

- Cameron, E.K.; Taylor, G.A. 1997: Flora and fauna of Sentinel Rock, Mangawhai Heads, northern New Zealand. *Tane* 36: 15–25.
- Campbell, D.J. 2002: Changes in numbers of woody seedlings on Kapiti Island after rat eradication. *Science for Conservation* 193, Department of Conservation.
- Campbell, D.J.; Atkinson, I.A.E. 1999: Effects of kiore (*Rattus exulans* Peale) on recruitment of indigenous coastal trees on northern offshore islands of New Zealand. *Journal of the Royal Society of New Zealand* 29: 265–290.
- Campbell, D.J.; Atkinson, I.A.E. 2002: Depression of tree recruitment by the Pacific rat (*Rattus exulans* Peale) on New Zealand's northern offshore islands. *Biological Conservation* 107: 19–35.
- de Lange, P.J. 1997: Oaia Island, south Muriwai, all surf, sun and the odd *Lepidium*. *Auckland Botanical Society Journal* 52(1): 4–6.
- de Lange, P.J.; Cameron, E.K. 1999: The vascular flora of Aorangi Island, Poor Knights Islands northern New Zealand. *New Zealand Journal Botany* 37: 433–468.
- de Lange, P.J.; Cameron, E.K.; Murray, B. 1999: *Alectryon excelsus* subsp. *grandis* (Sapindaceae): a new combination for an uncommon, small tree, endemic to the Three Kings Islands, New Zealand. *New Zealand Journal Botany* 37: 7–16.
- de Lange, P.J.; Cameron, E.K.; Taylor, G.A. 1995: Flora and fauna of Tatapihi (Groper Island), Mokohinau Islands. *Tane* 35: 69–94.
- de Lange, P.J.; de Lange, T.J.P.; de Lange, F.J.T. 2005: New exotic plant records, and range extensions for naturalised plants, in northern North Island, New Zealand. *Auckland Botanical Society Journal* 60(2): 130–147.
- Delmiglio, C.; Pearson, M.N. 2006: Effects and incidence of Cucumber mosaic virus, Watermelon mosaic virus and Zucchini yellow mosaic virus in New Zealand's only native cucurbit, *Sicyos australis*. *Australasian Plant Pathology* 35: 1–7.
- Esler, A.E. 1978: Botanical features of islands near the west coast of the Coromandel Peninsula, New Zealand. *New Zealand Journal Botany* 16: 25–44.
- Gill, B. J. 1999: Prehistoric breeding sites of New Zealand sea lions (*Phocartos hookeri*, Carnivora: Otariidae) at North Cape. *Records of the Auckland Museum* 35: 55–64.
- Gillham, M.E. 1960a: Plant communities of the Mokohinau Islands, northern NZ. *Transactions of the Royal Society of New Zealand* 88: 79–98.
- Gillham, M.E. 1960b: Vegetation of tern and gannet colonies in northern New Zealand with a comparative note on colonies in the Bass Strait, Tasmania. *Transactions of the Royal Society of New Zealand* 88: 211–234.
- Gillham, M.E. 1960c: Vegetation of New Zealand shag colonies. *Transactions of the Royal Society of New Zealand* 88: 363–380.
- Godley, E. 1993: Magnus Earle Johnson (1885–1976). *New Zealand Botanical Society Newsletter* 33: 13–15.
- Heenan, P. B.; de Lange, P. J. 1999: Reproductive biology, ecology and conservation of *Carmichaelia williamsii* (Fabaceae), a vulnerable legume from New Zealand. *Pacific Conservation Biology* 5: 179–190.
