generally found climbing up the trees flowers in Nov

This species is moderately common in some places in the rainforest on Norfolk Island; it is a common creeper in eastern Australia. The drawing shows the twining stem with leaves, the whitish flowers and the dark-coloured fruit, and there is a small drawing of a flower. The wide leaves of the Norfolk Island plants, illustrated in the painting, are considerably broader than those of the Australian plant. The pencil note reference to 'Convallarioides' is uncertain; it may refer to a supposed similarity to the genus *Convallaria*.

No. 27 *Tetragonia implexicoma* (Miq.) Hook.f. (Aizoaceae)
Native Spinach

27 A Creeper found generally near the sea

This prostrate herb is moderately common around the edges of Norfolk Island, where it grows on sea cliffs and sand dunes in semi-shaded situations below pines. The species also occurs in southern Australia and New Zealand. The leaves and creeping stem, along with the yellow flowers and the bright red fruit of this plant are illustrated (see Figure 6), and readily distinguish it from the green-fruited *T. tetragonoides*, which also occurs on the island.

No. 28 *Capparis nobilis* (Endl.) F.Muell ex Benth.
(Capparaceae) Devil's Guts

28 found climbing up trees the fruit is eatable

This robust endemic climbing vine is common in the forest and often climbs into the tops of tall trees. The leaves, large white flowers and the large purple fruit are distinctive and illustrated in the watercolour, although the stout, recurved spines present along the branches are not shown. A small drawing shows a cross-section of a fruit. 'Capparis' in pencil at the bottom of the sheet correctly identifies the genus. The species was named and described by Endlicher (1833) as *Busbeckia nobilis*.



Fig. 6. No. 27 *Tetragonia implexicoma* (Aizoaceae)
 Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 29 *Samolus repens* (J.R.Forst. & G.Forst.) Pers. (Primulaceae) Creeping Brookweed

29 Found growing on the rocks on the Sea shore the drawing is natural size the flowers are sometimes white

This small coastal plant is widespread, from Australia to New Zealand and New Caledonia. The watercolour illustrates a stem with leaves and the small pinkish flowers of the species, with a smaller drawing of a flower. Small colonies are quite common in moist places near the sea around Norfolk Island.

No. 30 *Baloghia inophylla* (G.Forst.) P.S.Green (Euphorbiaceae) Bloodwood

30 The Blood Tree grows very straight from 50 to 60 ft high when the bark is cut a liquid issues out something like blood and in vast quantity, it has been used here for painting furniture but does not answer the purpose as the least wet brings it off when it is properly prepared there is little doubt but that it may become very useful the Colour when put on is that of a very dark mahogany the wood splits easily & is used chiefly for paleing

This plant was originally described as *Croton inophyllus* by Georg Forster, based on material collected in New Caledonia in 1774 during Cook’s second voyage to the Pacific. It has also been known as *Baloghia lucida*. This tree is common in subtropical rainforest on the east coast of Australia. The watercolour shows a stem with the large leaves, small white

flowers and the distinctive fruit of the species, while small sketches show a flower and a cross-section of a mature fruit.

No. 31 (2 illustrations) *Phormium tenax* J.R.Forst. & G.Forst. (Hemerocallidaceae) Flax

31 Two drawings of the flax plant one from a scale of 9 ft the other natural size flowers in October.

This common coastal plant on Norfolk Island occurs in New Zealand and some of its surrounding islands. Despite some reservations about it being indigenous (Coyne 2011), there is no convincing evidence suggesting Polynesian introduction (Mills 2011). The watercolours, on separate pages and both numbered 31, depict the whole plant, the folded leaf, the tall inflorescence, flowers and fruit. A pencil note gives the correct species name, which was collected in New Zealand by the Forsters in 1774 and described by them in 1776.

No. 32 *Nestegis apetala* (Vahl.) L.A.S.Johnson (Oleaceae) Ironwood

32 Grows to a tree the fruit when ripe tastes something like raisins the wood is very hard but has not as yet been used for any purpose - fruit is ripe in Dec'

This tree, related to the edible olive and previously named *Olea apetala*, is very common in the rainforest on the island. The species also occurs in New Zealand, from where the type specimen was collected. The watercolour shows a fruiting stem with leaves, along with a small drawing of a cross-section of a fruit.



