

**Fig. 2.** **A:** *Austrostipa ramosissima*. Floret, dorsal view; most of awn omitted, patterning of lemma indicated centrally. Lines each side indicate level of palea apex. To right, a transverse section, showing the coriaceous, tuberculate lemma tightly enclosing the ripened fruit ("caryopsis"). **B–F:** *A. verticillata*. **B.** Floret, dorsal view. **C.** Floret, oblique-ventral view, showing upper part of caryopsis (c) exposed above palea (p) (short lines indicate level of palea apex); at floret's apex there are three shrivelled anthers. Note – gap between lemma margins is caused by swelling of caryopsis. **D.** Palea in dorsal view, showing wide membranous margins and a few tubercles and short hairs centrally, the nervation not evident. **E.** Caryopsis in dorsal view; shallow broad basal groove above base is presumably where the central thickened part of the palea has been pressing. **F.** Floret with its shortly setose, eventually deciduous, geniculate awn. Scale bars 1 mm long. (A from AK 257364; B–F from AK 255949). Drawn by author.

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## Norfolk Island noodlings

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### Introduction

In Australia one noodles by rummaging through waste from an opal mine, hoping to find an overlooked gem or two. Norfolk Island's well-known flora would seem to offer similar odds, but a holiday there last December did turn up enough "notes and queries", mainly concerning weeds and cultivated plants, to make a write-up seem worthwhile. It was my fourth time on "Norf'k Aelan" (previously: 1989, 1991, and 2006), and my field books for those trips have had to be noodled through as well.

I made no collections on this last visit but a photograph supports one of my sightings. In what follows, some reference is made to material in AK (Auckland War Memorial Museum herbarium), including the manuscripts of J. D. McComish (Appendix 1).

The island's weeds have recently been investigated by staff of the CSIRO herbarium at Canberra, who visited in late 2013–early 2014 (Lepschi, Collins &

Cowley, unpublished report dated 2014). This report includes information from the unpublished writings of Australian botanist Kevin Mills (fieldwork in c. 2006–7) and from de Lange et al. (2005), but does not refer to Gardner (2006) or the account of Auckland Botanical Society's visit in 2010 (Wilcox et al. 2010).

The *Flora of Australia* volume (Green 1994) on the plants of Norfolk and Lord Howe Islands has gathered up the older records (but even the first one for a non-native species is generally cited without a date). A less-technical account of Norfolk Island's plants, written by former Parks officer Peter Coyne (2011), contains some information on the island's weeds.

The plants are discussed below alphabetically by genus; that is, the observations are judged to be more important than any classification into "naturalized", "garden escape", "probably native", etc.

The island is not large, and I get the impression that its fanatical gardeners do share their treasures, but because not all properties are readily accessed one can easily miss knowing that a particular species is in fact growing on the island. For example, two cultivated tree species I had not seen before Dec '15 were: *Elaeocarpus reticulatus* (Anson Bay Road, flowering but no fruit seen) and *Viburnum odoratissimum* (front boundary of "The Ark" property on J. E. Road, ripe fruit present).

Sometimes too one just has to admit to long spells of inattention: in one direction from where I was staying on New Cascade Road I noticed for the first time in Dec '15 an (admittedly small) breadfruit tree (*Artocarpus altilis*) and in the other direction, at the T-junction a short way to the east, a 3 m tall pandan (*P. forsteri* ?) complete with ripening fruits; see further below.

In Dec '15 the island was on the edge of drought, its watercourses dry except right at the cliff edges and along the lower ground close to the shore. This seems increasingly to be the case, and I have to wonder whether a time is coming when even the most thrifty of the island's native trees, including the Norfolk Island pine (*Araucaria heterophylla*), will find it hard to make a living.

