

Save our Flora

AN ONLINE INDEPENDENT NATIONAL PROJECT

Conservation through Cultivation

Project launched on

14th November 2013

Maria Hitchcock Administrator
Bulletin Editor

Bob Ross Conservation
Legislation

Membership Individuals: 142
Groups: 19
International 2

Membership is free.

Please encourage others to join.

Bulletins are sent by email only.

Feel free to pass them on.

People joining up after e-Bulletin No 5 is published will receive the latest e-Bulletin only. Earlier Bulletins can be sent out on request. This is an informal interactive sharing group. We welcome your emails, articles and offers of seed and cuttings at any time.

Your privacy is respected and assured with this group.



Acacia purpureopetala Qld Critically Endangered Image: www.anbg.gov.au

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This issue contains edited articles on

Banksia vincentia

Phebalium verrucosum

Phebalium speciosum

kindly sent to me by Ian Telford

The full papers in pdf form are available from the editor on request

Unsure if you have any rare or endangered plants? Check them out on the EPBC list

<http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora>

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From the members:

Jan Sked (Qld)

I am in the process of putting together a PowerPoint programme on the "Rare & Threatened Species in My Garden", which I am to present at our local Branch Meeting in July.

Great idea! I'm going to do the same. (Ed)

Ian Telford (UNE Herbarium)

Ian has sent a pdf about the newest Banksia to be named. '*Banksia vincentia* (formerly *Banksia* sp. Jervis Bay) which falls within the *B. spinulosa* complex is known only from fourteen individual plants and is distinguished by its semi-prostrate habit, with basally prostrate, distally ascending branches from the lignotuber, and distinctive perianth colouring.

In 2008, Jacki Koppman and Suellen Harris found a population of nine plants of Banksia that they could not identify, at Vincentia, Jervis Bay, on the south coast of New South Wales. At the time, the plants were growing within 100 m of a population of *B. spinulosa* var. *spinulosa*. In 2009 Koppman and Harris sent specimens and photographs of the population to the National Herbarium of New South Wales for identification. The specimens clearly belonged to the *B. spinulosa* complex based on floral and vegetative characters but differed morphologically from the four named taxa of the complex. Over the last five years members of the Australian Native Plant Society including members of the Ulladulla Land Care group, together with MLS, have intensively searched the surrounding area up to 5 km away for more plants of this entity. Further surveys of similar coastal habitats in the region were also conducted. The outcome of these searches was the discovery of five more plants within the original population'. *Phytotaxa* 163 (5): 269-286

Ian has sent the pdf of this journal article. Please email me if you would like a copy. (Ed)

Suzanne Robertson (Vic)

I am the president of the Echuca Moama group Australian plant society. I was wondering if you would have a representative in Northern Victoria that could speak at our meeting if not have you got some more information about your project that I can present at our meeting. I personally would love to get involved with the scheme.

I'll forward your email to the members. Hopefully someone may be able to give that talk. If not then I am preparing a Powerpoint presentation which you could use. (Ed)

Cathy Powers (Vic)

I am happy to do a presentation to the group based on a prepared PowerPoint. I could attend one of their meetings and speak on the concept and project.

Many thanks for stepping in Cathy. The powerpoint is now ready. There may be others wanting to make presentations as well. (Ed.)

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PowerPoint Presentation

Ready to go!

30 slides approx 30 mins. talk

**If you are interested in obtaining
this presentation
please email me**

**I can send it in an email (4.3MB)
or as a CD**

**(Send me a C5 stamped addressed envelope
- 2 stamps)**

or on a memory stick

**(Send me a blank memory stick plus a
stamped addressed envelope - 2 stamps)**

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From the members:

Victoria Tanner (ACT)

Rosemary Race replied to my letter and I would like to post a reply.

Thanks Rosemary, however in the ACT we have a system of 99 year leases for land purchases not an out right sale situation. I am also well aware of Conservation Covenants, which vary in each state and apparently not a legal agreement offered here. It is more commonly used in regards to rural properties rather than urban residential gardens, anyhow.

You also mentioned including clauses and other requirements in Wills, however Wills can, and are often contested and their requirements also vary in each state/territory. It is a nice thought, but whatever you write or request in your Will, does not mean it will be upheld. When you are gone, no-one is going to monitor or enforce your wishes/conditions. Unfortunately, this is a bleak outcome for home gardeners who devote many hours to their labours, so enjoy it to the max. while you can!

On a positive note, I have noticed that the Australian Nature Conservation Trust have a section on their website offering for sale properties with Conservation Covenants (not sure if you have to pay for this service). Perhaps they or another body could offer another section on their website offering residential urban native garden properties for sale?

