

Coffs Harbour Group NEWSLETTER No.157: December 2022



2022 COMMITTEE

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APS Coffs Harbour Membership

We warmly welcome our new members:

Dr Jo Hall and Ms Judith Webber

APS NSW Website

www.austplants.com.au

Keep up-to-date with news, program of outings and meetings via our pages:

www.austplants.com.au/Coffs-Harbour

For your 2023 Diary – APS activities early in the year

Greetings,

As many of you will know we had a successful Annual General Meeting although we are currently without a Treasurer. If there is anyone with an inclination to be the Group's Treasurer, please get in touch with me before our final Committee meeting of the year on 26th November 2022.

However, the principal purpose of this email is to ensure that people mark down in their diary two early activities in 2023. The first is our initial outing on **Sunday 22 January 2023** is the Wonga Walk in the Dorrigo National Park. The second activity is **our first meeting on Tuesday ,14th February, 10.000am** when Janice Fitzpatrick will speak about her recent tour of Western Australia and specifically the Hakeas she saw. WA wildflowers have recently been at their best and this is a talk not to be missed.

The calendar of events and outings has been roughly completed and we will be fine-tuning at our last Committee meeting and will get it out to you as soon as possible afterwards.

Kindest regards

Robert Watt, Coffs Harbour Group Secretary

Propagation by Seed – the plants of the North Coast Dry Sclerophyll Forest Gwyn Clarke, Vice President Australian Plant Society Coffs Harbour Group

Gwyn's talk for this October meeting had a particular theme – because the September outing of the Group to the Flaggy Creek Nature Reserve was cancelled due to bad weather including flooding, Gwyn brought some of the flora of the region to use as her examples. A biological visit to the Reserve without getting wet feet.

Many of us are familiar with the vegetation of the **North Coast Dry Sclerophyll Forest** - both from the occasional visit to Flaggy Creek but also to Gwyn and Geoff's home at Kremnos nearby. It is open eucalyptus forest to roughly 20m with prominent sclerophyll shrub stratum and open ground cover of grasses. Prominent trees include *Angophora robur* (Sandstone rough-barked Apple) and *A. woodsiana*; *Corymbia gummifera*; *Eucalyptus baileyi* (Baileys stringbark); *E. pilularis* (blackbutt); *E. planchoniana* (needlebark stringybark) and *Syncarpia glomulifera* (turpentine).

Gwyn spoke of the variability of the flora and the fact that when this region is close to the **Coastal Dune Dry Sclerophyll Forest**, it shares several species particularly with the nature of the sandy soil and the need to keep a garden acidic – with a Ph between 3.5-4.5. When further from the coast there are some endemic plants not found elsewhere. It has also been noted, and this was discussed that there are a large number of plant genera and some species shared with the **Sydney Coastal Dry Sclerophyll Forests** and in most of these cases the climate appears to be of less importance than the soil type. Thus, examples were given of these plants growing south in areas that would be thought to be too cold – for example *Lambertia formosa*.

And it was from the smaller shrubs of this Forest type that Gwyn brought an impressive array of plants with their fruit in evidence allowing her to speak of how they may be propagated from seed. She acknowledged that at other times of year the collection would be different.

The specimens she brought were:

Actinotus helianthi (flannel flower) *Acacia ulicifolia*; *Banksia oblongifolia*; *Bossiaea rhombifolia*; *Calytrix tetragona*; *Daviesia wyattiana*; *Dillwynia sericea*; *Gompholobium pinnatum* (pinnate wedge pea); *Grevillea* 'Orange Marmalade'; *Dodonaea crucifolia*; *Isopogon petiolaris*; *Lambertia formosa*; *Melaleuca thymifolia*; *Melaleuca* "Spot Fire" and the wonderfully iconic local grass *Themeda australis*.

Visitors at that meeting were treated to a master class in seed propagation, with theory and practical suggestions as to how the best results could be achieved with a wide variety of seed and soil types.

She had a very attentive and appreciative audience and our thanks to Gwyn for putting so much effort into the presentation.

**Apocynad Vines,
A talk given by Doug Binns on 29 September 2022
to the Australian Plant Society, Coffs Harbour Group**

The Apocynad vines are part of the botanic family Apocynaceae, with roughly 400 genera and over 5,000 species, varying from tall trees found in tropical rainforests and the subtropics, to succulent shrubs and small trees growing in tropical, dry, and even xeric environments. There are also perennial herbs from temperate zones.

In Australia the family is represented mostly by tropical plants with climbers, shrubs, or herbs and less commonly trees. Climbing species occur mostly in wetter climates in the tropics and subtropics but a few species extend into semi-arid parts and into temperate southern Australia.

