

**NEWSLETTER No. 140: January 2019****2019 COMMITTEE**

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Lindy Hills and Mary Gibson

**Newsletter Contributions**

If you have something of interest to share, please contact the Editor, Jan Whittle.

Keep up-to-date with news, Program of outings and meetings via our website:

[www.austplants.com.au/Coffs-Harbour](http://www.austplants.com.au/Coffs-Harbour)

**Welcome to New Members**

Lindy Hills and Wayne Hartridge

**Membership Renewals**

Renew online via APS website:

[www.austplants.com.au](http://www.austplants.com.au)

**MONTHLY MEETINGS**

*All meetings are held on Tuesdays in the Display Room, North Coast Regional Botanic Garden.  
Please bring a plate of food to share. Tea and coffee will be provided.*

**Tuesday, FEBRUARY 12: 7pm – 10pm**

**Guest Speakers:** 3 APS Members

**Topic:** *My favourite plant*

**Tuesday, MARCH 12: 10am – 1pm**

**Guest Speakers:** Members of the Friends, NCRBG

**Topic:** *Banks-Solander Area in the Botanic Garden*

**Tuesday, APRIL 9: 7pm – 10pm**

**Guest Speaker:** Colin Broadfoot

**Topic:** *Top Tips for Garden Plants*

**Note:** Our 2019 Programme of Meetings and Field Trips is now available on our website and as a pdf file attached to this Newsletter.

## FIELD TRIPS

### **Sunday JANUARY 27: 9.30am – Noon**

**Leader:** Rowan McCabe

**Location:** Urunga Wetlands, 1 Hillside Drive, Urunga

**Directions:** Turnoff Pacific Hwy to Bellingen, then take old Pacific Hwy to Urunga. Meet at Newry Island turnoff, Old Pacific Hwy at 9.30am.

This site was opened to the public in May 2017, following completion of a major project to regenerate the disused former mine site and provide access via a 450 m sealed footpath and 150 m boardwalk over the wetland. History: In 1969 an antimony processing plant was established on the site to process ore initially from the nearby Newry State Forest and Wild River Creek, Dorrigo. While it only was in production for 5 years, the plant generated 16,000 tonnes of tailings waste, containing arsenic, lead and reagent residues of cyanide and cresylic acid, which leached into the wetland. The result was large-scale die back of the swamp paperbark (*Melaleuca quinquenervia*) and damage to the wetland habitat of birds, plants and fish. In 2011 a remediation order was made and \$10 million allocated with work commencing in 2015. A total of 36,400 tonnes of contaminated soil and sediment was removed, treated and stored in a containment cell constructed on site.

### **Sunday MARCH 23, 9.15am (Bello) for 10.30am start**

**Private Garden:** Carol & Trevor Deane

**Location:** 206 Lower Bielsdown Rd, Tallowood Ridge (Dorrigo)

**Directions:** Meet at Yellow Shed, Bellingen at 9.15am; car pool to arrive at destination about 10.30am. Rob Watt (02 6655 0043)

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### **Phil O'Shea: *Cleistanthus hylandii* , Bernie's Cleistanthus (Phyllanthaceae)**

This species was only formally described as recently as the early 1970's (Airy Shaw H.K. 1974) and named after well-known tropical plant botanist, Bernard "Bernie" Hyland. Although this plant's home range is the dry rainforest of the east coast of Cape York Peninsula and Magnetic Island, it is surviving (it has just reached 2 metre after about 10 years) here in a sheltered frost-free spot near Coffs Harbour.

We originally bought it for the attractive red new growth and its shade tolerance. It is planted in a moist but well drained site, which is partly shaded for much of the day. In more tropical climates it apparently grows to about 8 metres in height and is recommended as a screening plant. It has suffered insect and fungal attack in the past but this year's spring rain has given it a new growth spurt.



