



SGAP Cairns Newsletter

March 2018 Number 177

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Meeting Report - February 2018

SGAP Cairns first meeting for 2018 was hosted by our President, Tony Roberts. Of necessity, February excursion planning must be conservative. One never knows if tropical downpours, washed out roads or cyclonic winds will impact on a bush outing - so it's always best to keep things close to home. The conservative approach provided us with an ideal

opportunity for the more experienced members of our group to share their knowledge of plant propagation in an informal workshop setting.



The Don and Pauline Lawie double act.

The weather was typical for the year: warm, humid with occasional showers. After a splendid lunch of shared goodies (which could easily have gone on all afternoon), we sat down to listen, watch and learn.

Society for Growing Australian Plants, Inc.
Cairns Branch

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2017-2018 COMMITTEE

President: Tony Roberts
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Webmaster: Tony Roberts

Mary Gandini demonstrated propagation from cuttings; discussing soil mixes, selecting the right material for taking cuttings, and how to use commercial rooting hormones.

Tony demonstrated marcotting on one of his figs, using a sharp knife, a plastic bag, electrical tape and coconut peat.

Don and Pauline Lawie shared their years of experience as leaders in the SGAP orchid study group. They brought as their demonstration plants golden orchids (*Dendrobium discolor*) and the familiar dove orchid (*Dendrobium crumenatum*), a prolific and straggly plant that is recorded from Christmas Island and can therefore be considered an Australian native.



Dendrobium crumenatum.

Methods of propagation - marcotting

Tony Roberts

Marcotting or air layering is an asexual or vegetative method of plant propagation.

In this layering method, roots are induced to form on a part of the plant while it remains above ground (aerial), hence the term air layering. In other layering methods, the plant part is rooted on the ground or in a pot.

Common procedures in marcotting

1. Plant and shoot selection

A shoot with plenty of leaves is chosen from a healthy plant. The size of the stem at the part to be rooted is generally about that of an ordinary pencil, but this is not essential. Both the thickness and length of the stem vary depending on the plant part to be layered (trunk, branch or twig), the intended size of the air layer to be produced, and the plant species.



Tony's marcotting demonstration, a simple procedure using coconut peat, a plastic bag and electrical tape.

In woody plants, the stems used in marcotting are normally thinner than in herbaceous plants.

The lateral branches of some plants produce marcotted plants that continue to grow laterally so are not good for normal propagation.

2. Girdling and scraping

For trees, shrubs and semi-woody plants, a strip of bark is first removed from around the portion of the stem to be rooted. This involves pressing a sharp knife against the bark, preferably as close as possible below a node, moving the knife in a circular motion around the stem. A similar cut is made generally about 2 - 5 cm below the first cut, but it can be wider with larger stems. The two cuts are then connected by a straight cut and the bark is pried loose and removed.

The debarked portion of the stem is then scraped to remove the phloem and cambium, that slippery coating on the wood, to prevent the wound from healing and the upper and lower barks from reconnecting.

3. Slitting and wedging

In herbaceous plants, an inward cut is made starting from below a node and slightly upward. The cut has to traverse the horizontal line that marks the node at the point about halfway of the thickness of the stem and terminate above the same node. In other words, this slanting cut must be able to sever the horizontal connection of the node.

Coir dust, sphagnum moss or a piece of wood or any other suitable material is then inserted into the wound to serve as a wedge. The purpose of the wedge is to keep the upper and lower cut surfaces apart and prevent healing just like in girdling and scraping.

4. Promoting root growth

A slightly moistened handful of sphagnum moss or coconut coir dust is placed around the the debarked stem and wrapped with a plastic sheet. A transparent plastic sheet is preferred, as root development can be observed later. In many plant species, however, the stems can be marcotted even with pure soil.

The rooting medium may be as thick as 2.5 cm from side to side, or bigger, depending on the earliness to develop roots and the size of the stem. The longer is the time required to induce rooting and the bigger the stem, the thicker should be the rooting medium.

Both ends of the plastic sheet are gathered and tied securely against the stem, with one end just under the bottom part of the debarked stem (lower cut) and the other a short distance above the upper part (upper cut). It is important that the upper cut should be covered with the rooting medium because it is from this cut that roots form.

As an alternative, the plastic sheet may be placed first on the stem with one end tied just below the lower cut. The rooting medium is then inserted gradually and the upper end of the plastic wrapping is tied securely to the stem. This technique is more convenient and applies to any rooting medium which crumbles if not held by the hand.

To prevent breaking of the stem with big and heavy rooting medium, it is tied to another branch or to a stick attached to the parent plant.

5. Separation of the air layer or marcot from the parent plant

The rooted shoots are severed from the parent plant when plenty of roots have developed. At this time, the rooting medium becomes hard and rough when touched. New shoots will also have sprouted from the portion of the stem immediately below the rooting medium. In many plant species, this occurs at least 15 days from marcotting.

6. Potting

The marcotted shoot is immediately potted into a suitable container. The intensity of care that will ensure the successful establishment of the layered stem will depend on various factors such as size of the shoot, size of the rooting medium, and profuseness of roots. For maximum survival, the newly potted plants are kept under partial shade and high humidity.

Pimelea in North Queensland

Betsy Jackes, Adapted from, Bean, A. R. *Austrobaileya* 10(1), 2017¹

Introduction

There are fourteen species of *Pimelea* occurring in Queensland north of latitude 22° S, two species which were assigned to *Thecanthes* for a few years have been returned to *Pimelea* since 2016. Many species in this genus are commonly known as 'rice flowers'.