## The plants

### 1. *Acacia* sp. (Leguminosae)

The huge, sprawling-trunked old tree near the southern end of New Cascade Road continues its healthy but nearly sterile existence. I have seen it with flowers just once (*ROG 6219*, coll. 1991, flowers yellow) but never with fruit-pods. It has generally been regarded as being the island's oldest Tasmanian blackwood (*Acacia melanoxylon*), but its flowers are in cylindrical spikes and so an identification must be sought elsewhere in this huge genus. One possibility might have been *A. spirorbis* (incl. *A. solandri*) of northern Australia and Melanesia, but this has cream flowers. I suppose it might be *A. auriculiformis* (of similar distribution; see Boland et al. 1989: 156 for an illustration) but this needs to be confirmed by a specialist.

An illustration here (Fig. 1) illustrates differences between several acacias, including *A. auriculiformis*, *A. melanoxylon*, and the familiar *A. longifolia*; note especially the subtle but taxonomically valuable differences in 'leaf' or phyllode venation.

I do not know the history of the New Cascade Road tree. A candidate for its planting would be a certain Colonel W.W. Spalding, who in 1897 became the island's first Resident Magistrate — the farmstead he subsequently occupied, at the top of Selwyn Pine Road in the area known as "Palm Glen", is now a historic site within the National Park. Maiden (1904: 747) in his account of the island's cultivated plants just says that Spalding planted "*Acacia melanoxylon*".

### 2. *Chenopodium trigonum* (Chenopodiaceae)

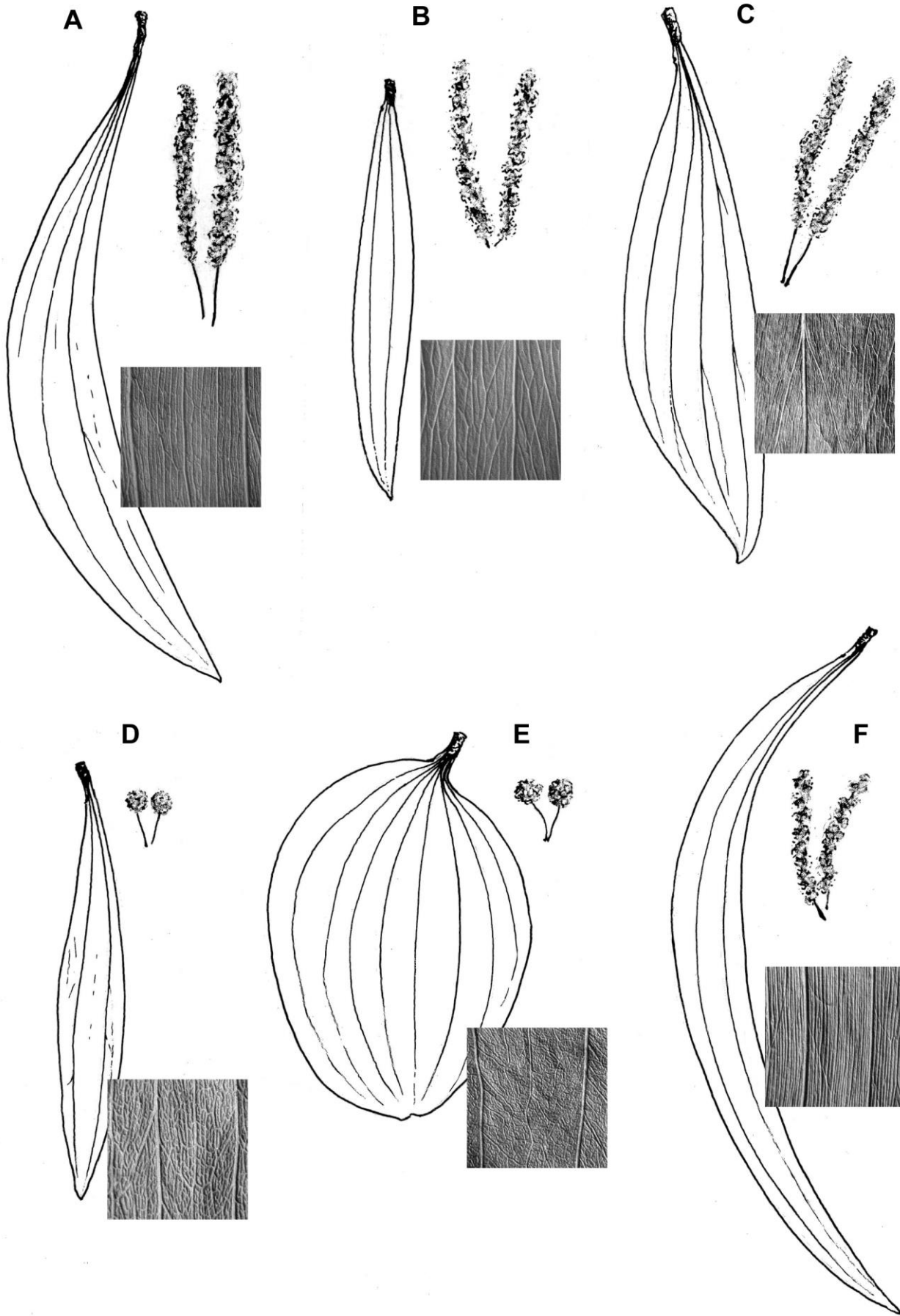
Lepschi et al. (2014) obtained Norfolk Island's first collection of this straggling perennial Australian chenopod, in the vicinity of Headstone. They refer their collection not to the coastal subspecies but to the relatively weedy subsp. *stellulata*.