Shirley Pipitone (ACT) has a new business




Shirley Pipitone
BSc(Hons), MLArch
8 Millard Place
Flynn ACT 2615
(02) 6259 3139
0439 415 908

Designing bush
ABN 9978 269 3032 designingbush.com.au

Critically endangered

Acacia cochlocarpa subsp. *velutinos* WA
Acacia equisetifolia NT
Acacia purpureopetala Qld
Acacia unguicula WA
Callistemon wimmerensis Vic
Cassinia tegulata SA, Vic
Clematis dubia Norfolk Is.
Epacris graniticola Tas
Epacris limbata Tas
Epacris stuartii Tas
Eremophila koobabbiensis WA
Eremophila rostrata WA

Do you have an article on a listed EPBC plant you would like to contribute to our next Bulletin?

Bushfire Prevention

The new 10/50 vegetation clearing code of practice from the Rural Fire Service NSW is already being misused as an excuse to clear native vegetation to allow beach or harbour views which add value to property.

'Greens MP David Shoebridge said the new laws have already led to a critically endangered remnant rainforest being cleared on a property at Fingal Head on the north coast'....

'The policy does not allow trees to be removed if other restrictions apply, such as land management agreements entered into under the National Parks and Wildlife Act, the Threatened Species Conservation Act or the Native Vegetation Act'.

Read more: <http://www.smh.com.au/nsw/bushfire-laws-used-to-increase-waterfront-views-20140823-106rn.html#ixzz3BG8WyLuq>

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John Walter Wrigley (1934 – 2014)

Australasian Systematic Botany Society Newsletter 159 (June 2014)

Authors: Murray Fagg, Brendan Lepschi, Anna Monro, Frank Zich

The death of John Wrigley marks a significant loss for Australian horticulture and botany. John died peacefully at the age of 80 on a trip to Brunswick Heads, near Coffs Harbour, with his wife Marcia by his side, on 17th July 2014.

John is best known as the lead author of the book '*Australian Native Plants - Propagation, cultivation and use in landscaping*', released in 6 fully-revised editions (Wrigley & Fagg 1979–2013), which he produced with illustrator and photographer Murray Fagg. Over 200,000 copies of this title have been sold in total. The pair also produced books on *Australia's Proteaceae* (Wrigley & Fagg 1989), the *Leptospermum alliance* (Wrigley & Fagg 1993), and a botanical and social history of eucalypts (Wrigley & Fagg 2010).

He trained as an industrial chemist and worked with Shell and Unilever before being appointed as Curator at the then Canberra Botanic Gardens in 1967, a career change based on his hobby and passion for propagating and growing Australian native plants. In the role of Curator John steered the Gardens to its official opening in 1970 and was responsible for the establishment of the Rainforest Gully and the Rock Garden, both significant landmark projects in the evolution of gardening using Australian natives. On leaving the then National Botanic Gardens in 1981, he moved to Coffs Harbour on the NSW north coast and there designed the North Coast Regional Botanic Gardens from scratch. From there he also established a plantation export industry using the immature foliage of native rainforest plants, especially Proteaceae.

John was a horticulturist who placed a strong emphasis on linking the growing plants to voucher specimens — he collected 4,481 herbarium specimens during his time at the Gardens in Canberra. He was also passionate



John Wrigley

Image: <https://www.anbg.gov.au/biography/wrigley-john.html>

about sharing his knowledge and experience: he produced 75 publications (17 books, 58 papers), two interactive computer garden software packages on CD, and a calendar on Australian plants. There are also 30 unpublished internal reports prepared by John during his work at what is now known as the Australian National Botanic Gardens (ANBG) (Web ref.) for the floristry trade. These reports are stored in the ANBG Library & Archives.

Adenanthos ileticos E.C.Nelson is named for John Wrigley, with the epithet derived from the Greek for "to wriggle". In addition, Wrigley material has been used as the type specimens for ten Australian plant taxa. Five of these are collections from the wild and the remainder were collected from living plants grown at the Australian National Botanic Gardens from material originally collected by John.



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New Banksia

Banksia vincentia Stimpson & P.H. Weston sp. nov.

With affinities to *Banksia spinulosa* sensu lato, differing from other taxa in the complex by a much lower stature with stems basally prostrate from lignotuber, distally ascending.

Description

Lignotuberous shrub, approximately twice as wide as it is high, 0.30–0.75 m high x 1–2 m wide. Stems basally prostrate from a lignotuber, i.e. divergent and ± horizontal in basal 20–30 cm, then ascending to erect at the ends.

Young stems covered in a felty layer of hairs. Stems older than 12 months becoming gradually smooth; axillary buds prominent in immature leaves.

Leaves narrowly oblong-obovate, rounded to truncate; petiole 1–3.5 mm long, moderately to densely felty hairy, leaf 12–47 mm long, 2–6.5 mm wide, entire or with 1–6 marginal teeth in the top section of the leaf, sometimes with one or more toothless waves replacing teeth, with slightly recurved margins; top surface sparsely to moderately covered in a mixture of short, tightly curled hairs, becoming smooth or with a few residual hairs along the midvein when mature.

Under surface of leaf densely hairy with a sparse layer of straight, horizontal hairs either side of the midvein.