## ACTIVIES REPORTS

### Janice Fitzpatrick: *Saving our Species* presentation by Andy McQuie, Community Engagement Team Leader, NE Branch, NSW Office of Environment & Heritage (OEH)

Andy described his role as dealing with community engagement for 'off-park' conservation projects run by OEH, although there was some collaboration with National Parks in some projects. His role is split between overseeing regulatory compliance with environmental controls (like threatened species in floodplains and coastal estuaries, kangaroo harvesting and land clearing) and managing energy efficiency programs.

The *Saving our Species* Program has a budget of \$100million over 5 years, with 1000 species included on the register. Andy referred us to the SoS website, where each of the threatened species has its own webpage, and has an Officer from the Office allocated to it, with some species also having an expert associated with its webpage. The local Coffs Harbour SoS branch concentrates on 5 species:

| Threatened Species Name                                   | Webpage                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Zieria prostrata</i>                                   | For strategy, search on LGA = Coffs Harbour, Species Name= <i>Zieria prostrata</i><br><a href="https://www.environment.nsw.gov.au/savingourspeciesapp/">https://www.environment.nsw.gov.au/savingourspeciesapp/</a><br>Species profile on<br><a href="https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10863">https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10863</a>        |
| <i>Lindsaea incisa</i><br>(Slender screw fern)            | For strategy, Search on LGA = Coffs Harbour, Species Name= <i>Lindsaea incisa</i><br><a href="https://www.environment.nsw.gov.au/savingourspeciesapp/">https://www.environment.nsw.gov.au/savingourspeciesapp/</a><br>Species profile at<br><a href="https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10482">https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10482</a>         |
| <i>Eleocharis tetraquetra</i> (square-stemmed spike rush) | For Strategy, search on LGA = Coffs Harbour, Species Name= <i>Eleocharis tetraquetra</i><br><a href="https://www.environment.nsw.gov.au/savingourspeciesapp/">https://www.environment.nsw.gov.au/savingourspeciesapp/</a><br>Species profile at:<br><a href="https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10265">https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10265</a> |
| <i>Alexfloydia repens</i>                                 | For Strategy, search on LGA = Coffs Harbour, Species Name= <i>Alexfloydia repens</i><br><a href="https://www.environment.nsw.gov.au/savingourspeciesapp/">https://www.environment.nsw.gov.au/savingourspeciesapp/</a><br>Species profile at:<br><a href="https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10036">https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10036</a>     |
| <i>Quassia</i> sp Moonee Ck ( <i>Moonee quassia</i> )     | For Strategy, search on LGA = Coffs Harbour, Species Name = <i>Quassia</i> sp Moonee<br><a href="https://www.environment.nsw.gov.au/savingourspeciesapp/">https://www.environment.nsw.gov.au/savingourspeciesapp/</a><br>Species profile at:<br><a href="https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10723">https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10723</a>     |

OEH is building a database of information about the listed threatened species in the hope that more information can be collected and consolidated in one place for researchers and conservation groups to use – currently there are large gaps in our knowledge about many of the threatened species. Andy noted that OEH takes a systemic approach to collecting information about threatened species – not just where they are found, but how they got there, their means of propagation, threats to their survival like certain weeds etc. It is only through a thorough understanding of how these plants grow can we conserve them.

As examples of this systemic approach, Andy described the case of *Alexfloydia repens*, which occurs on Diggers Headland. It is difficult to propagate by seed, and it appears to have a relationship with the Black-grassed Butterfly caterpillar, but the nature of that relationship is not known. *Zieria prostrata*, which occurs on several local headlands, probably uses bees, ants and butterflies as pollinators, but there may be others.

It is believed many threatened species occur on private land, especially species that like swampy conditions such as *Eleocharis tetraquetra*, which makes any information gathering about their growth habits, distribution and threats difficult to gather. Andy stated that community engagement to get landowners and other private individuals to collect and report information about threatened species is an important part of his role. A recent initiative by OEH has been to incorporate indigenous cultural

connections with the threatened species, with Andy working with local indigenous elders to expand our understanding of the plants.

