

Australian Pea Flower Study Group

PEA MAIL

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Introduction

I am still trying to work out where this year went. This is a small issue to wrap up the year, highlights of which included the ANPSA conference hosted by APS NSW in picturesque Kiama and the FJC Rogers seminar hosted by Maroondah Branch of APS Victoria. Both events were extremely well organised and huge successes.

The study group gained 30 new members this year, mostly from the two aforementioned events. Approximately half of our members have joined the Facebook group. It is great to see Facebook being used for asking questions and sharing photos.

In 2023, the inaugural 'Pea Forage' will be held on the Central Coast of New South Wales. Details to follow early next year.

For a bit of holiday fun, have a crack at the quiz on the last page. Answers in next newsletter.



Merry Christmas and Hap-pea New Year

Shirley McLaran

Study Group Leader and Newsletter Editor



Mirbelia rubiifolia

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- Fab Five 'egg-and-bacon' peas
- Pilliga and Warrumbungles
- Newcastle to Melbourne via the coast
- FJC Rogers 'Fabulous Peas' 2022
- Christmas Pea Quiz

Fab Five 'egg-and-bacon' peas

Shirley McLaran

Many pea flowers have yellow petals with red markings, earning them the common name 'egg-and-bacon' peas. The aim of this article is to introduce you to five genera along with significant features of that genera that will help you to identify some 'egg-and-bacon' peas to genus level in the field, without examining the reproductive parts of the flower*. Some of these features may require a hand lens to see them.

All five genera introduced here belong to the Mirbelieae tribe. Tribe is a taxonomic rank below family (Fabaceae) and subfamily (Faboideae), but above genus. In botany, the standard ending of a tribe is -eae.

*Stamen structure aids in distinguishing genera within Faboideae.

Pultenaea

- Look for pairs of stipules fused behind the axillary bud.
- Look for bracteoles, a leaf-like appendage attached to the calyx tube.
- Occur in all states except NT



Pultenaea daphnoides,
stipules circled



Pultenaea euchila,
bracteoles circled

Dillwynia

- Look for an upper petal, called the 'standard' or 'banner' which is much broader than it is long (top to bottom) and is notched at the top. The standard has the appearance of a compressed figure 8 lying on its side or 'Mickey Mouse' ears.
- The leaves are alternate, simple, narrow and terete or three-sided, with a groove along the upper surface. In some species the leaves are twisted.
- Occur in all states except NT



Dillwynia retorta

Fab Five 'egg-and-bacon' peas

Shirley McLaran

Aotus

- Look for leaves with recurved margins in pseudo whorls
- Look for absence of bracteoles (*Aotus* translates to no ears)
- Occur in all states except NT



Aotus ericoides in flower (above) and with hairy inflated pods (right), Awabakal NR, NSW.

Daviesia

Look for triangular fruit. I like to think the fruit is shaped liked the letter 'D', for *Daviesia*. When the sides of the pods curl back to release the seeds, they look different but are still distinctive.



Daviesia ulicifolia, fruits dehiscent (above), Warners Bay, NSW
Daviesia acicularis, immature fruits (right), Yengo NP, NSW

Eutaxia

- Look for opposite decussate leaf arrangement, that is, pairs of leaves at right angles to the pair above and below them
- Leaves are usually incurved or concave
- Chiefly in Southwest WA; One or two taxa in Qld, NSW, Vic and SA.

Eutaxia myrtifolia, Shoalhaven Heads Native Botanic Garden, NSW.



The glossary of botanical terms from PlantNET (The NSW Plant Information Network System) is available here.

<https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&glossary=yes&alpha=A>

Pre-conference tour - Pilliga and Warrumbungles - Sept 4 to Sept 9

The pre-conference tour, run in association with the Australian Flora Conference hosted by APS NSW in Kiama, treated participants to a great range of pea flowers. The first day, Dan, our botanist, was kept busy describing the vegetation as we travelled northwest from Sydney airport to Coonabarabran via the Blue Mountains and Mudgee. The countryside was verdant after the constant rainfall in the months prior.