Flower spike surrounded by a whorl of 1–4-year old branches, 75–167 mm long developing at the base with 14–17 columns of flower pairs. Narrow bracts at the base of the flower spike have a spine on the underside, thickened at the base, hairy, 1.5–3 mm long.

Floral tube yellow or cream with white to beige hairs, grading to orange with rusty hairs; claw 19–25 mm; limb 2.5–4 mm long. Anthers 0.5–1 mm long. Style apically hooked, 26–35 mm long from ovary to bend, 5–7 mm long from bend to apex; green for 12–16 mm above ovary, distally grading from red to maroon to black just prior to anthesis. Seedcone of similar length to flower spike, 125–135 mm in circumference.

Distribution:

Banksia vincentia is restricted to a small area near Vincentia on the south coast of New South Wales.

Ecology:

Banksia vincentia grows in sclerophyllous shrubland dominated by *Allocasuarina littoralis*, *B. ericifolia*, *Hakea teretifolia* with *Persoonia mollis*, *Lambertia formosa*, *Isopogon anemonifolius*, *H. laevipes*, *Aotus ericoides*, and species of Restionaceae and Cyperaceae, in sandy soil over clay on sandstone. *Banksia vincentia* grows within 0.1 km of populations of *B. ericifolia*, *B. spinulosa* and *B. paludosa*, although those species occur in different microhabitats. *Banksia vincentia* is a lignotuberous shrub and presumably resprouts after fire. *B. vincentia* produces many flower spikes but very few seed cones. The plants of *B. vincentia* in the wild show signs of severe foliar herbivory, while specimens in cultivation from cuttings at UNE show no such signs.

Suggested conservation status:

Of the 14 individuals now known, six are reproductively mature and producing seed, while the remaining eight appear to be dying, probably due to poor drainage of the site relating to construction and presence of a road dividing the population. All specimens of this plant were found within a radius of 60 m. Compared with species of *Banksia* listed under the Environment Protection and Biodiversity Conservation Act (1999), *Banksia* sp. Jervis Bay has the smallest population and most restricted distribution of all endangered or critically endangered species of *Banksia*.

Given the low numbers of individuals, we consider the species should be listed as 'Critically endangered' according to Threatened Species Conservation Act (1996) of NSW.

Ref. *Phytotaxa* 163 (5): 269–286

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Ruth Crosson (Rockhampton) sent this from the *Rockhampton SGAP Newsletter* August 2014

For Queensland laws regarding Threatened Flora

Harvesting and growing

Plant harvesters and recreational and commercial growers can harvest, grow and trade many of Queensland's native plants without the requirement of a licence.

The Wildlife Management Regulation also allows harvesting of endangered, vulnerable and near threatened species ('EVNT plants') and special least concern species where it can be demonstrated to be sustainable.

The law applies only to harvesting (or collecting) protected plants, not to harvesting commercial timber or plants which are not protected.

The [Protected Plant Growing Licence \(Word, 254K\)](#)[†] authorises the propagation and cultivation of EVNT and special least concern plants taken from the wild. The harvesting of restricted species under this licence must comply with the new code of practice for the taking and use of protected plants. The code will allow the taking of small quantities of seed and propagating material for growing protected plants.

Trade in protected plants is not licensed—instead, it is regulated through a code of practice. The code requires those parties involved in the trade of native plants to demonstrate that the plants are sourced and traded legitimately. This is done through self-regulated record keeping that is supported by a system of official plant tags, allowing protected plants to be tracked through the harvesting and trade process from source to point of sale.

[Trading in protected plants](#)

The holder of a Protected Plant Harvesting Licence or a Protected Plant Growing licence must keep records of operation, starting from the date

the licence commences. A licence must produce this for inspection under the *Nature Conservation Act 1992* if requested by a conservation officer. A record keeping template is available from the department to record transactions made under a harvesting or growing licence.

Available from:

Contact [Permit and Licence Management](#) for more information or email PALM enquiries palm@ehp.qld.gov.au

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/index.html>

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/growing.html>

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/trading.html>

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/harvesting.html>

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/clearing.htm>

Ruth has also forwarded on four documents

1. [Code_of_practice_for_the_taking_and_use_of_protected_plants.pdf](#)
2. [commercial_wildlife_harvesting_licence.pdf](#)
3. [Nature_conservation_\(protected_plants\)_conservation_plan.pdf](#)
4. [propagate_info.pdf](#)

If you would like me to send you any of these please let me know.

Congratulations

to our members

Ben and Ros Walcott of Canberra
whose garden will feature on a stamp!

You can read the complete article here.

<http://www.canberratimes.com.au/lifestyle/homestyle/walcott-garden-earns-stamp-of-approval-20140813-103hg1.html>

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***Phebalium verrucosum* Vent.
subsp. *verrucosum* (Paul G. Wilson)
I. Telford & J.J. Bruhl, *stat. nov.***

(Rutaceae)

Ian R.H. Telford and Jeremy J. Bruhl
Telopea Vol. 16, 127-132

Abstract: *Phebalium squamulosum* Vent. subsp. *verrucosum* Paul G. Wilson (Rutaceae) is excluded from *P. squamulosum* and raised to the rank of species as *P. verrucosum* (Paul G. Wilson) I. Telford & J.J. Bruhl based on morphological and essential oil data. The distribution of the species is mapped and its conservation status is revised.