Fig. 7. No.33. *Pittosporum bracteolatum* (Pittosporaceae), a tree endemic to Norfolk Island.
 Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 33 *Pittosporum bracteolatum* Endl. (Pittosporaceae)
Oleander

33 Grows to a Tree and produces an oily substance when the fruit opens the seeds appear as if rubbed with oil & of a jet black

This endemic tree is very common in the rainforest on the island. The watercolour shows a stem with leaves and the fruit of the species, one showing the distinctive split fruit; see Figure 7. A pencil note '*Pittosporum*' correctly identifies the genus.

No. 34 *Jasminum simplicifolium* G.Forst. subsp. *australiense* P.S.Green (Oleaceae) Jasmine

34 *Jasminum*

This shrubby creeper is common in the rainforest and may be a low shrub or a slender high-climbing creeper. The painting shows the creeping stem with leaves, several inflorescences with the fragrant white flowers and the black fruit. A pencil note '*Jasminum lucidum*' refers to an earlier name. The species is also known from eastern Australia and Lord Howe Island.

No. 35 *Peperomia urvilleana* A.Rich. (Piperaceae)
Two-leaved Peperomia

35 A species of *Piper* found growing on rocks & decayed trees the leaves succulent the fruit very minute.

This small herbaceous epiphyte grows on rocks and trees in the rainforest. The watercolour shows a stem with leaves and two narrow flowering spikes covered in tiny black seeds. A pencil note *Piper* is a genus in the same family. The species is widespread in the southwest Pacific, including New Zealand where the type material was collected.

No. 36 *Passiflora aurantia* G.Forst. (Passifloraceae)
Norfolk Island Passionfruit

36 *Passiflora*

The species is rather uncommon on the island, usually growing in light gaps and on the edges of the forest. The watercolour depicts the climbing stem with leaves, characteristic tendrils of *Passiflora* and the large, attractive red flowers. A pencil note '*Passiflora*' denotes the genus.

No. 37 *Ipomoea indica* (Burm.) Merr. (Convolvulaceae)
Blue Morning Glory

37 *Convolvulus* found about Cascade Bay

This species was previously known as *Ipomoea congesta*; it is not indigenous to Norfolk Island. The plant was obviously introduced soon after European settlement in 1788. The painting shows the climbing stem and the large flowers, which appear pinkish, but the colour has probably faded from the original blue colour of this species. Pencil notes '*Convolvulus?*' and '*Ipomoea?*' refer to two genera in the family Convolvulaceae.

No. 38 *Elaeodendron curtispiculum* Endl. (Celastraceae)
Maple

38 Grows to a large Tree

This tree is quite common on the island, often growing on dry ridges. The watercolour shows a stem and leaves, along with the distinctive dentate leaves, some small flowers, immature fruit and the blue-black mature fruit, along with a small sketch of a cross-section of a fruit; see Figure 8. Pencil notes are '*Genus Rhamnos*', referring to the family Rhamnaceae, and '*Drupe seed (?) cerussatus*'; another note is difficult to decipher. '*Cerussatus*' meaning 'white lead' refers to the colour of the fruit, which are covered in a whitish bloom. The type specimen comes from Norfolk Island, although the species is not endemic to the island.



Fig. 8. No. 38 *Elaëodendron curtispiculum* (Celastraceae). Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 39 *Euphorbia obliqua* Endl. (Euphorbiaceae)
Spurge

39 *Euphorbia* natural size found in Sandy Ground near the Sea

On Norfolk Island, this species mostly grows on the calcarenite rock along the south-western part of the island and on Nepean Island. The watercolour shows the whole plant, including roots, as well as the small flowers and fruit. This small herbaceous species is also found on the tropical islands to the north, New Caledonia and Vanuatu.