- Imber, M.J. 1984: Exploitation by rats *Rattus* of eggs neglected by gadfly petrels *Pterodroma*. *Cormorant* 12: 82–93.
- Johns, P.M. 1997: The Gondwanaland weta: family Anostomatidae (formerly in Stenopematidae, Henicidae or Mimnermidae): nomenclatural problems, world checklist, new genera and species. *Journal of Orthoptera Research* 6: 125–138.
- Lee, M. 1999: Biota of seven islets off Waiheke Island, inner Hauraki Gulf. *Tane* 37: 99–136.
- McIntyre, M. 2001: The ecology of some large weta species in New Zealand. Pp 225–242 *In*: Field, L.H. (ed.). The biology of wetas, king crickets and their allies. CABI Publishing, Wallingford, United Kingdom.
- Newhook, F.J.; Dickson, E.M.; Bennett, K.J. 1971: A botanical survey of some offshore islands of the Coromandel Peninsula. *Tane* 17: 97–117.
- Norton, D.A.; de Lange, P.J.; Garnock-Jones, P.J.; Given, D.R. 1997: The role of seabirds and seals in the survival of coastal plants: lessons from New Zealand *Lepidium* (Brassicaceae). *Biodiversity and Conservation* 6: 765–785.
- Ogle, C.C. 1987: The retreat of Cook's scurvy grass. *Forest & Bird* 18(1): 26.
- Pierce, R. 1998: The impact of kiore *Rattus exulans* on two small seabird species on New Zealand islands. *In*: Adams, N.J.; Slotow, R.H. (eds.) Proceedings of 22nd International Ornithological Congress, Durban. *Ostrich* 69: 446.
- Sperber, H. 2006: Year of the plantsman. North & South November: 80–88.
- Stanley, R.; de Lange, P.J.; Cameron, E.K. 2005: Auckland Regional Threatened & Uncommon vascular plant list. *Auckland Botanical Society Journal* 60(2): 152–157.
- Sullivan, J.J.; Timmins, S.M.; Williams, P.A. 2005: Movement of exotic plants into coastal native forests from gardens in northern New Zealand. *New Zealand Journal of Ecology* 29(1): 1–10.
- Taylor, G.A. 1989: A register of northern offshore islands and a management strategy for island resources. *Department of Conservation Northern Region Technical Report Series* 13.
- Taylor, G.A.; Cameron, E.K. 1990: Kauwahaia Island – Te Henga, west Auckland. *Auckland Botanical Society Journal* 45(2): 71–77.
- Tennyson, A.J. 1995: Flora of Karewa Island, Bay of Plenty. *Tane* 35: 17–23.
- Thomson, A.D.; Ebdon, S.C. 1999: Viruses affecting indigenous plants: a note on the susceptibility of *Sicyos australis* Endl. to cucumber mosaic virus. *New Zealand Botanical Society Newsletter* 57: 20–21.
- Whitaker, A.H. 1973: Lizard populations on islands with and without Polynesian rats *Rattus exulans*. *Proceedings of the New Zealand Ecological Society* 20: 121–130.
- Whitaker, A.H. 1978: The effects of rodents on reptiles and amphibians. *In*: Dingwall, P.R.; Atkinson, I.A.E.; Hay, C. (eds.): The ecology and control of rodents in New Zealand nature reserves, pp 75–88. *New Zealand Department of Lands and Survey information series # 4*. 237 pp.
- Whitaker, A.H. 1987: The role of lizards in New Zealand plant reproductive strategies. *New Zealand Journal of Botany* 25: 315–328.
- Wilson, C.M.; Given, D.R. 1989: Threatened plants of New Zealand. DSIR Publishing, Wellington.