Type: New South Wales: Northern Tablelands: Tia Falls, *W. Forsyth s.n.*, Oct. 1900; holo: NSW69872.

Description: Shrubs or treelets, to 5 m high. Bark grey, becoming corky with prominent pale longitudinal lines of pores in the bark. Branchlets densely white scaly. Leaves with petiole 1–2.2 mm long; leaf blade narrowly elliptic, oblong or linear, 13–38 mm long, 1.8–5.8 mm wide; margin flat or slightly recurved; apex rounded, minutely curled, blunt or ± retuse; lower surface densely white stellate hairy, rarely with some rusty colouring; upper surface with midrib impressed, warty, initially sparsely stellate hairy, becoming sparsely papillose by loss of hair branches, rarely smooth. Inflorescence of 1 (or 2) terminal umbels; umbels (1–)3–5(–12)-flowered, often with the 2 adjacent upper axils bearing solitary flowers; peduncle 1–3.5(–8) mm long, densely white stellate hairy; pedicels 2.4–6 mm long, densely white stellate hairy. Calyx cup-shaped–broadly obconic, 1.8–2.2 mm diam., warty, densely white stellate hairy, 5-lobed; lobes broadly triangular, c. 0.7 mm long. Petals 5, free, ovate, 2.5–3.2 mm long 1.4 mm–1.8 mm wide, obtusely acuminate, margin slightly incurved, glabrous; lower surface silvery or rusty scaly; upper surface cream-white coloured. Stamens 10, spreading; filaments 3.5–5.8 mm long; anthers elliptic, c. 0.7 mm long with a minute, globose tip. Ovary subglobose, c. 1.2 mm diam.;

carpels free, 5, white scaly; style filiform, c. 4.3 mm long, glabrous; stigma truncate. Fruit of 5 ±spreading cocci; cocci obovoid, 3.5–3.8 mm long, 2.2–3 mm wide, truncate and shortly beaked, white scaly. Seeds not seen.

Distribution: *Phebalium verrucosum* is endemic to the Macleay, Guy Fawkes and Nymboida River drainage basins on the eastern fall from the New England Tableland, on gorge rims of the Northern Tablelands and along the Nymboida River, North Coast, New South Wales.

Habitat: the species grows on gorge edges at 900–1000 m altitude, and also following suitable rocky stream-side sites down to 180 m altitude. Soils at gorge rim sites are skeletal, derived from metasediments; those of stream banks are on metasedimentary rock outcrops or alluvial gravel. Vegetation communities include *Eucalyptus* shrubby woodland or *Backhousia sciadophora*, *Olea paniculata* dry rain forest on gorge rims and *Casuarina cunninghamiana* gallery forest on stream banks. Associated understory species on the gorge rims include *Zieria floydii* at Guy Fawkes River gorge, *Acacia blakei* subsp. *diphylla* at Long Point, *Zieria furfuracea* and *Olearia viscidula* at Wollomombi Falls, *Hakea fraseri* and *Beyeria lasiocarpa* at Tia Falls and *Backhousia myrtifolia*, *Hakea ochroptera* and *Leonema elatius* subsp. *beckleri* along the Nymboida River.

Conservation Status: although previously gazetted as a threatened taxon (see Weston and Harden 2012) under the ROTAP criteria (Briggs and Leigh 1996), recent collections show a considerably larger range than previously known. The species is noted as common at several Oxley Wild Rivers National Park sites (e.g. more than 100 plants at Long Point, pers. obs.) and is now not considered to be at risk. The species is conserved in Guy Fawkes River, Nymboi-Binderay and Oxley Wild Rivers National Parks

Botany and N.C.W. Beadle Herbarium, School of Environmental and Rural Science, University of New England, Armidale, NSW 2351, Australia
Author for correspondence: itelford@une.edu.au



Phebalium speciosum I. Telford

Rutaceae

Ian R. H. Telford

Phebalium speciosum I. Telford, endemic to north-eastern New South Wales and previously included in *P. nottii* (F. Muell.) Maiden & Betche, is described as new. Information is presented on its distribution, habitat and conservation status. An image of an isotype specimen, a table comparing distinguishing attributes of the new species, *P. nottii* and *P. woombye*, and a modification to the key to the species of *Phebalium* occurring in New South Wales are included.

Type: New South Wales: North Coast: Battery Hill, 6 km SSW of Urbenville, 4 Aug 2007, I.R. Telford 13171, T. Vollbon & D.H. Moffatt; holo: NSW; iso: BRI, CANB, HO, K, MEL, MO, NE, PERTH (Fig. 1).