### 3. *Delarbrea paradoxa* (Araliaceae)

In 1989 Owen Evans showed me a colony of this distinctive pachycaul araliad (erect cylindrical trunk, terminal tuft of large pinnate leaves) on a scrubby ridge of forest degraded by guava (*Psidium cattleianum*), c. 200 m up the Mt Pitt Road from the Park entry, on the eastern side of the road. In 1991 this locality had three young-looking but fruit-bearing

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**Fig. 1.** Some *Acacia* spp. of the coasts of northern Australia and Melanesia, and two better-known spp. cultivated and naturalised in New Zealand: "leaf" (phyllode) outline showing principal nerves, venation at about midway down the blade; inflorescences (pair at each node). Scale bar (lower centre) for leaves and inflorescences is 5 cm long. Phyllodes are orientated with their upper edge (the one containing the small sub-basal gland) to the left. Photographs of venation (orientated as for the blades) are 1 cm wide. **A.** *Acacia auriculiformis* Cult. Florida, AK 248467. **B.** *Acacia longifolia* New Zealand, AK 154595 (lf), live material, unvouchered (infls). **C.** *Acacia mangium* Solomon Is., AK 220541. **D.** *Acacia melanoxylon* New Zealand, AK 291165 (lf), 221857 (infls). **E.** *Acacia simplex* Tonga, AK 184595. **F.** *Acacia spirorbis* Vanuatu, AK 278302 (lf); New Caledonia, AK 76260 (infls).



trees c. 10 m tall, with seedlings and saplings abundant all round. Because of this "weediness" the colony was eradicated (so I believe).

Lepschi et al. (2014) did not see the species, but adult trees are still present in the Park's forest (A. Evans, pers. comm.), and in Dec '15 I saw young plants in a plantation hedge not far beyond the Park's western boundary (Fig. 2).

I think that *D. paradoxa*, a native of Vanuatu and New Caledonia at least, should be regarded as part of the natural interchange between islands of the region (Owen Evans believed it might have been brought in by migrant red-crowned pigeons which had been seen on Norfolk Island in the 1980s; nor has anyone confessed to having brought it here; cf. Coyne 2011: 90). Also, anything shade-tolerant and vital enough to be able to come up through guava might be considered an ally in the restoration of forest to the island.