Some Norfolk Island plant records

Rhys Gardner

These notes come from my third visit to Norfolk Island, in July '06. To the degree that this truly subtropical realm (lat. 29 deg. S) ever has a winter, that month was a cold and rainy one. But it satisfied the locals (and the flora), the previous several years having been excessively dry.

As in 1989 and '91, resident naturalists Owen and Beryl Evans helped me in all regards. I mention below a number of their observations, made in more than five decades of working to preserve Norfolk's natural bounty.

Since publication of the relevant Flora of Australia volume (Green 1994) a number of additional species, minor weeds for the most part, have been found on Norfolk. De Lange et al. (2005) picked up most of them, but a few were missed there or had their circumstances misinterpreted. Other notes below concern matters of ecology or history. Indifferent to hierarchical classification where such varied material is concerned I have simply made the arrangement alphabetical by genus. Where not otherwise qualified, "Norfolk" or "Norfolk Island" refers to the island group, that is, Norfolk Island itself (the "mainland"), and the smaller Nepean and Phillip Islands. Where my collecting numbers are cited, the specimens are in AK (and sometimes elsewhere).

***Azolla pinnata* (Azollaceae).** De Lange et al. (2005) make an incautious statement about the probable naturalness of this aquatic fern on the island. Owen Evans says that the plant was introduced quite recently by Mrs Sue Menghetti of Taylor's Road/Watermill Valley, for her ornamental pond. It has since spread from there "on ducks' legs".

***Callerya australis* (Leguminosae)** Samson's sinews. This large climber has had a recent name change, from *Milletia australis* (Schot 1994). Fruit on the Norfolk plant seems to be formed only infrequently. Owen & I went to hunt in a grove that had formerly yielded fruit, only to see that the tidy-minded landholder had cleared away all his ancient vines.

***Chamaecrista rotundifolia* (Caesalpiniaceae).** My collection (Green 1994) of this New World species came from a newly cleared and harrowed slope above the Forestry Nursery on the west side of the island, and was a first Southern Hemisphere record. To the best of my knowledge this small bush is not a garden plant anywhere in the world, but it does have weedy tendencies (R. Barneby, pers. comm.). In fodder, or through World War II activities, are the two guesses so far made for its mode of introduction (as seed) to Norfolk. A third would be that it had stowed away on imported forestry machinery.

***Citrus limon* (Rutaceae).** Wild lemon trees, of the 'Rough Lemon' variety (*C. jambhiri*) grow along Norfolk's older tracks, bush edges and clearings, and their spines can give a sharp reminder that lemon-juice was once a part of the island's economic life-blood. Owen Evans says that these trees largely originated by cattle having eaten the fruit, and points out that they are especially numerous at places where these animals used to congregate, such as track junctions. Cattle tended to roam free on Norfolk Island up to about the end of World War II (at this time a lack of labour meant that fences were neglected). I saw no clear examples of more recent naturalization of the species; possibly the introduction of ship rats during WWII may have been

consequential too, in predating the seeds and seedlings (P. de Lange, pers. comm.).

The general lack of appreciation of the dispersal role of cattle, horses etc. has been commented on by noted American ecologist Dan Janzen – see Barlow (2000).

***Cortaderia selloana* (Gramineae)** pampas grass. A first collection from Norfolk, that is, Phillip Island, was made by local naturalist Honey McCoy in 2002 (de Lange et al. 2005). But contrary to what that article says, pampas grass is certainly present on the main island too – I saw plants in gardens at three different places, one of them being the road frontage in the main shopping area! It does appear to be absent as a wild plant on the island, but for how long?

***Cotoneaster* sp. (Rosaceae).** Part way down the Ball Bay Road, along the top edge of a roadside bank near where *Dicranopteris linearis* grows (de Lange et al. 2005) there is a grazed-down bush of a small-leaved cotoneaster. Owen Evans said there were more wild plants to be found in the general locality (lulled by this, I failed to secure a specimen). A larger-leaved species, *C. glaucophyllus*, is recorded by Green (1994) as having naturalized on Lord Howe Island, and Owen and Beryl believe it has done so on Norfolk too.

***Cryptocarya triplinervis* (Lauraceae).** As noted by Green (1994) and de Lange et al. (2005) small trees of this species are frequent in the Hundred Acres Reserve. But no old planted or wild trees grow there. Owen Evans says that the oldest trees are to be found some way to the south, on private land, and were brought back (as seed?) from Lord Howe Island by one of the Nobbs family on a visit to that island in the 1880s. There is also a large old roadside tree not so far away from that private land – a double-trunked individual, it is c. 10 m tall and at least 50 cm in basal diameter.