On day 2, after stepping off the bus in the Pilliga Nature Reserve to walk the Sandstone Caves track, the first order of the day was to identify the floriferous pea that we had been ogling from the bus for some time. This showy shrub with arching branches loaded with yellow and red flowers, was identified as *Pultenaea cinerascens*. Before even starting the walk we also found *Bossiaea concolor*, *Aotus mollis* and *Hardenbergia violacea*. *Pultenaea cinerascens* and *Dillwynia sericea* were abundant along the track.



|-----*Pultenaea cinerascens*-----|

The afternoon was spent at Bilby Blooms, where Anthony and Annabelle O'Halloran gave us a tour of their display garden. They are growing *Kennedia retrorsa*, a rare climbing herb, for which confirmed populations are known from the Mount Dangar area and the adjacent Goulburn River catchment.



Kennedia retrorsa



Pre-conference tour - Pilliga and Warrumbungles - Sept 4 to Sept 9

The next day was spent exploring the Warrumbungle Range. Of the three walks, the short walk to White Gum Lookout had the biggest range of pea flowers. Here, *Pultenaea cinerascens* shared the limelight with *Dillwynia phyllicoides*, *Hovea lanceolata*, *Hovea apiculata* and a very showy *Indigofera australis*. The delicate twining *Glycine clandestina* and the robust *Hardenbergia violacea* were also sighted.

*Indigofera australis*

The Burbie Canyon track revealed *Indigofera adesmiifolia*. The flattened stem of the pinnate leaves give the plant an unusual and unmistakable appearance. Intergrades between *Indigofera adesmiifolia* and *Indigofera australis* have been recorded from the few sites where both species co-occur.

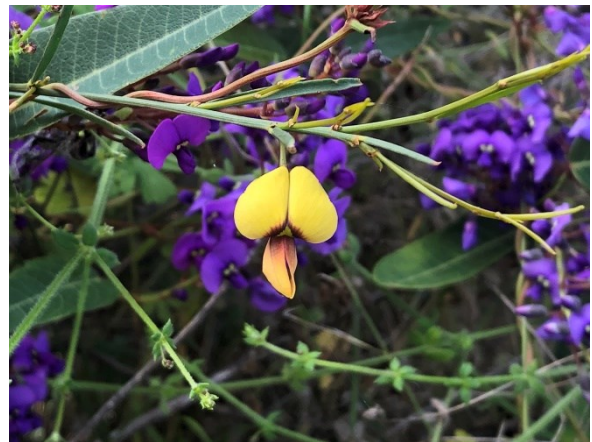
*Indigofera adesmiifolia*

The lure of a view of the Breadknife from Spirey View Lookout required an increased tempo and didn't leave much time for botanising. The brisk walk and captivating view rounded out the day beautifully before we headed north to Narrabri, our base for the next two nights.

On day 4, the morning walk to Sawn Rocks in Mount Kaputar NP was stunning with *Hardenbergia violacea* combining with many *Acacia* species to put on a great show. Making frequent appearances was *Indigofera adesmiifolia* and on the return trip *Templetonia stenophylla* was seen nestled under *Hardenbergia violacea*.



Sawn Rocks, Mt Kaputar NP

*Templetonia stenophylla*

Pre-conference tour - Pilliga and Warrumbungles - Sept 4 to Sept 9

After an informative tour of the University of Sydney Plant Breeding Institute, where we learned about wheat and native grain research, we were taken to a patch of *Eucalyptus-Callitris* woodland on the University site that has never been floristically surveyed. *Daviesia acicularis*, *Hovea apiculata* and *Mirbelia pungens* were included in the list of 30 plants compiled as a starter.



The *Hovea apiculata* in the foreground was about 3m wide.



Mirbelia pungens

Late on the same day we travelled an hour southwest of Narrabri to the Australian Wildlife Conservancy compound. Outside the fence *Aotus mollis*, *Dillwynia sericea*, *Daviesia ulicifolia* and *Gompholobium foliolosum* were sighted while the light faded.

The last two days were mostly botanising from the bus as we headed to Kiama for the conference. Apart from rain arriving as we neared Orange, the weather was perfect. Our drive to Mount Canobolas was postponed to the following morning but there was very little in flower anyway as flowering at that altitude peaks in November. In addition, the road to the summit was closed for park improvements.