#### 4. *Dianella intermedia* (Xanthorrhoeaceae)

The relatively short and compact inflorescences, with downcurved and rather stout branches, and pendent flowers with strongly recurved tepals, distinguish at a glance the Norfolk Island plant from those of New Zealand. Also, in the flower of this plant, the struma (yellow, gland-like swelling below the anther) is subglobose and considerably shorter than the anther (Moore & Edgar 1970: 41; see Coyne 2011: 143 for a photograph of the Norfolk Island plant). In New Zealand, across the range of variation (I do not think we have more than one species) the struma is oblong and equals the anther.

#### 5. *Dietes grandiflora* (Iridaceae)

In 1989 I collected a wild plant of this "Jockey's Cap" iris from below Big Pine Ridge in the National Park. My field-book gives the specimen as *ROG 5854*. It got lost and so was not included in Green (1994). I did not see the species wild again until Dec '15, when I found a colony of three plants together at one place on the edge of the Bridle Track, in Norfolk Island pine forest. The oldest plant here was making fruit. Some way southwards, immediately above the junction of Poverty Row and Selwyn Pine Road, a c. 50 m long stand of *D. grandiflora* under a shelterbelt of youngish Norfolk Island pines is seeding out towards the road verge.

Those who appreciate the beauty and interest of the Lord Howe Island flora might think it a pity that the endemic of that island, *Dietes robinsoniana*, is not the iris that is naturalizing on Norfolk Island. It seems unlikely that this is absent from gardens, but I cannot say I have seen it.

#### 6. *Eucalyptus* spp. (Myrtaceae)

Wilcox et al. (2010: 114) list nine species of eucalypt (including *Corymbia maculata*) for the island. No



**Fig. 2.** Pinnate leaves of a *Delabrea paradoxa* sapling regenerating under a hedgerow of *Howea forsteriana* and *Persea americana*, at a property on Anson Bay Road. Ripe *Howea* infructescences in the wheelbarrow. Photo: ROG, 16 Dec 2015.

naturalizations are mentioned, nor do Lepschi et al. (2014) note any. Seedlings and saplings of *E. fibrosa*, however, continue to come up on the road cutting below the parent stand on Anson Bay Road, just north of the junction with Mission Road. I first saw them there in 1989. It seems unlikely that drought is preventing their growth into larger trees, so the absence of these suggests action by Norfolk Island's highway-men. Presumably *E. fibrosa* is also reproducing sporadically within its plantation boundaries along the western side of the National Park, wherever there is suitable bare ground.

The other commonly planted eucalypt, *E. botryoides*, behaves similarly to *E. fibrosa* (e.g., *ROG 5753*), as does *E. globulus*, although much less frequently (*ROG 5991*). Fire in the fuel-rich plantations (c. 25 ha) within the Park, on the northwest side of the island, would probably cause most of the eucalypt species here to regenerate. It is remarkable that such an event has not yet occurred.

#### 7. *Freesia laxa* (Iridaceae)

Wilcox et al. (2010: 117) saw this plant "in hedgerows along Cascade Road and Mission Road". The second of these localities is where I saw it wild in 1989. Lepschi et al. (2014) make no reference to it.

#### 8. *Freycinetia baueriana*

This "palm lily" of the islanders is plentiful in the sheltered damp forest along the south side of the

ridge between Mt Pitt and Mt Bates. Because of ongoing control of rats here by Parks Australia I was able, in Dec '15, to see for the first time these plants' luscious orange-pink female inflorescences. The species also differs from New Zealand's *F. banksii* in its leaves: they reach c. 7 cm wide, are somewhat glaucous above, and are scarcely toothed on their margins and midrib below (cf. de Lange et al. 2005: 591; Wilcox et al. 2010: 108).