***Cyrtomium falcatum* (Dryopteridaceae)** holly fern. In 1989 this ornamental fern had sprung up here and there in the Evans' garden at New Cascade Road, especially on stone walls (ROG 5928, AK); it seems not to have gone any further.

***Delabrea paradoxa* subsp. *paradoxa* (Araliaceae).** Until Owen Evans and I were shown plants in forest on Mt Pitt in 1989 this species was known only from New Caledonia and eastern Malesia. It is a typical small-medium araliad, with a single stout pale-barked trunk, long glossy pinnate leaves, hermaphrodite flowers, and black fleshy raisin-sized fruit. At that time it was unknown as a garden plant on the island (it has since been brought into cultivation at several places), and Owen suggested it might have been introduced naturally by vagrant birds, for example, by red-crowned pigeons, which

were seen on the island for several months in the middle of 1980. At the Mt Pitt site the delarbrea treelets were beginning to emerge above the dense ridge-thicket of red guava (*Psidium cattleianum*), and we thought we might be seeing a natural way of dealing with the latter species, which is a rat-food, forest-invading, groundcover-suppressing pest.

Our July '06 revisiting of the site revealed that the numerous delarbrea saplings, and nearly all the larger trees, had recently been cut out, over an area of c. 50 x 20 m. I can understand the Park's managers being worried about the impact this species could have, but it can hardly do more harm than the guava, and is at least native to the SW Pacific region.

***Dysoxylum bijugum* (Meliaceae)** sharkwood. This is known as sharkwood, from the odour of its yellow-orange flowers, unpleasant to some but pleasing others by its evocation of durian (onions, burnt biscuits, petrol). My July '06 visit just caught the end of a good flowering and I noticed that a number of the trees bore both (ripe) fruit and flowers, while others bore flowers only. However, flowers from all the five specimens I collected (2 with fruit and 3 without) had ample pollen and properly-developed ovules.

***Euphorbia norfolkiensis* (Euphorbiaceae)**. This small bushy coastal tree had become rare on Norfolk Island and so was the subject of a planting programme in the '90s, notably at the Bumbora Reserve, where not so long ago more than a hundred individuals flourished (P. de Lange, pers. comm.). But because of careless harvesting of a fallen Norfolk pine, and subsequent neglect of the site (no watering in the several years' drought; overgrowth by kikuyu grass), only one bush remains. A bright spot is that this had abundant fruit, just like the single plant cultivated by Beryl Evans, so the species must be self-compatible.

***Ficus macrophylla* (Moraceae)** Moreton Bay fig. There are perhaps a couple of dozen of these trees on the island. Some are single-trunked, while others (for example the one in the airport enclosure) are more like the Lord Howe Island subsp. *columnaris* in the near-horizontality of their trunks and the profusion of stilt roots. Fruits I examined at one place lacked pollinating wasps.

***Ficus virens* (Moraceae)**. Two magnificent historic specimens of this deciduous tropical tree grow on the island, one at the Melanesian Mission Chapel and another some several hundred metres away to the southwest. Green (1994: 64) thought they belonged to the Polynesian *F. prolixa*, but I am sure the above identification is correct, and that they would have originated with the Church of England's activities in the Solomons. It is significant too that the old tree of *F. glandifera* that was here a short way north of the

Chapel (it has died, perhaps through drought) is also a Melanesian species.

***Hibiscus insularis* (Malvaceae)** Phillip Island hibiscus. This hibiscus tree was known only from Phillip Island. Literally on the brink of extinction until recently, it is now secure there and also on the main island, where its harlequin flowers of yellow and crimson are a feature of the more native-friendly gardens. At one of the latter, Arthur Evans' property at Steel's Point, as seen at about 3 pm, a great number of honey-bees were visiting the flowers. They were not gathering pollen directly from the anthers or from inside the corolla. They seemed to be searching for nectar in the gaps between the petal bases, but I could not see nectar there myself. On Phillip Island, where there are wild plants, pollination is probably done by the native gecko, which Owen and Beryl say visits the flowers assiduously.