Description: Shrub to 3 m tall. Branchlets rusty scaly. *Leaves* with petioles 3–4.7 mm long, channelled above, silver and rusty scaly; leaf blade lanceolate or narrowly elliptical, 25–84 mm long, 7.5–22 mm wide, obtuse; margin wavy, slightly recurved; upper surface dark green, silvery stellate, becoming minutely papillose by erosion of hair branches, the midvein deeply impressed; lower surface silvery and rusty scaly. *Inflorescences* terminal, sessile umbels of 4–8 flowers; pedicels 7.5–10 mm long, slightly thickening distally, rusty scaly. *Calyx* cup-shaped with 6–8 lobes, silvery and rusty scaly outside, silvery scaly inside; cup c. 2 mm long, 4.2–4.8 mm diam.; lobes erect, triangular, 2.2–3 mm long, acute. *Corolla* of 6–8 petals, of which 4 adjacent spreading, the other 2–4 more or less erect, clawed; claw 1.5–2 mm long, smooth, white to pale pink lamina obovate or elliptical, 8.4–10.2 mm long, 3.2–5 mm wide, shortly acuminate, margin minutely toothed; upper surface smooth, deep pink paling with age; lower surface silvery and rusty scaly with a smooth marginal band. *Stamens* 12–14, inclined over the 4 spreading petals; filaments filiform, 6.5–11 mm long, smooth, pink; anthers oblong, 1.7–2.5 mm long, yellow. *Ovary* subglobose, 2–3 mm diam., of 6 or 7 free carpels; carpels 2–2.3 mm long, rusty scaly; style 5–5.5 mm long, smooth, recurved above stamens; stigma capitate, minutely papillose. *Cocci* ellipsoidal, 4–4.2 mm long, 2.4–3.2 mm wide, rusty scaly. *Seeds* ellipsoidal, 2.6–3 mm long, 1.2–1.6 mm wide, longitudinally striate, black.

Distribution: apparently restricted to Battery Hill and Callawajune Mountain (South Obelisk), 6–8 km SSW of

Urbenville, North Coast Bioregion, New South Wales (Fig. 2).

Habitat: grows on steep slopes below cliff lines on acid volcanic plugs at 350–400 m altitude in open forest or heath on skeletal clay-loam soils. Associated species include *Eucalyptus microcorys*, *Corymbia intermedia*, *Allocasuarina littoralis*, *Bossiaea rupicola* and *Leptospermum polygalifolium*.

The acid volcanic outcrops of the McPherson Range and adjacent areas between Boonah, Queensland and Woodenbong and Urbenville, New South Wales, constitute a well-known area of endemism. Many of the taxa restricted to these rocky sites occur widely in the area, e.g. *Acacia brunioides* subsp. *brunioides*, *A. acrionastes*, *Pultenaea whiteana* and *Coronidium lindsayanum*, but several are recorded only from a single mountain, e.g. *Bertya ernestiana* on Mount Ernest, *Arundinella grevillensis* on Mount Greville, *Jacksonia chappilliae* on Bald Knob.

Conservation status: *Phebalium speciosum* is known from two populations, one at the type locality below Battery Hill, the other at the foot of Mount Cullawajune, 1.5 km to the south-west. The Battery Hill population consisted at the time of the type gathering of some 200 mature plants confined to a narrow strip between the perimeter road of a *Pinus* plantation in Yabbra State Forest and the cliff line. The Mount Cullawajune population is larger, of some 250 plants in an undisturbed rocky gully (pers. obs., May, 2012).

Possible threats to survival of the species are of concern, particularly for the Battery Hill population with its confined habitat and proximity to the plantation road. Too frequent fires would present a major threat to survival of both populations. Accessibility of the Battery Hill cliffs makes them a favourite with rock climbers and some trampling of plants has been observed. Extension of Toonumbar National Park to include the populations within the reserve system is recommended.

A coding of “Endangered” is suggested following the New South Wales Environmental Planning and Assessment Act 1979, and “Data Deficient” following IUCN guidelines (IUCN 2012).

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Flora of the Norfolk Group of Islands

Beverley Weston

The Graptophyllum No 258 Sept-Oct 2014

SGAP - Mackay Branch's newsletter.

Norfolk Island and the two smaller islands (Nepean and Phillip) to its south are on the same latitude as Byron Bay and are outcrops of the Norfolk Ridge which is a long submarine ridge running between New Caledonia and New Zealand, about 1300 km off the east-coast of Australia. Phillip Island has been described as being the same shape as a hairdryer.

The main island was first settled by East Polynesian seafarers in their double-hulled canoes in the fourteenth or fifteenth century. They survived for several generations before disappearing. Their main village site was at Emily Bay where they left behind stone tools, the Polynesian rat and banana trees. It is also thought that they were responsible for introducing New Zealand Flax *Phormium tenax*. The final fate of these early settlers remains a mystery.