#### 9. *Geranium gardneri* (Geraniaceae)

The earliest Norfolk Island collection of this weedy Australian geranium seems to have been made by Isaac Robinson in 1898 (Green 1994: 259). It is abundant in open dry ground around the top of Mt Pitt, the place where it was seen by McComish in the late 1930s (e.g., *McComish* 106, WELT; cited by him in his manuscripts under the name *G. dissectum*).

The true European *G. dissectum* has never, I think, been collected from the island; almost certainly, all early records of it will have been misidentifications of *G. gardneri*. Green (1994: 258) did not make this connection, and accepted *G. dissectum* as a member of the island's flora, but "probably extinct".

#### 10. *Moraea flaccida* (Iridaceae)

In Dec '15 I saw two small patches of this plant (until recently, *Homeria flaccida*) in the National Park above the end of the Red Road car-park, one towards Mt Bates, the other a short way along the Bridle Track. One colony was making fruit, but a search around it (including a fair way downslope) did not turn up any additional colonies. I have informed Parks Australia.

Green (1994: 516) cites only relatively recent records, does not explain the local name "Cascade Onion", and says of it "Imported with soil ...". But the species is discussed by McComish in his manuscripts (as *Homeria collina*); he said it was "confined to the Cascade District, where it covers large areas" and that it had been deliberately introduced as a garden plant by one John Adams (grandfather of T.E. Adams, who had been the Methodist pastor c. 1930). The spread of this plant across the island seems to have been remarkably slow.

#### 11. *Howea forsteriana* (Arecaceae)

This Lord Howe Island endemic, the "kentia palm", has been cultivated on Norfolk Island for about a hundred years (Appendix 2; note also that Maiden (1904) does not mention it). The first record of it wild here, however, is that of de Lange et al. (2005), from a collection made in 1998.

In Dec '15 I assisted the island's last kentia palm seed-collector, Arthur Evans, who learnt the trade at his father's knee. The palms he collects from are scattered about the island, in small plantations and

along driveways and boundaries, etc. The species continues to be planted, though to a much lesser extent than a few decades ago, when the price of seed was described to aspiring noodlers as "a thousand dollars a bushel".

The palm begins to bear fruit (always called "seed") when it is c. 15 years old, and is typically at its best for the next 30 or so years, when it might reach 10 m tall in the trunk. A mature palm will have all stages of flowering and fruiting represented, the time between the youngest inflorescence and the oldest infructescence being several (up to c. 5) years.

The inflorescence consists of several stout whip-like axes, up to c. 75 cm long, pendent from a short strap-like, fused base. The axis bears densely crowded triads of male and female flowers, but is usually barren for some way at its end — whether through this part being mostly of male flowers, or by abortion, I do not know. Pollination nowadays is probably mainly by honeybees.

The fruits of an infructescence ripen all together. The ripest infructescences (usually several on each tree) are picked in September, towards the end of the dry season (see Fig. 2). The next cohort, though of full-sized fruits, will only be properly ripe the following March, and are picked then; if they are picked prematurely they will not survive. The infructescences of several seasons hang close together around the trunk, and care needs to be taken to stay away from the young ones: the three sharp style-remnants on their developing fruits will cut one's hands and forearms and, over the day, produce an elegant but painful spiralled tattooing. Leather gloves give some protection from animals too — huntsman spiders, white-tailed spiders, and rats.

The palms generally do not have rat-guards. I don't recall seeing any rat-gnawed seed among those we collected, either, but was told by Arthur Evans that rats do chew along the sides of the leaf-stalks, just after the leaf begins to expand from its "sword" stage.

The work of the collector involves hauling ladders and wheelbarrows through the plantations, pulling down the ripe infructescences, treading the fruit off them, noodling out the waste, and bucketing the fruit into half-bushel bags. The fruit dries for some time in the shed before being sent off to Europe (formerly Belgium, now hotter and sunnier Sicily), to be germinated for the indoor pot-plant trade.