No. 40 *Lobelia anceps* L.f. (Campanulaceae)

Lobelia

40 Natural size

This herbaceous plant is quite common on the coast in some places, particularly along the southern edge of Norfolk Island. Illustrated is a leafy branch, the small purplish flowers and a fruit, with smaller sketches of flower parts. A pencil note reads 'Lobelia cf [compare with] *L. angulata*'. *Lobelia angulata* is a closely related New Zealand plant. *L. anceps* is widespread in the southern hemisphere and was previously known as *Lobelia alata*.

No. 41 *Ipomoea cairica* (L.) Sweet (Convolvulaceae)

Coast Morning Glory

41 Convolvulus flowers in October

This species may or may not be indigenous to Norfolk Island; it is now ubiquitous throughout the Pacific and it is unclear to which regions it was originally native. Depicted are the twining habit of the plant, the distinctive palmate leaves and the large pinkish flowers. A pencil note reads 'Ipomoea'. The suggestion by Lange *et al.* (2005) that this species is indigenous because of the early date of this painting cannot be substantiated (Mills 2010c). The species is treated as a serious weed on Norfolk.

No. 42 *Planchonella costata* (Endl.) Pierre (Sapotaceae)

Bastard Ironwood

42 Grows to a large tree, the Pigeons are very fond of the fruit which is ripe in Nov

This endemic tree is uncommon in the rainforest and found mostly at low altitudes. Originally named *Achras costata* by Endlicher (1833), it has since been known by several names, and has been placed in the genus *Pouteria* more than once. The painting shows a stem with leaves, the flowers in bud and the orange fruit of this species, with smaller sketches of flower parts and the characteristic large seed.

No. 43 *Melicytus ramiflorus* J.R.Forst. & G.Forst. subsp. *oblongifolius* (A.Cunn. ex Heward) P.S.Green (Violaceae)

Whiteywood

Yellow wood

This taxon is common in the rainforest in the national park, being far more abundant than *M. latifolia*, illustrated in watercolour No. 23. The painting shows a stem with leaves, the small fruit that are produced along the branches of this plant, hence the specific name. The pencil note reads 'Yellow Tree' and below the word Tree 'Wood' is written later by a second hand. Presumably the pencil note 'Ignot', appearing to be written by the second hand, means unknown (*L. ignotus*). Other species on the island in the family Rutaceae are today called Yellow Wood.

No. 44 *Ungeria floribunda* Schott & Endl. (Malvaceae)

Bastard Oak

44 Grows to a large Tree & has a beautiful appearance when in flower

This is an interesting monotypic genus that is endemic to Norfolk Island. The large brown, ribbed fruit are illustrated, as are the large leaves and an inflorescence of red flowers; see Figure 9. Smaller sketches show flowers and a cross-section of a fruit. The pencil note 'Helicteres' refers to another genus in the family Malvaceae; a stylised 'B' is written beside the name.



Fig. 9. No.44 *Ungeria floribunda* (Malvaceae), a genus endemic to Norfolk Island.

Attributed to John Doody, c.1792. (Mitchell Library, Sydney DLP XX 1.)

No. 45 (2 illustrations) *Dianella intermedia* Endl. (Hemerocallidaceae) Dianella*45 Natural size found growing among the flax plants Hexandria monogynia flowers in Nov*

This endemic plant is now rather common in the national park, where it has been extensively planted along the walking tracks. Illustrated are two plants, one with an inflorescence of white flowers, the other showing the blue fruit; the first also shows a small sketch of a flower. A pencil note reads 'Dianella caerulea', a common eastern Australian species. This taxon is regarded as endemic by de Lange and Murray (2003), thus separating it from the as yet un-named Lord Howe Island plant.

No. 46 *Abutilon julianae* Endl. (Malvaceae)

Norfolk Island Abutilon

46 Grows to about 8 feet high found near the Far Bay as there are only a few plants here and in no other part of the Island I am doubtful whether they have not been brought by some of the first Settlers

This species was thought extinct until a few years ago when it was found on Phillip Island, following the removal of Rabbits from that island. The species originally also grew on Norfolk Island, where it is now quite commonly planted. The watercolour depicts the large serrated leaves, the yellowish

flowers and typical dry fruit of *Abutilon*; see Figure 10. Smaller sketches of flower parts are also shown. A pencil note reads 'Sida', a genus in the same family as *Abutilon*, below that is 'cf asiaticum'. The plant being referred to is the African species now known as *Abutilon asiaticum*.