The first European known to have sighted the island was Captain James Cook in 1774, on his second voyage to the South Pacific on HMS Resolution. Cook went ashore on Tuesday 11 October 1774 at Anson Bay with the ship's officers and scientists. This group included Johan Reinhold Foster and his son Georg, the first botanists to visit the island. Cook was impressed with the tall straight Norfolk Island Pines and New Zealand Flax. It was these two plants that led to the first European settlement - the tall straight pines for ships' masts and the flax was known from New Zealand to be an excellent fibre plant. Just three weeks after the First Fleet arrived at Sydney Cove, twenty-two settlers (free and convict) under the command of Philip Gidley King set out to develop a British colony on Norfolk. This was the first penal settlement on Norfolk.

Part of King's instructions read "you are immediately to proceed to the cultivation of the Flax Plant, which you will find growing spontaneously on the island". Unfortunately, no one told him what it looked like so he thought it "rather extraordinary" that Captain Cook described it as "more luxuriant than at New Zealand". It was a fortnight before King realised that the large 'iris' he found so common was in fact the flax he was searching for!

Neither plants proved to be successful for their intended purpose at the time. The pines were "unfit for large masts or yards, being shaky or rotten at 30 or 40 feet from the butt; the wood was so brittle that it would not make a good oar, and so porous that the water soaked through the planks". And none of the settlers knew "the proper mode of preparing the flax plant". However, attempts to produce flax continued. Five years later two Maori men were 'conscripted' to instruct the people on Norfolk how to process the flax. Unfortunately, one was a priest and the other a warrior and flax preparation was the responsibility of Maori women.

In 1804 Ferdinand Bauer spent eight months on Norfolk and visited Phillip Island in the October of that year. He collected 152 good herbarium specimens in this time which included most of the endemic species from both islands. He was the most important discoverer of the flora of Norfolk Island.

This penal settlement was abandoned in 1815 because it was too remote and did not have a safe landing for shipping. All the buildings were demolished and most of the livestock were removed except for some chickens. The ship rat was left behind on Norfolk as were the pigs, goats and rabbits that had been released on Phillip Island for food and sport for the soldiers.

The second penal settlement commenced in 1825 and was wound down in 1847. The last convicts were removed to Tasmania in May 1855. During this time calcarenite was quarried from Nepean Island to build the township of Kingston. Once covered with Norfolk Island Pines, the quarrying resulted in the island we see today.

Allan Cunningham visited during this period and was marooned on Phillip Island for a few days because of a convict uprising and the weather. His departure from Norfolk was also delayed for over five weeks because of weather.

On 8 June 1856, the next settlement began on Norfolk Island. These were the descendants of Tahitians and the HMS Bounty mutineers from Pitcairn Island. The Pitcairners occupied many of the buildings remaining from the second penal settlement and gradually established their traditional farming and fishing methods on the island. The island's population continued to grow as the island accepted settlers who often arrived with American whalers who called in for water and supplies.

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These visits prompted the establishment of the whaling on Norfolk. This industry shut down in 1962. These days, Norfolk's main industry is tourism and one fifth of the main island and Phillip and Nepean Islands have been declared National Park.

Phillip Island is an island recovering from the introduction of pigs, goats, rabbits and chickens in the late 1700s which caused a dramatic degradation of the original vegetation. This in turn allowed for accelerated erosion of the soil. Throughout this time, some species of plants and animals survived – but some did not. One endemic species to the island that did not survive was the Phillip Island Glory Pea *Streblorrhiza speciosa*. First collected and drawn by Bauer in 1804, it was last seen by Cunningham in 1830. By the early 1900s, the pigs, goats and chickens had been removed, but the rabbits were not completely removed until 1988. There is now a major conservation project under way to rehabilitate the island.



Hibiscus insularis

The most well-known species endemic to the island is the Phillip Island Hibiscus, *Hibiscus insularis* which is critically endangered. Bauer collected the type specimen in 1804. The population on the island is minuscule with only two small stands of a single genotype.

Another critically endangered species from Phillip island is *Achyranthes margaritarum*. One single plant was discovered in the late 1980s by Honey McCoy and formally named in 2001. Fewer than 20 mature plants were known to remain in the wild in 2003.

Collected by Bauer in 1804 on both Norfolk and Phillip Islands, *Abutilon julianae* was considered extinct until

plants were found growing on Phillip Island as the rabbit numbers were reduced.

Other critically endangered species on the Norfolk Island Group are *Boehmeria australis subsp australis* and Shade Tree *Mertya latifolia*. *Coprosma baueri* which is endemic to Norfolk is listed as endangered.



Cordyline obtecta

Cordyline obtecta which is known as Ti or Rauti, *Dysoxylum bijugum* (Sharkwood), *Myrsine ralsoniae* (Beech) and *Pittosporum bracteolatum* (Oleander) are all listed as vulnerable. In 1914 it was recorded that “after the Norfolk Island Pine, it (*Lagunaria patersonia subsp patersonia*) was the most abundant tree on the island. A tree 24m high and 5m round has been recorded.