#### 12. *Hypericum canariense* (Clusiaceae)

Lepschi et al. (2014) saw plants of what seems likely to be this species, in forest at MacLachlan's Lane in the National Park, but wondered if they were just

relics of cultivation. In 1992 Owen Evans had sent me colour-slides of a shrubby hypericum "growing wild", which I sent on to Peter Green at Kew, and he obtained the above identification from specialist Norman Robson. The species was omitted from Green (1994). Unfortunately, I cannot supply the location details of Owen's find. I did not visit Maclachlan's Lane in Dec '15, nor did I see the species elsewhere.

### 13. *Indigofera suffruticosa* (Leguminosae)

Green (1994: 178) thought that the first and only collection of the indigo plant was one he himself had made, on the slopes of Mt Pitt (no date cited), and he speculated "possibly only recently introduced". However, Maiden (1904: 761) mentions "a few plants at Orange Vale [near the Mission], probably a remnant of an old experiment". McComish (ms. "Norfolk Island", p. 26) collected this plant in flower and fruit in September 1937 from "gully slopes" on the Mission property, and sent it to NSW (Royal Botanic Gardens, Sydney; *n.v.*). It seems that the plant is only just capable of maintaining itself at this site, perhaps partly by regeneration from a seed bank.

### 14. *Lablab purpureus* (Leguminosae)

On Norfolk Island this legume vine has the name Wu'hoo Bean. It was brought from Pitcairn Island, having been cultivated there for its edible seeds. It is not known to naturalize in either location. Nebauer-Borg (in Coyne 2011: 39) suggests that Norfolk Island has a second plant, which she calls "Poor Man's Beans", and says that it too was brought from Pitcairn, although it is "not nearly as palatable". She gave no scientific name, but her illustration appears just to be of a variant of *L. purpureus*, with rose-purple flowers and purplish seeds (cf. *ROG* 5961, AK 198109).

Göthesson (1997) relates the history of *L. purpureus* on Pitcairn. It still grows abundantly there, but the Norfolk Island name is not known and it is just called "Wild Bean". Perhaps "Wu'hoo" refers to the Hawaiian island of Oahu, but I cannot find a supporting reference.

### 15. *Lilium formosanum* (Liliaceae)

This weed of dry open ground was present on Norfolk Island in 1987, at least as a garden plant (de Lange et al. 2005: 593). I collected it wild on Selwyn Pine Road in 1989 (*ROG* 5892, "occasional to dense on bare muddy wastes and banks; with old fruit").

Green (1994) cited it only for Lord Howe Island, and my information is that in fact it was introduced from there following a visit by one of Norfolk Island's plantspersons. It is now widespread on Norfolk Island itself, but seems not to have reached Phillip Island yet (Coyne 2009). There is currently no biological control for it; research

on this would be of benefit to both Australia (where it is a weed in the southeast) and New Zealand.

### 16. *Myoporum insulare* (Myoporaceae)

Green (1994: 340) did not record this Australian species as ever having been found, wild or cultivated, on Norfolk Island. On p. 58 of his "Norfolk Island" ms. however, McComish records "*Myoporum* [sp.]; Local name "Tasmanian ngaio ... Introduced for use as a breakwind [sic] but found to be unsuitable. Flowering specimen ... sent to Wellington". This specimen (*McComish* 58, coll. 19 Oct 1937) is in WELT; it needs to be determined by a specialist. (The only relevant Norfolk Island specimens cited by Chinnock (2007: 115) are two "*McCormish*" [sic] ones of the native *M. obscurum*).

### 17. *Pandanus forsteri* (Pandanaeae)

No authors (Maiden 1904; Laing 1915; Green 1994) mention any species of *Pandanus*, wild or cultivated, for Norfolk Island. In Dec '15 though, I saw two mature pandans there, each c. 3 m tall and with ripening fruit. One of these is on New Cascade Road at the junction with J.E. Road; the locality of the other I do not remember. I am unable to say whether either or both might be the Lord Howe Island endemic *P. forsteri*. However, *P. forsteri* is mentioned in the McComish manuscripts. For example, on p. 110 of his "Norfolk Island" he states: "A very fine specimen growing on Pentreath's property (formerly Mrs Laing's), New Cascade Road. Said to have been brought from Lord Howe Island, and to be at least 30 years old. Bearing fruit (infertile)." It seems that McComish did not collect this plant.