Many thanks to Dan, whose vast knowledge of plants, vegetation communities and geology of the area underpinned the entire tour; and Ralph Cartwright for organising and leading a wonderful tour.

Dan Clarke's report on the tour for APS NSW is available here:

<https://resources.austplants.com.au/stories/report-on-pilliga-and-warrumbungles-pre-tour/>

Newcastle to Melbourne, the long way

Shirley McLaran

Who doesn't enjoy a road trip? Preferring to drive to Melbourne, instead of flying, to attend the FJC Rogers 'Fabulous Peas' seminar in October, I decided to take the more interesting path down the south coast of New South Wales to Eden and across Gippsland to Melbourne. Stops along the way were inevitable, after all, that is why you take a road trip. Carol Guard kept me company on the way.

Only having half a day to begin our journey, we broke up the trip from Newcastle to Nowra, with a stop at Fitzroy Falls. On a short walk along the eastern rim of the gorge we spotted *Pultenaea daphnoides*, *Aotus ericoides* and *Bossiaea buxifolia*.

Heading south from Nowra, the highway was lined with *Pultenaea villosa*. The arching branches of this shrub were laden with flowers.

At an unscheduled roadside stop at the turn off to Sussex Inlet, large tangled masses of *Mirbelia rubiifolia* were also flowering profusely.

Parts of the South Pacific Heathland Reserve at Ulladulla were recovering from fire. *Kennedia prostrata* stood out against patches of black. *Pultenaea daphnoides* and *Pultenaea retusa* were displaying immature fruit.

The last stop in New South Wales was the Pinnacles Loop walking track in Beowa National Park (formerly Ben Boyd National Park), where we again saw *Aotus ericoides* in flower and *Bossiaea cinerea* was at the end of its flowering period.

After crossing the border into Victoria, there was significant regeneration following fires in the understorey and along the verges there were splashes of colour following slashing. The road into Mallacoota in Far East Gippsland had us salivating. To begin with, a couple of large specimens of *Daviesia latifolia* stood proudly on the roadside. Then as we entered Croajingalong National Park we were treated to an explosion of colour. Knowing we would return the same way, we enjoyed the view noting favourable places to stop.



Mirbelia rubiifolia



Daviesia latifolia

Newcastle to Melbourne, the long way (continued)

Shirley McLaran

The first stop on the way out of Mallacoota was tall Eucalypt forest with an understorey of pea flowers, wattles, orchids, Hibbertias and ferns to name a few. *Dillwynia sericea* and *Aotus ericoides* were the most conspicuous peas in flower. *Sphaerolobium minus* was also flowering, while the masses of flat immature pods on *Platylobium parviflorum* were eye-catching. The second stop had less canopy cover and was very sandy. The track was lined with *Aotus ericoides* and *Dillwynia sericea*. Compared with the first stop, *Dillwynia sericea* was flowering spectacularly.



Platylobium parviflorum



Aotus ericoides



Dillwynia sericea

All through Gippsland there were more signs of regeneration after fire. On closer inspection, the sea of yellow in the understorey near Wingan River was identified as *Goodia lotifolia*. To break up the drive from Lakes Entrance to Melbourne, we visited the Traralgon South Flora and Fauna Reserve, where we found *Pultenaea gunnii* subsp. *gunnii* flowering.



Flowers of *Goodia lotifolia*



Goodia lotifolia

FJC Rogers Seminar

Shirley McLaran

'Fabulous Peas' was the theme of the 14th FJC Rogers Seminar hosted by APS Maroondah in Mount Evelyn, Victoria in October. The seminar was run over two days and focused on Australian Pea Flowers.

On Saturday we were treated to a wonderful program of speakers beginning with Marilyn Bull's introduction to the subfamily Faboideae and identification of the common genera within the subfamily. Keynote speaker, Professor Mike Crisp, explained the transition from bee-pollination to bird-pollination has led to changes in floral traits. The genus *Leptosema* is a good example. Crisp also explained how *Daviesia schwarzenegger* and *Daviesia devito* came to be named. Dr Julie Ardley presented findings of research into the symbiotic relationships between wild legumes and their rhizobia. Most legumes are selective and only nodulate with one or a few rhizobial species. Other topics included propagation and cultivation of pea plants and the use of pea flowers in art.