Another forest tree found on Norfolk is *Baloghia inophylla* (Bloodwood). Amongst the forest shrubs there are the endemic *Alyxia gynopogon* (Box or Evergreen) and the familiar *Dodonaea viscosa subsp. viscosa* (Tea-tree, Hopwood or Ake Ake). Cunningham thought the *Dodonaea* may have been introduced because Bauer did not record it.

Classified as a forest shrub by Peter Coyne, the Pepper Tree *Macropiper excelsum subsp psittocarum* is closely related to the kava plant (*Piper menthysticum*). The roots of this species were used to make a similar drink to kava in convict times. Amongst the climbers there are *Geitonoplesium cymosum* which is known to us as the Scrambling Lily and to the Norfolk Islanders as Climbing Lily and *Ipomoea indica* which is presumed introduced to

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Lagunaria patersonia ssp. *patersonia*

Norfolk but thought to be native in 1792. Other climbers are the endemic *Melodinus baueri* (Big Creeper) and *Millettia australis* (Wild Wisteria or Samson's Sinew). The most noticeable fern is the endemic Norfolk Island Tree Fern (*Cyathea brownii*) which is recorded growing to 20m. *Arachnoides aristata* (Prickly Shield Fern) and *Microsorium pustulatum* subsp. *pustulatum* are also found in Australia.

Amongst the smaller plants there is *Oplismenus birtellus* which cannot be confused with any other 'Hopeless Menace' because it is the only *Oplismenus* on the island, the familiar *Commelina cyanea* (Forget-me-not) and the endemic and only species on the island *Dianella intermedia*. There is also *Viola betonicifolia* subsp. *nova-guineensis* (Wild Violet) and the sedge *Cyperus lucidus* (M'-oo or Moo-oo) which is still used today on the island for making hats.

Pisonia brunoniana (Wai-wai or Birdcather) is found along the coast, and not to be forgotten is the Norfolk Island Palm *Rhopalostylis baueri*.

Most of my photos were taken in the Norfolk Island Botanic Garden where the denseness of the rainforest can be readily appreciated. The garden did include a few mysteries.



Wollastonia biflora

Finally, the widespread *Wollastonia biflora* (Mile-a-Minute), a shrubby creeper that held its own on Phillip Island against the rabbits. It is one of few terrestrial plants that produce Dimethylsulphononiopropionate (DMSPP) which appears to be a deterrent to herbivores.

References:

Allan Cunningham: *Journal of a Botanist on Norfolk Island in 1830*, Kevin Mills, 2012
History of Norfolk Island, Wikipedia (various references)
Norfolk Island's Fascinating Flora, Peter Coyne, 2011
The Vegetation of Phillip Island - Norfolk Island Group, Dr Kevin Mills, 2009

As Bev has already pointed out, some Norfolk Island species are familiar to us here although they often have different common names. For example *Wollastonia biflora*, a species of coastal headlands is known here as Beach Sunflower. Other species include *Baloghia inophylla*, *Dodonaea viscosa* subsp. *viscosa* and *Cyperus lucidus*.

Comment by Irene Champion (Mackay)

It was once considered that a subspecies of the Norfolk Island Hibiscus *Lagunaria patersonia* occurred in Queensland but the Queensland plants are now recognised as a distinct species, *Lagunaria queenslandica* - Pyramid, Sugarplum or Cowitch Tree. It is represented in the Brigalow Garden at the MRBG and these plants were grown from material from Lizzie Creek off the pipeline road between Eungella and Homevale. It flowers in November with numerous pink hibiscus-like flowers contrasting against the grey-green foliage. However, a drawback with this species are sharp very irritant hairs contained in the capsules.

Seed and Cuttings Exchange

Please send all requests directly to the person making the offer.

Please follow the correct protocols for requests of seed or cuttings. These are detailed on the next page. Please note that some species are in very short supply and cutting material may be limited. Please note that in order to streamline this activity addresses will be published with the offers so that people can apply to the grower directly. Where there is no address please send your request to saveourflora@gmail.com

Maria Hitchcock

16 Hitchcock Lane Armidale NSW 2350

Correa eburnea

Callistemon pungens

Grevillea wilkinsonii

Zieria adenodonta

Arthur Baker

55 Moran ST Gatton Qld 4343

Gardenia psidiodes

Grevillea quadricauda

Grevillea glossadenia

Eucryphia wilkiei

Graptophyllum ilicifolium

Xanthostemon formosus

Phaius tancarvilleae

Plectranthus nitidus

Zieria prostrata

Grevillea mollis?

Eremophila nivea

Dodonaea rupicola

Xanthostemon arenaris

X verticulutus/seeds or cuttings

Kunzea flavescens

K granitica

Callistemon pearsonii

C flavovirens{seeds}

Melaleuca irbyana

Lilaeopsis brisbanica {Water plant}

Hernandia Bivalis

Spathoglottis Pauliniae {Tropical ground orchid}

Rhododendron Lachiae

Charles Farrugia

Eremophila denticulata ssp trisulcata

Eremophila denticulata ssp denticulata

Eremophila nivea (blue form)

Eremophila nivea (white form) - limited.