There were questions for Andy from members, including one about propagating species for transportation back into the wild. He told us that is done on a case by case basis, but that botanic gardens could have an important role in growing threatened species both to educate people about them but also to preserve them albeit in a controlled environment. Given a limited budget, threatened species have been prioritised by category:

- Iconic – such as mallee fowl, Wollombi pine
- Site-managed – such as *Zieria prostrata*
- Landscape managed – such as Regent bowerbird
- Threatened ecological communities

As far as the contribution we can make to the SoS Program, Andy suggested there were many opportunities to observe and record sightings of threatened species, especially if they can be observed over time. Capturing data about distribution is very important, as well as observing the environment in which they are growing, how they are pollinated or are propagated, weed competition etc. This information should be sent in to OEH to be captured in their database. OEH also manages a range of projects around threatened species and if we find a project we think worthwhile we should apply for support from OEH for it.

Thanks to Jennie Watkins for tracking Andy down and inviting him to speak – it was very informative.



Moonee Quassia



Zieria prostrata



Regent bowerbird

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Alison Moore attended the opening of the *Terra Australis* section in the National Arboretum, Canberra. Here are some of her photos.



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## Barry Kemp: The *Baeckea* tangle



*Baeckea imbricata*



*Baeckea stenophylla*

Few names have caused more confusion amongst plant growers and botanists than ***Baeckea***. Understanding the story is a bit like untangling a bundle of fishing line, but I will try to explain what transpired. Whether this will help to sort out what you are growing is another thing. If in doubt, take a flowering specimen to the Botanic Garden herbarium and we will try to put a name to it. However, there are numerous cultivated forms, which muddy the waters, usually sold as *Baeckea virgata*. I had a “compact” one which grew to the size and shape of a Volkswagen!

The large number of plant species grouped as **Family Myrtaceae**, include many shrubs whose teatree-like flowers have five small white or sometimes pink petals. The sepals are sometimes absent or vestigial and the fruit is usually a woody capsule which may or may not be persistent after the seed is shed. The ones which came to be named *Baeckea* have opposite leaves, so are easily separated from ***Leptospermum*** (the tea-tree) which has alternate leaves. ***Kunzea*** can have either, but is separated by having stamens longer than the petals. Easy so far.....

The first publication of the name *Baeckea* was by Linnaeus in 1753. He was able to publish a description so early because some of these shrubs could be found in South-east Asia and the Pacific islands, and plant specimens were being carried back to Europe long before Banks and Solander collected on the east coast of Australia.

Over the next couple of centuries, many other shrubs were formally described using the genus name *Baeckea*. My 1996 Flora of Victoria states that “there are about 115 species, with one extending to southern China”. Many were in WA. However, it had already been realized that the genus *Baeckea* contained a very diverse group of shrubs, even though they had some common characteristics. Several botanists took up the challenge of splitting the genus into more realistic genera, not always working in unison.

Sometimes things not obvious to the casual observer have been used to sort them out, such as how many compartments (loculi) are in the fruit capsules and how the seeds are arranged. Some have flowers growing singly in the leaf axils, some in pairs and others are in groups of 3 or more, so that is more easily seen. Unfortunately for us, the results of this work were spread over several scientific journals, each of which costs hundreds of dollars for a subscription. The website “**Plantnet**” is very useful for NSW and is kept up to date.

As far as I know, the ones that are mostly Western Australian as mentioned below have not been grown in our area, so I will ignore them, concentrating instead on the ones which grow naturally on the North Coast and are likely to be grown for garden use. The features I describe are fairly superficial and are not the only ones used by botanists to separate them.

One of the first to be split off was **Ochrosperma**, with 3 species, two of which grow in our local heathland, **O. lineare**, a thigh-high shrub with narrow leaves and multiple, usually upright stems, and **O. citriodorum**, which is very low, strongly aromatic and intricately branched. **Triplarina** followed, with seven species, confined to the eastern states. Only one is recorded for the north coast (**T. imbricata**, a tall shrub with slender, arching branches, found in the Nymboida area and a few scattered areas).