### 18. *Pandanus tectorius* (Pandanaeae)

I was very surprised, while compiling the above paragraph on *P. forsteri*, to find that McComish also refers to another member of the genus on Norfolk Island. For example, in his annotated copy of Maiden (1904), on a slip interleaved at p. 722 (the treatment of *Pandanus*), McComish writes: "On the shore of Ball Bay & in a little cove about 3/4 mile south there were single specimens of a species of *Pandanus*, which had grown from water-borne seeds". A corresponding entry in his "Norfolk Island" indicates that he had made collections of these two plants and had sent them to the Bishop Museum, Honolulu. They (*McComish* 8 and 8A) appear in the current database of that herbarium as *P. tectorius*, having been identified as such by pandan specialist B.C. Stone (B. Kennedy, BISH; pers. com.).

It seems reasonable to suppose that McComish's supposition about "waterborne seeds" is correct — perhaps some islander assured him that fruit-segments of *P. tectorius* do sometimes reach Norfolk Island's beaches. They would have been brought in there by the South Equatorial Current; further south this turns eastward and eventually

casts up on to New Zealand's northern shores a variety of seeds (though not, it seems, those of *P. tectorius*; Martin 2003).

A final outlier to this story is that while *P. tectorius* has not reached New Zealand, it did at least once reach Lord Howe Island. Green (1994: 415) records it there, under the synonym *P. pedunculatus*: "a single tree in the North Bay and presumably [originating] from water-borne seed ... it never propagated itself and died in 1975".

#### 19. *Paspalum* spp. (Poaceae)

On the grassy, cattle-grazed sides of Bishop Patteson Lane, which is the vehicle track into the south-west side of the National Park, there is a good amount of *Paspalum orbiculare*, a grass rediscovered elsewhere on the island by Peter de Lange in 1998 (de Lange et al. 2005: 593). However, *P. dilatatum* is much more abundant here, and there are a few taller plants of what I realize only now must be Vasey grass (*P. urvilleanum*); this is a new "unconfirmed record" for the island.

In a footnote to their report Lepschi et al. (2014: 26) quote Kevin Mills' observation that a pasture grass he had identified only to genus ("*Urochloa* sp.") was common (in c. 2009) along tracks in the National Park. Those authors consider this to be a record of *P. orbiculare*. But I believe I saw a grass that fits Mills' description, and it is not *P. orbiculare*. Its culms tend to lie flat, and its leaves can be 30 cm long and c. 2 cm wide. Beryl Evans too (pers. comm.) has noticed it as a new weed. Its identity awaits attention from a future noodler.

#### 20. *Podocarpus* sp. or spp. (Podocarpaceae).

Wilcox et al. (2010: 114) note the presence of a cultivated podocarp, "possibly *P. subtropicalis*"; this species is sometimes regarded as a synonym of *P. neriifolius* (Wu et al. 1999: 82).

A collection of mine made in 1989 from what probably was a fairly young tree (ROG 5973, Lion's Park at Burnt Pine; male tree c. 4 m tall, 25 cm

basal diam.) has been identified by me, from its anatomical features, as *P. macrophyllus*.

#### 21. *Prunus persica* (Rosaceae)

Green (1994: 162) recorded the peach as wild on Lord Howe Island, but not on Norfolk Island. I have already quibbled about this (Gardner 2006: 111), but it is true that, for no clear reason, wild peaches are rather uncommon on Norfolk Island. A cultivated tree at the Evans property in New Cascade Road (ROG 5983) was described to me as being "the old island peach": its fruit is fairly small (to c. 6 cm diam.), somewhat heart-shaped and with a broad nipple, greenish-white fleshed, and nearly free-stone.