Eremophila vernicosa – extremely limited – plant just recovering from a winter battering also I need to do some more grafts.

Russell Dahms

Boronia clavata

Denise & Graeme Krake

752 Warrigal Range Rd. Brogo NSW 2550

Seed of

Hakea dohertyi

Hakea ochoptera

Hakea longiflora

Grevillea maccutcheonii, [this seed is still green]

Geoff & Gwynne Clarke

Grevillea humifusa - cuttings

Angophora robur - seed

Dodonaea crucifolia - cuttings or seed

This was named a couple of years ago by Ian Telford who came down from Armidale to look over our block. Many people were calling it *Dodonaea hirsuta*, but it is not very hairy and has no hairs at all on the fruits. It also grows in a nearby flora reserve. If people would like to try this I can make it available when the material is ready. I have grown it successfully from cuttings, but it does not live long after planting out. It also produces seed and I can collect that after the next flowering (spring fruits). It grows happily around the block, popping up from seed here and there, produces plenty of seed, but it is not long lived even when self sown. Fruits are showy reds. I think it's worth a try.

Bob O'Neill

7 Hillsmeade Drive, Narre Warren South, Vic. 3805I want to increase our range of Lechenaultias and *Correa pulchellas*. Can anyone help us out? Both of these groups of plants are doing well for us at Narre Warren South, Vic. I would be delighted to offer cuttings from our range to interested people. Some plants may be available to people who are able to come to our home address.

Paul Kennedy (Leader ANPSA Hakea SG)

I am looking for seed or cuttings of *Hakea pedunculata* which grows naturally on Cape York near swamps. We have moved into our new home at 210 Aireys St. Elliminyt and have now begun the task of reintroducing all the Banksia and Hakea species.

Do you have any EPBC plants growing in your garden with sufficient foliage to share cuttings with our members? Let me know and I'll print it here. It would be easier if we can add your address so that members can contact you directly. Please make sure you follow the protocols on the back page. (Ed)

Save our Flora

Requesting and sending seed by post

Please follow these simple steps.

Make a request

1. Send your request by email first. It will be forwarded to the grower so you can request seed and ask for the address.
2. Send your request enclosing a self-addressed envelope with two 60c stamps attached. Post the envelope.

Send seed

1. When you receive an envelope with a seed request, package up the required seed which includes the name, provenance (if known) and date of collection. Add any tips on germinating the seed and post.

Receiving seed

1. Seed should be stored in paper (small manilla seed packets are best but any cheap envelopes will do) and kept in a cool dark place. Some people use those small paper lolly bags and staple them at the top. Add mothballs if you like. This will prevent insect attack. I save moisture absorbers from medicine bottles and add them to my seed drawer to ensure the seeds do not rot.

Seed life varies according to species. Acacias will last for many years while Flannel Flower needs to be really fresh. Old seed may not germinate and needs to be thrown out. Test some of your seed periodically. It's worth asking seed suppliers for the age of certain species of seed before purchasing.

Requesting and sending cuttings by post

Please follow these simple steps.

Make a request

1. Send your request by email first. It will be forwarded to the grower so you can request cuttings and ask for the address.
2. Purchase an Express Post small satchel for \$10.55. it will hold up to 500 gms.
3. Self address your satchel and place it in an envelope with your cuttings request. Add a label/s with the name of the species and sender. Pencil is best for writing on labels.
4. Post the envelope.

Send cuttings

1. When you receive an envelope with a satchel inside, cut about 6 stems of the requested species. The best time to do this is early morning. Store cuttings in the crisper part of the fridge until they are ready to be posted.
2. Wrap the cuttings in damp newspaper and place them in a cliplok plastic bag. Make sure you label each parcel with the names of the species and sender. Squeeze air out of the bag and fasten top.
3. Put the bag in the satchel and post.

Receiving cuttings

1. As soon as you receive your cuttings put the unopened plastic bag in the crisper part of the fridge until you are ready to prepare them.

Group Members

ANPSA Groups

APS Melton Bacchus Marsh Vic
 SGAP Ipswich Qld
 SGAP Sunshine Coast and Hinterland Qld
 APS Echuca Moama Vic

Botanic Gardens and Reserves

Hunter Regional Botanic Gardens
 Tamworth Regional Botanic Gardens
 Lindum Park Flora and Fauna Reserve
 Burrendong Arboretum Wellington

Nurseries

Bilby Blooms Binnaway NSW
 Cool Natives Nursery Armidale NSW
 Mole Station Native Nursery Tenterfield NSW

Seed Suppliers

Victorian Native Seeds

Study Groups

Acacia SG
 Correa SG
 Epacris SG
 Garden Design SG
 Grevillea SG
 Hakea SG
 Waratah & Flannel Flower SG

Do you belong to a group interested in growing or conserving native flora?

Why not ask them to join us?