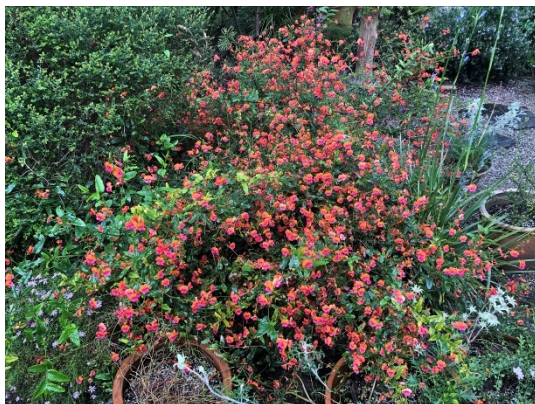
During the breaks, plants and books were available for purchase. A wide variety of species had been propagated especially for the seminar. Kuranga Nursery was nearby allowing us to make more pea purchases before dinner. After dinner, Chris Clarke regaled us with some of the many wonderful peas he has photographed during his travels.

On Sunday, we visited two private and two public gardens all of which featured pea flowers. It was both inspiring and encouraging to see so many species of peas in cultivation. If you are visiting Melbourne, I highly recommend visits to Maranoa Botanic Gardens and Karwarra Australian Plant Garden.

Thanks to the organising committee for a FABULOUS weekend.



Lots of peas on sale to choose from



Chorizema cordatum

Bev Fox's Garden

Member requests

Bill Handke from the ACT is involved with Forest 20 - Southern Tablelands Ecosystems Park (STEP), at the National Arboretum Canberra. Bill is looking for seed from pea flowers in the Southern Tableland.

Read more about Forest 20 here: <https://www.nationalarboretum.act.gov.au/living-collections/forests-and-trees/forest-20>

Claire Mullin is looking for suggestions on peas for her garden in Armidale which has black clay soil and receives heavy frost.

If you can help with either of these requests, please email fabpeamail@gmail.com or post in the facebook group.

Mirbelia rubiifolia (Andrews) G. Don

Heathy Mirbelia

Tribe: Mirbelieae

Derivation of Name: *Mirbelia* - After Charles Mirbel, an 18th-19th century plant physiologist
rubiifolia - having foliage similar to the genus *Rubus* (Brambles)

Description: A straggly spreading shrub with wiry stems that grows to around 50cm high by 75cm wide. Linear leaves are arranged in whorls of three around angular stems. The leaf apex is pungent pointed. The upper surface of the leaves are conspicuously veined with lateral veins at right angles to the mid-rib.

Pink to purple flowers with darker markings are arranged in clusters in leaf axils and umbel-like racemes at the end of branches.

The small oval pod is partitioned longitudinally.

Distribution: Widespread in heath, sclerophyll forests and woodlands on the east coast and slightly inland from Rockhampton QLD to Mallacoota VIC.

Conservation Status: QLD - Of least concern
NSW - Not considered to be at risk in the wild.

VIC - Critically endangered. A single small population on coastal heathland near Mallacoota.

Cultivation: Uncommonly cultivated, but considered a reasonably hardy species for moist, semi-shaded sites. Requires good drainage. Pruning from an early age promotes bushy growth. Possibly short lived.

Ed: Observed very healthy plants in full sun after good rain on South Coast of NSW. Worth giving it a try in a container.

Propagation Propagate from seed following pre-treatment with boiling water or abrasion; or by cutting from firm, current season's growth.



Australian Native Plants Society (Australia). *Mirbelia rubiifolia*.

https://anpsa.org.au/plant_profiles/mirbelia-rubiifolia/

[Retrieved Dec 2022]

VicFlora (2022). Flora of Victoria, Royal Botanic Gardens Victoria.

<https://vicflora.rbg.vic.gov.au/flora/taxon/793dfdae-f3af-401b-b879-0d994a8802c8> [Retrieved Dec 2022]

Elliot and Jones (1993) Encyclopaedia of Australian Plant suitable for cultivation.