There are a number of characteristics that we can identify, and which are found to varying extents in climbing members of the family. They include:

- **Laticifers:** being highly specified cells forming a tube-like network structure of the plant, in which **milky or clear latex** is produced and stored and released upon rupture.
- **Colleters:** Leaves are usually simple and either opposite or whorled and often have a patch of small glands (colleters) near the base of the lamina. Colleters are widely distributed in about sixty angiosperm families, but common in species in Apocynaceae. It is assumed to protect new growth.
- **Gynostegium:** is formed by the fusion of stamen with stigma. It is a complex structure where all parts get fused at the stigmatic surface. Gynostegium is common in the subfamily Asclepiadoideae (formerly the milkweed family Asclepiadaceae). Here, the gynostegium is commonly colourful and with calyx and corolla, they form a distinctive structure that attracts insects for pollination. Because of the singularity of this evolutionary development, it tends to be an important factor in identification.
- **Pollinarium:** pollination of some of the species of Apocynaceae, particularly from the sub-family Asclepiadoideae, is highly specialized using a special pollen-holding structure called a pollinarium. The pollinarium comprises two cohered pollen masses (pollinia) and the connecting tissue, which may be quite elaborate. A similar structure is present in species of the orchid family (Orchidaceae).
- **Corona;** suffice it to note here that of the five subfamilies currently recognized in Apocynaceae, four (Apocynoideae, Asclepiadoideae, Periplocoideae and Secamonoideae) have some of the most elaborate and complicated flower structures of all of the angiosperms. Flowers often salverform (with a narrow, tubular base and spreading lobes), sometimes with a **corona of appendages** at the throat of the tube
- **Coma:** climbing species produce a follicle or pair of follicles (often large and woody), which split to release the small seeds which have a coma of fine hairs to aid wind dispersal.

A treatment of the family Apocynaceae in Australia has been published in: *Flora of Australia* 28: 104-196, with recent developments online. The main genera with climbing species are *Parsonsia*, *Marsdenia*, *Tylophora*, *Cynanchum*, *hoya* and *Secamone*.

Photographs shown: (also see Flora of Australia on-line)

1. *Parsonsia straminea*: By far the most common species of apocynad vine in the local area, with very distinctive juvenile plants with leaves pressed closely to tree trunks and adventitious roots clinging tightly to the surface. It is often weedy, germinating in awkward places, but flowers attract a wide variety of insects.

2. Pollinators: include flies, butterflies and moths.

The *Monarch Butterfly* on *Gamphocarpus physocarpus*, (or *Gamphocarpus fruticosus*) not an Australian native, from South Africa and Ethiopia and introduced into Australia as a garden plant. Now a pest but a favourite of Monarch Butterfly

3. *Hoya australis*: A very variable species with highly succulent leaves. Forms from exposed habitats may tolerate full sun in cultivation.

4. *Marsdenia rostrata*: Commonly known as 'milk vine'. A common and often vigorous species in wet sclerophyll forest of the coast and tablelands. Showy when in flower.

6 *Marsdenia longiloba*: a slender climber, known as 'clear milkweed' or 'slender Marsdenia', found north from Barrington Tops to S.E. Queensland. Although it is currently listed as Endangered in NSW, it is a relatively common species in wet sclerophyll forest in the Coffs Harbour area. It has previously been overlooked due to superficial similarity to other species.

7. *Marsdenia hemiptera* known as 'rusty vine', a pubescent woody vine with clear or slightly green-yellow latex. A rare plant in NSW, with scattered occurrence in littoral rainforest north from Coffs Harbour. Great garden potential due to its relatively large purple flowers, but very rarely cultivated.

8. *Marsdenia liisae*: a species described in 1989 by J.B.Williams, found initially in the New England National Park in February 1974 but later found to be widely but sparsely distributed along the eastern escarpment and coastal ranges north from Barrington Tops. While similar to *M.rostrata*, it is much less common and has much larger flowers.

9. *Araujia sericifera*, commonly known as 'moth vine', it grows widely but commonly found on North Coast. Naturalized and tends to grow on disturbed sites. A native of Peru. Generally pollinated by moths, hence the name.

10 *Tylophora paniculata*, common name 'thin-leaved Typhora', a common plant in wet sclerophyll forest in the local area and elsewhere in the NSW North Coast region, but rarely seen in flower. Latex is clear and watery.

10 *Tylophora linearis*, apparently no common name, grows in dry shrubland and eucalypt woodland in western NSW and southern Queensland. It is currently listed as Vulnerable in NSW. This species is interesting because the latex characteristics were incorrect in the original description, leading to it being overlooked for many decades. Despite the Vulnerable listing, it is a common plant but is rarely seen in flower. Vegetatively this species is difficult to distinguish from *Rhyncharrhena linearis* but is easily distinguished from the otherwise similar *Marsdenia viridiflora* because that species has milky latex.