Green (1994) records *H. insularis* as a "shrub to 2.5 m tall (taller in cultivation)". Owen Evans showed me a piece of stem he had obtained when an old garden was being destroyed; it was c. 10 cm in diameter. Of particular interest is that the juvenile *H. insularis* is a small-leaved bush with virgate to almost divaricate branching.

***Lagunaria patersonia* (Malvaceae)** white oak (known in New Zealand as Norfolk Island hibiscus). This stately tree is abundant among Norfolk pines near the coast and also in hardwoods-dominated stands of the more sheltered and fertile places. If an individual has several trunks it may get to a couple of metres in basal diameter, while drawn-up trees may reach almost 30 m in height.

The correct specific epithet is disputed. The species was first named in 1803, by botanical artist Joseph Andrews, who called it *Hibiscus patersonius*. The epithet refers to Col. William Paterson, who was on Norfolk in the late 18th C. and who sent seed to Britain. Apparently, before Andrew's publication, the plant was known informally in English gardening circles as "Patersonia" (Sims 1804, cited by Green 1990). But Andrews himself says in his protologue that he is not willing to put it in the genus *Lagunaea*, "so we have given our present subject, the name under which it is in general known", that is, *H. patersonius*.

Such an -ia ending to make a female noun (Patersonia) is the usual way of commemorating a person at generic level. But as an adjectival specific epithet commemorating a person "patersonius" is incorrect in both botanical and non-botanical usage; under ICBN Art. 60.11, it must be corrected. The earliest correction was done (inadvertently or not) in the next year by Sims, who transferred the species out of *Hibiscus*, naming it *Lagunaea patersonii*.

One could argue that "patersonius" was merely a slip (typographical error) for the correct Latin adjective "patersonianus". Since there has been no "patersoniana" epithet published so far, I think this line of inquiry need not be pursued.

Green (1990) saw the matter differently. He supposed that the epithet in *H. patersonius* was not intended as an adjective referring to Col. Paterson but was a noun in apposition, a masculinized version of the informal name "Patersonia". Of course, if Andrews had intended this he should have simply written *Hibiscus patersonia* (cf. *Podocarpus totara*). But, perhaps a better artist than a scholar, he didn't, presumably influenced by the masculine generic. Green apparently thought it was necessary to change "patersonius" to "patersonia" when this noun was transferred into the feminine genus *Lagunaria*. But the Rules of Nomenclature do not allow such a change for substantive epithets.

Craven et al. (2005) implicitly recognized this, and "in keeping with the [Principle of Priority]", preferred *Lagunaria patersonius* as the correct name. Such a spelling is barbaric, that is, non-traditional – I much prefer *L. patersonii*. I do not see a way of choosing between the two views on what the original epithet represents, and believe that for the sake of peace the name *L. patersonii* should be conserved.

***Paraserianthes lophantha* (Leguminosae – Mimosoideae - Ingeae)** brush wattle. Green (1994) records only two collections of this weedy tree on the island, both fairly recent ones, and Owen Evans says he has never known it to have been abundant. In July I saw it only at one place, in scrubby pasture in the northwest part of the island. Why should it be so well-behaved on Norfolk?

***Pellaea viridis* (Adiantaceae)**. On the upper edge of a roadside bank at the south end of Stockyard Road, just beyond the reach of the mower, are a couple of small clumps of this South African fern (*ROG 10850*). I had previously collected it springing up in pots in Evans' garden (*ROG 6148*).

***Phormium tenax* (Hemerocallidaceae)** New Zealand flax. As far as I can tell the Norfolk plants all belong to the one variety (though those of Phillip Island may be slightly smaller). Their leaves, glaucous below, are gold-edged; the inner tepals are yellow-orange and the outer ones are somewhat darker and glaucous. Owen and Beryl say that on Phillip Island the gecko takes nectar of the flax and so presumably pollinates it.