New Pea-nuts

Anne Langmaid	VIC	Helen Williamson	NSW
Barb Cooke	QLD	James Middleton	NSW
Bill Handke	ACT	Jane Canaway	VIC
Boyd Webster	NSW	Jocelyn Clarkson	QLD
Brenda Meehan	QLD	Kristine Gow	NSW
Bruce Watt and Kate Schoeffel	NSW	Lucinda Islip	NSW
Chris Clarke	VIC	Malle Eden	NSW
Claire Mullin	NSW	Michael Swire	NSW
Dan Clarke	NSW	Neil and Wendy Marriot	VIC
David Lightfoot	VIC	Nicky Zanen	VIC
Don Beattie	NSW	Richard Clark	WA
Drew Thomas	TAS	Robert Failes	NSW
Elizabeth Triggs	VIC	Robyn Tyson	VIC
Etienne and Yvonne van der Merwe	VIC	Sheena McGhee	NSW
Fran Middleton	ACT	Wendy Grimm	NSW

Zoom Zoom

It has been over three years since the study group was reignited at the Albany conference. Our membership is now over 100 and is spread far and wide. We usually only meet face to face at the biennial conferences. I propose to organise zoom meetings, which will allow us to get to meet more often.

NOTE: The inaugural meeting planned for early 2022 was postponed. A zoom meeting is on the agenda for 2023 (date to be advised).

Many of us may have experienced zoom meetings or something similar during the last few years thanks to COVID-19, but there may be some people who have never joined a meeting and others that find the technology a bit daunting. To break the ice, the inaugural zoom meeting will give us the opportunity to meet informally as well as allowing you to find your feet. It is as much for my benefit as yours, as I have never hosted an on-line meeting. For future meetings I will organise a guest speaker to kick off with.

Here is a link to a video to give you an introduction to joining a zoom meeting:

<https://www.youtube.com/watch?v=mbbYqiurgeo>

Pea Forage 2023 - Central Coast, NSW

Save the dates for a weekend gathering on the Central Coast next year for enthusiasts to see peas growing in natural habitats. We will visit a variety of places rich in pea species over two days. Members will be required to book their own accommodation and car pooling over the weekend will be encouraged. Hopefully, this will become an annual event for the study group. More information to come.



SAVE THE DATE

Pea Forage

CENTRAL COAST, NSW

Friday 18th to
Sunday 20th
August, 2023

Financials

Balance 31.12.2021		\$130.00
Income		
Donations	25.00	
Interest	0.00	
Balance 31.12.2022		\$155.00

Donations

Thanks to the following groups for donations:

Native Plants Queensland (NPQ)
NPQ Pine Rivers Branch

Stay Connected

Facebook Group

The study group now has a facebook group to provide a place for members to share photos, discuss anything related to pea flowers and communicate with other members in real-time. Only members will be permitted to join the group. The group is private, meaning only members can see who is in the group and what they post, however, it has been made visible so that anyone can find the group and join if interested. To join, search for 'pea flower study group' and request to join*. If you have trouble finding it, please email me for the link.



Australian Pea Flower Study Group

Private group · 57 members

Study Group Email

Please send newsletter contributions, suggestions, photos and any other correspondence to the study group email:

fabpeamail@gmail.com

*If you are reading this newsletter and are not a member of the study group, enquiries can be made by emailing Shirley at **fabpeamail@gmail.com**.

Next Issue

Bossiaea is the genus to be featured in the next newsletter. The genus has 78 species, and is endemic to Australia. The newsletter depends on contributions from members. I would love to hear of your experiences with growing *Bossiaea*s. Any photos of *Bossiaea* that you are prepared to add to the group photobank are also welcome.

Photo Credits

Photos relating to articles were provided by the author of that article unless otherwise stated. Other photos were provided by the editor unless otherwise stated.

Merry

Christmas



Photo credits
1 & 2 Karlo Taliana
8 Ray Turner
Rest: Editor



Christmas Pea

Name all eleven pea
There is one for each of

Tree Challenge

genera in the baubles.
the letters A-L (excluding F).

Clue: Many are mentioned in the newsletter, but not all because that would be too easy.