Fig. 10. No.46 *Abutilon julianae* (Malvaceae), a Norfolk Island endemic shrub. Attributed to John Doody, c.1792. (Mitchell Library, Sydney; DL PXX 1.)

No. 47 *Tylophora biglandulosa* (Endl.) F.Muell.
(Apocynaceae) Hoya

47 *Asclepias*

This is a moderately common rainforest creeper on Norfolk Island, with one large old plant on Phillip Island (Mills 2009). The species is also known from other islands in the southwest Pacific. The watercolour shows the climbing habit of the plant and inflorescences of small flowers, which are coloured pinkish. Pencil notes are the genera 'Cynanchum vel [or] Asclepias' and nearby the letter 'B'; these genera being in the same family. The species was named and described as *Hybanthera biglandulosa* by Endlicher (1833).

No. 48 *Melodinus baueri* Endl. (Apocynaceae)
Big Creeper

48 *The Creeper on which the Locust makes its first appearance*

This endemic vine is also illustrated in drawing No. 20. In addition to a climbing stem and leaves, this painting shows small insects, a species of leafhopper; juveniles and adults are depicted. Neither flowers nor fruit are depicted. The pencil note 'Apocinoid B' on this sheet refers to the family to which this genus belongs.

No. 49 *Excoecaria agallocha* L. (Euphorbiaceae)
Melky Tree

49 *Grows about 30 feet high*

This tree grows around the southern coasts of Norfolk Island, where it is often a low-growing, wind-pruned plant. The watercolour illustrates a stem with the thickish leaves of the species and several spikes of male flowers. A pencil note says 'Excaecaria'. The species grows throughout the southwest Pacific, including northern Australia.

No. 50 *Muehlenbeckia australis* (G.Forst.) Meisn.
(Polygonaceae) Shrubby Creeper

50 *Nearly about the same size*

This species grows as a scrambling shrub or climber and occurs in open areas in and near rainforest; it also occurs in New Zealand. The specific name here meaning 'southern', and not referring to the Australian continent. The watercolour illustrates the creeping stem, distinctly shaped leaves and terminal and axillary panicles; see Figure 11. The species was named *Coccoloba australis* by Georg Forster in 1786 based on a specimen from New Zealand collected on Cook's voyage in 1774; the taxon has been placed in the genus *Polygonum* in the past.

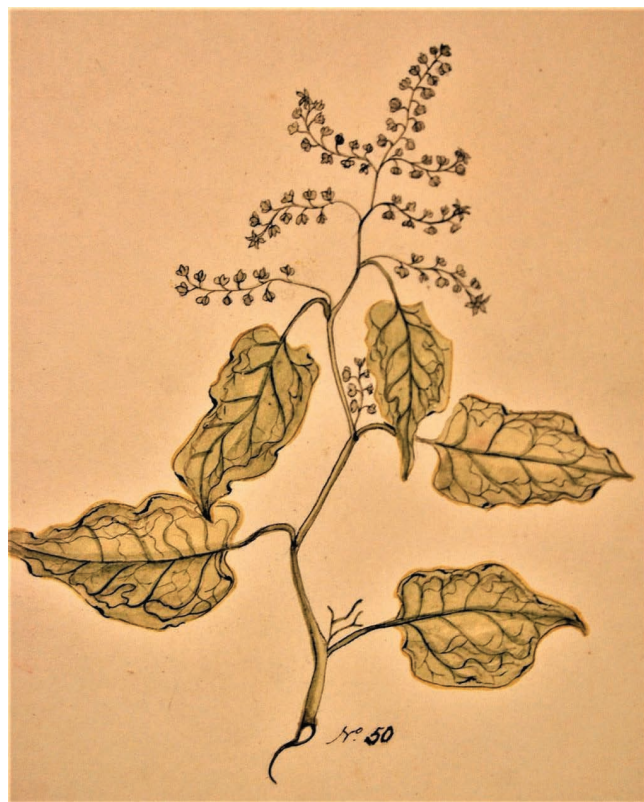


Fig. 11. No.50 *Muehlenbeckia australis* (Polygonaceae), a scrambling creeper shared with New Zealand. Attributed to John Doody, c.1792. (Mitchell Library, Sydney; DL PXX 1.)