On the main island flax is naturally confined to the coastal lower fringe of Norfolk pines and shrubbery. However, the species has been used in abundance in a new planting at Mt Pitt summit. Knowledgeable people think this a bit odd, but at the moment the

plants are doing well. There are no honey-eating birds such as the tui on Norfolk (presumably the extinct kaka parrot would have done this job) nor is the gecko present, so it will be interesting to see how much fruit these Mt Pitt plants make and whether or not they can seed-in and consolidate their newly elevated lifestyle.

***Platynerium bifurcatum* (Polypodiaceae)** stagshorn fern. This is a familiar ornamental on Norfolk, and de Lange et al. (2005) note several recent naturalizations of it there, including one made into tall forest. Many small plants are growing naturally in the tangled old oleander hedge of the Evans' New Cascade Road property and also on the trunks of the palm *Howea forsteriana* there, while a short way away they are coming up in the crevices and hollows of large rocks in the garden of Pine Valley Apartments.

Green (1994) apparently accepts the species as being native to Lord Howe Island, but cites only recent specimens from there. Its natural distribution includes New Guinea and Queensland at least. Whether or not it should be treated as unwelcome on Norfolk Island, there are too many gardening millionaire-recluses there now to make eradication (of the fern, that is) a practicable option.

***Prunus persica* (Rosaceae)** peach. Wild peach trees grow here and there on Norfolk's bush and road edges, as for example at the top of Palm Glen Road. They were flowering at the time of my visit. Green (1994) records the species naturalized only for Lord Howe Island. Allan Cunningham recorded in his ms. Journal of his stay on Norfolk (typescript in possession of O. Evans) that "peach had been left by the original settlers".

***Quercus robur* (Fagaceae)** English oak. Some of the old planted trees around the Melanesian Misson are tropical ones (see *Ficus* above). But there is also an English oak here, one of very few on the island. Standing at the top of the overgrown bank c. 100 m north of the Chapel, it is more than a metre in basal diameter, broken in half but still with two upright trunks which seem healthy enough (they were in leaf in July '06). I suppose it might be one of acorn-planting Bishop Selwyn's trees. The other temperate-zone trees here can be noted: several rather unhappy examples of *Ligustrum lucidum* and a similarly shrunken *Cupressus ? arizonica* (this with male cones only).

***Ungeria floribunda* (Sterculiaceae)** bastard oak. This is a medium-sized tree, in trunk and leaf something like *Lagunaria patersonii* but less frequent and much more remarkable. It is more remarkable even than the so-called iconic conservation flagship of the island, the Phillip Island glory pea *Streblorrhiza speciosa* -- like this *U. floribunda* is a monotypic

endemic, but has the advantages of being alive rather than extinct and of not being obviously related to any Australian or New Zealand group.