11 *Tylophora woollsii*, grows mainly in wet sclerophyll forest. Although originally collected at Parramatta in the late 1800s, for many years the only known living plants were in a small population in the Clouds Creek area near Nymboida. More recently several populations have been found in northern NSW, mostly north from Taree, but it is a rare plant, currently listed as Endangered in NSW. Latex is clear and watery. Without flowers, it is very difficult to distinguish from the more common *T. paniculata*.

The meeting was delighted with the introduction to an area of Australian flora that was not well known to most of us. We were also impressed by the depth of Doug's knowledge and elegant presentation. Our kindest thanks for his agreeing to do the presentation.



Hoya Australis



Hoya Marsdenia longifolia



Hoya Marsdenia rostrate



Tylophora paniculata



Tylophora woollsii



Tylophora linearis



Image. *Marsdenia rostrate*

Australia Palms.

NSW only has four species of palms, *Livistona australis* (Cabbage Palm), *Archontophoenix cunninghamia* (Bangalow Palm), *Linospadix monostachya* (Walking Stick Palm) and *Calamus muelleri* (Lawyer Vine). However, state boundaries mean nothing to plants and we have approximately 60 species of palms in Australia of which about 48 are endemic. Their distribution ranges from eastern Victoria right up to the top end and extending into isolated occurrences along rivers and gorges in central and western Australia. Queensland has many species and there are also four species on Lord Howe Island, one on Norfolk Island and one on Christmas Island. By far the biggest and most widespread genus is the *Livistona*, whose species have evolved to adapt to a wide variety of climates.

Coffs Harbour, being a relatively warm temperate climate can support quite a few of these including the spectacular rainforest species *Licuala ramsayii* (there are a couple at the Coffs Harbour Botanic Garden not far from the main entrance), but the tropical savannah species seem to struggle. I have planted *Livistona mariae* which I grew from seed collected at Lawn Hill NQ 5 years ago. I have also grown *Livistona nitida* from Carnarvon Gorge CQ, and these are doing a bit better after 7 years.



Image above: *Corypha elata*



Image above: *Wodyetia bifurcate*

The best place to see a collection of Australian native palms is at the Townsville Palmetum. It is a long way to go but well worth the visit if you are up that way. The planting of this 13-hectare site only began in 1982. It includes over 300 exotic palms and most of the 60 Australian species. This botanic garden has been designed based on habitat rather than country of origin, so you must search for the Australian species. There are sections of tropical savannah, swamp forest and rainforest. One of the most interesting is *Corypha elata*, a massive palm growing to 25 metres tall and 1 metre in diameter and found across the top end. It is hapaxanitic, in that after it flowers and fruits it dies.



Image above: 5 yr old Livingston



Image above: 7 yr old Livingston

Many palms can be grown outside their normal range. *Wodyetia bifurcata*, (Foxtail Palm) for example, is endemic to the Melville Range on Cape York Peninsula but it has set viable seed as far south as Grafton. I have found palms to be useful for stabilizing erosion on steep slopes due to their dense mat of adventitious roots. The Livistonas tend to be slower growing and have a certain fire risk due to their persistent fibrous leaf bases as they mature. The Livistonas are generally more adapted to fire, whereas the Archontophoenix are not.

Phil O'Shea

What colour is a Gum tree?

While scientific names follow internationally accepted rules, common (vernacular) names have no such rules and in the case of *Eucalyptus* and related trees, they are sometimes confusing, particularly where colours are used. The very widespread *Eucalyptus camaldulensis* is commonly called “River Redgum” which is a good name because it favours riverbanks, and the wood is a rich red colour. Common names for other “gum trees” are not always easily explained.

I tree I knew as “Yellow gum” is common in Victoria and South Australia. I wasn’t sure what the “yellow” bit indicated, it has a small amount of rough brown bark at the base, but above that most of the trunk and branches are smooth and a creamy colour (not often yellow). Flowers are creamy white, except for a subspecies (found in a limited area) which has deep pink flowers and is sometimes grown in gardens. The scientific name, published by Ferdinand von Mueller in 1855, is *Eucalyptus leucoxylon*, the species name apparently combining the Greek words for ‘white’ and ‘wood’, but some books say the wood is not really white, more often pale brown or slightly pink!

To compound the confusion, it is called “Bluegum” in South Australia, and sometimes “White ironbark”, because although the bark is nothing like that of a typical ironbark, it is closely related in other ways and the timber is sufficiently hard and durable to be used for railway sleepers!

What started me on this rambling is that a local tree known as “Small fruited Grey gum” (*Eucalyptus propinqua*) does have more or less smooth, patchy grey bark for most of the year, but this is shed annually to reveal a bright new orange surface (see photo taken in summer beside the Orara Way).

Barry Kemp



Image. *Eucalyptus leucoxylon*

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