Discussion

The Paterson/Doody material is a most valuable contribution to the study of the flora found growing on Norfolk Island at the time of European settlement. The material represents the first, and certainly the only relatively comprehensive treatment of the non-fern flora, prior to the work of Ferdinand Bauer in 1804-05. Paterson's accompanying notes provide the earliest descriptive and ecological material for many of the plants and although the species are not named in Paterson's notes or on the sheets, and indeed most could not have been at that time, the illustrations in combination with the notes leave no doubt as to the species being referred to in the notes. In addition to their artistic merit, beauty and general interest, the Paterson/Doody material offers some important early insights into the flora of Norfolk Island, prior to its large-scale modification in the first half of the 19th Century.

The 45 indigenous species of trees, shrubs, vines and herbs illustrated represent about one third of the currently recognised non-fern indigenous flora of the Norfolk Island Group. All of the species illustrated are known to science, but two species are now extinct on Norfolk Island, *Solanum laciniatum* (No.15); this drawing of *Solanum laciniatum* is the only record of the species from Norfolk Island; and *Solanum bauerianum* (No.14); the latter was endemic to both Norfolk and Lord Howe Island and is now extinct. The notes also prove that *Plumbago zeylanica* (No.12) is definitely indigenous to Norfolk Island, a fact that has not always received complete acceptance. *Plumbago* is still found on the remote sea cliffs at Duncombe Bay today, where Paterson states it occurs.

Three interesting inclusions are paintings of species of *Ipomoea* (Nos. 8, 37 and 41), at least two of which could not be indigenous to the island. These species had probably been introduced to the island very early after European settlement, only three years before Paterson arrived. How these exotic plants arrived on the island is not known, perhaps incidentally, such as in contaminated stock feed, or even brought as garden plants. In relation to the potentially indigenous species, given the presence of the above two species, the drawing of *Ipomoea cairica* (No. 41), does not establish beyond doubt that *Ipomoea cairica* is indigenous to Norfolk Island (Mills 2010c). A collection of *Ipomoea cairica* from the Botany Bay (Sydney) foreshore by Robert Brown in 1802 confirms an early presence in the Sydney area.

The recent history of the endemic *Abutilon julianae* (No. 46) is one of literally coming back from near extinction. This shrub had apparently been last collected on Norfolk Island by Robert Laing, the New Zealand botanist, in early 1912. Despite searching in recent years, the plant has not been found growing naturally on Norfolk. Paterson's notes state that only a few plants were found at Far Bay on Norfolk, so it was probably rare there from the earliest time of European settlement. However, following the elimination of Rabbits on nearby Phillip Island in the late 1980s, the plant was found on that island. It has since spread on Phillip Island,

and been planted there (Mills 2009); it has also been planted in many places in the national park on Norfolk Island.

The most iconic tree on the island, the Norfolk Island Pine *Araucaria heterophylla*, is not included in the watercolours; perhaps this is because it was already so well-known at the time. The pine is, however, discussed at the beginning of Paterson's written notes.

Conclusion

The watercolour paintings and associated notes attributed to John Doody and William Paterson, respectively, offer a most valuable contribution to the study of the flora of Norfolk Island. The provenance of the notes can be attributed to Lieutenant Governor William Patterson with certainty. The convict John Doody, Paterson's servant during his time on Norfolk Island, almost certainly produced the watercolours discussed in this paper and that are unquestionably associated with Paterson's notes; this can be inferred from the note in Paterson's letter to Banks in 1794.

Paterson never completed his planned Natural History of Norfolk Island, but his notes and the Doody watercolours left us with an invaluable record of the plants of the island as found in the early 1790s. These were prepared four years after the First Convict Settlement was established in 1788, and before there was large scale change to the island environment. Besides their historic importance, we should also appreciate the beauty of convict John Doody's watercolours, which must have been prepared under less than ideal conditions.

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