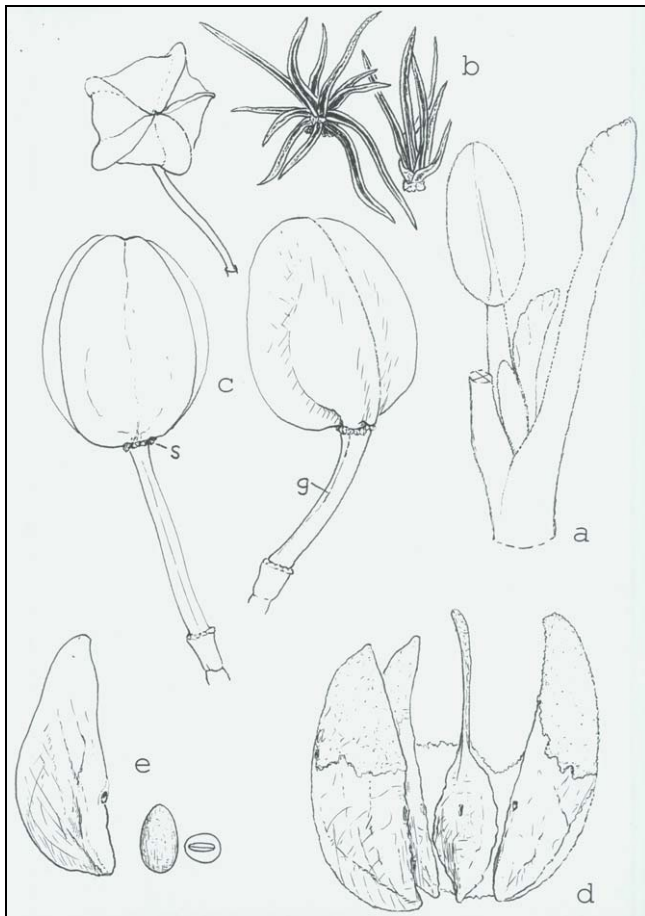


Fig. 1. *Ungeria floribunda* (ROG 10830, 10839).

- a: Shoot tip; note the absence of stipules, unusual in the family.
 b: Stellate hairs (c. 0.3 mm tall), thick walled, with rusty-brown contents.
 c: Fruit (3 cm diam.). The 5-flanged capsule, borne at the end of a glabrous gynophore (g) is ringed at its base by the remnants of the near-sessile stamens (s).
 d: Four cartilaginous mericarps (3.5 cm tall), still held together and partly covered by the capsule's "skin" (hairy epidermis and inner slimy layer).
 e: Single mericarp, with seed, the t.s. on right showing the embryo's two cotyledons and copious endosperm.

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References

- Barlow, C. 2000. *The Ghosts of Evolution*. Basic Books.
 Craven, L.A., Miller, C. & White, R. G. 2005. A new name, and notes on floral nectaries, in *Lagunaria* (Malvaceae, Malvoideae). *Blumea* 51: 345–353.
 de Lange, P. J., Gardner, R. O., Sykes, W. R., Cameron, E.K., Stalker, F., Christian, M.L., Braggins, J.E. 2005. Vascular flora of Norfolk Island: some additions and taxonomic notes. *New Zealand Journal of Botany* 43: 563–596.
 Green, P. S. 1990. Notes relating to the flora of Norfolk and Lord Howe Islands, III. *Kew Bulletin* 45: 235–255.
 Green, P. S. 1994. *Flora of Australia*. Vol. 49.
 Schot, A. M. 1994. A revision of *Callerya* Endl. *Blumea* 39: 1–40.

The capsular fruit and seed of *Ungeria* seem not to have been properly described. The fruit does not simply open but splits into 5 winged mericarps, each with a single seed (cf. *Hoheria*). Rats eat the fleshy thin-walled seeds and Owen Evans says that regeneration occurs only in places rats cannot get to, like rock clefts. Some conservation effort should be directed towards this noble and enigmatic tree.

***Urtica dioica* subsp. *gracilis* (Urticaceae).** A few years ago a nettle new to the island was seen by Arthur Evans in cattle-grazed parkland near his Steel's Point property. Owen and I saw it there in July 2006. It was sending up flowering canes from a shortly rhizomatous base, on which the remnants of last season's canes still stood (ROG 10818). This perennial habit and the large linear-oblong leaves immediately distinguished it from the already recorded *Urtica urens* (which, strangely enough, grows in the same paddock).

***Westringia fruticosa* (Lamiaceae)** coast rosemary. Some newer hedges on the island are made of this easy-care bush rather than the traditional tecoma or oleander or *Hibiscus rosa-sinensis* (all with or without Marston matting). At the clay bank at the south end of Stockyard Road (the *Pellaea* site), just beyond the reach of the mower, are a couple of small bushes (ROG 10849). I think they must be self-sown; the absence of seedlings close by would be because of the recent drought rather than any particular feature of the habitat.

***Wikstroemia foetida* (Thymelaeaceae).** This small tree is now much less common than formerly, because of a dieback which began after WWII and still continues. It takes trees both young and old, without visible markings or other symptoms, and its cause is completely unknown.

I had expected to find dioecy, but the two flowering trees I examined seemed to be hermaphrodite, with yellowish orange anthers and pollen, a large capitate sessile stigma, and well-formed ovules. The flowers have a green corolla and at night give off an odour of honey. Owen Evans says he has seen only one particular moth visiting the flowers, at dusk.