#### 22. *Soliva pterosperma* (Apiaceae)

Green (1994: 387) said that this spiny-fruited plant is "fortunately an uncommon weed" on the island. It seems to have increased since then, especially along roadsides, and in assiduously mown lawns, where it competes with the grass *Cynodon dactylon*.

#### 23. *Yucca aloifolia* (Asparagaceae)

Green (1994: 523) recorded this as a "garden throwout" on Lord Howe Island, but did not mention it for Norfolk Island. Lepschi et al. (2014) note and illustrate a colony growing at the base of the Ball Bay cliffs, but do not say whether the plants might be reproducing by seed.

Because the genus has a very specialized pollination syndrome the formation of seed outside its native range of the genus would be of considerable interest. Healy and Edgar (1980: 65) are similarly lax in just noting that in New Zealand members of the genus are "adventive on sand-dunes near the coast" and "growing wild".

#### Acknowledgements

To Beryl and Arthur Evans, for sharing their knowledge of the island's flora and history, and for some corrections: I will never forget now that convicts were fed on "maize, not sweet corn". At BISH, Barbara Kennedy checked specimens of *Pandanus* for me.

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### **Appendix 1: The McComish manuscripts.**

Two McComish mss. are held by AK, in its Reprints file. I have not learnt how they came to be there.

The first, dated inside its front cover "June 1938", is a printed copy of Maiden (1904). McComish has annotated its pages copiously and has added an overflow of interleaved notes and queries.

The second is an Australian school exercise book, titled "Norfolk Island"; it contains 118 hand-numbered pages and it too is abundantly interleaved with notes-and-queries slips. On its cover McComish has written that the material contained comes from two visits to the island, the first in 1937, from 23 March to 25 November, and the second from 24 December 1938 to some date (illegible) in November, 1939.

Cameron (2015: 79) summarizes the travels and collecting activities of James Doran McComish (1881–1948) and his second wife, Ida (Tahiti-born, artistic, good tree-climber). McComish may not have had much formal education in botany but he made competent notes on Norfolk Island's plants and clearly took a lesson from Maiden and Laing in being well aware of the historical aspects of floristics and weed science.

His specimens are sometimes labelled "Captain J. D. McComish"; at least, this is true of the AK ones handled by Lucy Cranwell as curator. McComish had this rank in 1920, when his World War One service with the Auckland Infantry Battalion, which had included Gallipoli, came to an end. (His profession on entering the Battalion was stated as Railway Clerk, but he had previously been a Trooper in the Boer War).

It has been suggested that McComish had been wounded in WWI, with the implication that he then inclined to more peaceable pursuits, but the relevant part of his WWI History Sheet (available online at the New Zealand Archives website) has no such indication.

His specimens are held by AK, BISH, BM, K, NSW, and WELT, and also MEL, e.g. *McComish* 120, *Pandanus tectorius* (cited by Green 1994: 415 as *P. pedunculatus*).

### **Appendix 2: Reference to *Howea forsteriana* in McComish ms. "Norfolk Island".**

The following extract is from p. 110:

"*Howea forsteriana* ... Many islanders have a few of these growing about their houses, & some have been planted in the gullies. Both grow [sic] much more vigorously, fruit much more prolifically and produce larger fruit, than those growing under natural conditions on Lord Howe Island. Fruit is borne c. 13 years after planting. There are perhaps 200 to 300 trees on the island, and the number is increasing slowly each year, the Islanders realizing that they are a useful source of income. The seeds are gathered each year by two men (Starr & Whittle, who formerly worked on Lord Howe Island for a Mr Gazzard, who represents an Australian firm). About 70 bushels of seed were gathered in 1937, growers being paid 30/- per bushel on the tree [i.e. freshly gathered seed]."

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