*Ochrosperma lineare*



*Harmogia densifolia*

Seven **Euryomyrtus** species were named, occurring in most states, but only **E. ramosissima** is near us (south of Port Macquarie). It is a very small shrub and the flowers are pink.

**Babingtonia** made a brief appearance, with 70 species, until another scientific paper restricted that name to plants in WA, S.A and western Victoria, and the East coast ones were re-named **Sannantha**, **Harmogia** and **Kardomia**.

“Baeckea Clarence River Weeper”, sold and grown under that name for many years, was briefly **Babingtonia angusta** before settling down as **Sannantha angusta**. There are several other north coast Sannanthas, difficult to separate:

- **Sannantha pluriflora** is a showy one, with head-like clusters of up to 9 flowers, but only found from Port Stephens southward.
- **S. similis** is 3-flowered and is widely scattered on the North Coast.



*Sannantha angusta*  
(Left)



*Kardomia silvestris*  
(Right)

There is only one **Harmogia** in NSW, **H. densifolia**, which has linear leaves with a small, recurved point, and the flowers are born singly in the leaf axils, but it bears lots of them, as well as having dense foliage. It is mostly found on the plateau. **Kardomias** also bear flowers singly and have small, lateral lobes on the short sepals. **Kardomia silvestris**, with petals <2.5mm wide is restricted to the Dorrigo district, and **K. prominens**, with petals >2.5mm wide, is only known from the Nymboida area.

There are still about 15 “unmolested” **Baeckea**s, which are separated from the others mentioned here by having only 2 compartments (loculi) in the fruit capsules. (The others have 3 or 4). Local Baeckea include **B. frutescens**, a tall shrub of wet heathland with bundled leaves, very common locally, and **B. imbricata**, much smaller, but in the same habitat. The broad leaves of this are in overlapping, neatly alternating pairs. **B. linifolia** has long, narrow leaves and is most common on the Central Coast, but it can be found locally e.g. Sherwood nature reserve and Wells Crossing Flora reserve. Flowers are solitary.

Whether this is the end to the story remains to be seen!

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## National Parks and Wildlife Service

### COFFS COAST AREA SAFETY ALERT SAFETY ALERT 2018/19-002

#### Sap from Tropical Milkweed causes serious eye injury

Recently, a staff member undertook weed control of a weed species known as Tropical Milkweed, Red Cottontop and a variety of other common names. The scientific name is *Asclepias curassavica*. She got a tiny amount of sap in her eye and, after a few hours, began to suffer symptoms such as headaches, blurred vision in the affected eye and pain induced by eye movement. These symptoms intensified, and she required hospitalisation. The sap had caused a burn to her cornea and had the potential to cause permanent damage to the eye. Luckily, in this case, a full recovery has been made.

Staff, volunteers and bush regeneration contractors need to be aware of the toxic nature of the sap of this weed species and its potential to cause serious eye injuries.

Photo of *Asclepias curassavica* – Moonee Beach Nature Reserve

#### Action Required:

1. Staff, volunteers and bush regenerators to be made aware of this issue – hand pulling (they pull out easily by the roots) is the preferred method for this species (avoid cut / paint) – avoid breaking stem and inducing sap. PPE to be worn should include eye protection, disposable gloves and overalls
2. Staff/supervisors should check weed species unknown to them before engaging in control and JSA's / Risk assessments should be modified to include appropriate control measures
3. Wee spray units should have portable eye wash stations included as part of their standard equipment

Link for further info: [https://en.wikipedia.org/wiki/Asclepias\\_curassavica](https://en.wikipedia.org/wiki/Asclepias_curassavica)

Common poisonous plants: <https://www.sgaonline.org.au/getting-to-know-poisonous-plants/>

Further Information Contact: Andrew Winter SFS Coffs Coast Area

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## Notice of APS Events

### 2019 ANSPA CONFERENCE IN ALBANY, WA

September 29 – October 4, 2019

For details, see the website for Wildflower Society of Western Australia

<http://www.wildflowersocietywa.org.au/anpsa/>