The genus *Pimelea* (family Thymelaeaceae) comprises about 140 species occurring in New Zealand, Australia and islands to the north. Herbs or small shrubs, they are readily identified by the flowers which do not have separate sepals and petals but sepals only which are normally treated as a perianth because you can't easily recognize which whorl is missing. Although really a hypanthium, the fused tubular portion or floral tube has four lobes at the apex. These lobes are the sepals and there are two stamens which are attached to the tube of the hypanthium/perianth and are often exserted. Some stamens are orange coloured: this is because of the presence of pollenkitt, a sticky substance that helps the pollen adhere to pollinators. The hypanthium is formed from the fusion of the basal parts of the calyx, corolla (if present) and the stamens. It may only surround the ovary or may enclose the ovary and be fused to it as in many Myrtaceae.

There are often different sexual systems between one species and another. Flowers may be bisexual, or in some species, both bisexual and female flowers occur on the one plant. In a few others the bisexual flowers are on one plant and female flowers are on a separate plant, whilst a few have males on one plant and females on another. Although hybridization between species has been recorded in New Zealand, Tony Bean (the author of the most recent study) could find no evidence of this in the Queensland specimens he examined.

Although about twelve species have been recorded as toxic, probably all are toxic if consumed in sufficient quantities. According to Ross McKenzie (2012), most species result in gastroenteritis, except for cattle and occasionally horses where consumption results in St George disease syndrome, which can be fatal. In northern areas, the principal species involved are *P. decora* (Flinders Poppy), *P. haematostachya* (Red Poppy) and to a lesser extent *P. elongata*, *P. simplex*, and *P. trichostachya*. In fact all species within this family should be considered toxic. Two species often cultivated are *Phaleria clerodendron* (Phaleria, Scented Phaleria, Scented Daphne) and *Wikstroemia indica*. If sufficient quantities are eaten by humans then the result is usually gastroenteritis, particularly if the seeds are eaten.

Some Notes on Queensland species of *Pimelea*

Notes on *Pimelea* occurring north of latitude 22°S. These notes are mainly based on the revision by Tony Bean.

¹ <https://www.qld.gov.au/austrobaileya>

Pimelea amabilis is a shrub to about 1 m high with leaves opposite to subopposite. It is endemic to north Queensland where it has a limited distribution from Hann Tableland (NW of Mareeba) to 30 km SW of Mt Garnet. It has been frequently collected around Almaden and Stannary Hills. There is an outlying population on Blackdown Station west of Chillagoe. It inhabits skeletal soil on rocky outcrops of granite or rhyolite, although the type collection was reputedly made from a limestone outcrop. Flowering appears to be restricted to between January and August. Flowers have a yellowish-green to yellow perianth. Formerly a subspecies of *P. sericostachya*.

Pimelea approximans is a shrub to 60 cm high. Its leaves are usually opposite to subopposite but are sometimes alternate. It is endemic to north Queensland where it is known from the Bathurst Bay area and the Coen area of Cape York Peninsula. It occurs in woodland or grassland on rocky hillsides. Flowering recorded for May and June, perianth yellow.

Pimelea aquilonia is a shrub to 3 m high with opposite leaves. It is endemic to north Queensland. Its distribution extends from Somerset (near the tip of Cape York Peninsula) to Bolt Head and Temple Bay, about 200 km to the south. There is also a highly disjunct occurrence at Mt Pieter Botte north of Daintree. Regarded as a common and widespread species. It grows on sand dunes close to the coast, in



Pimelea cornucopiae, formerly *Thecanthes*.



Pimelea chlorina, formerly *Pimelea* sp. Bakers Blue. (Image by Keith Townsend).

Thryptomene shrubland or in fragmented rainforest with hoop pine and/or *Callitris*. Flowering occurs throughout the year. Perianth white.

Pimelea chlorina (formerly *Pimelea* sp. Bakers Blue) is a shrub to 1.5 m high with alternate leaves. It is endemic to north Queensland where it is sporadically distributed from Mt Carbine to Charters Towers. It grows in sandy soils usually derived from granite, either on hillsides or associated alluvials, but at Mingela Bluff, it inhabits hillsides composed of quartzose sandstone. Flowers recorded for most of the year, perianth greenish-yellow.

Pimelea confertiflora is a shrub to 1.5 m high with opposite to subopposite and sometimes alternate leaves. It is endemic to

north Queensland occurring from Windsor Tableland (near Mt Carbine) to Undara National Park (near Mt Surprise), and east to Davies Creek Road, near Mareeba. It inhabits hillsides with sandy or skeletal soil on rocky outcrops of granite or rhyolite. Flowering occurs throughout the year, perianth yellowish-green to yellow.

Pimelea cornucopiae is a small shrub to 0.5 m high with opposite leaves. It is widespread in the tropics extending from Torres Strait to the Bundaberg area. Chiefly found in woodland or dry sclerophyll forest. Flowers recorded from February to July, perianth white. This species is under *Thecanthes* in the Flora of Australia, Volume 18.



The magnificent Flinders Poppy, *Pimelea decora* (image by BTC PG (Own work) [CC BY-SA 4.0])

south of Rockhampton, including continental islands. *Pimelea altior* was formerly treated as a subspecies: it has opposite to sub-opposite leaves and occurs south from about Miriam Vale. *P. latifolia* grows on margins of rainforest or vine thicket, on shallow soils at altitudes below 400 metres. On the islands of the Whitsunday group, it is found on coastal headlands adjacent to littoral rainforest. Flowers throughout the year, perianth white.

Pimelea linifolia is a shrub with opposite leaves which may be prostrate or erect to 1.5 m high. A widespread variable species occurring in all eastern States including south-eastern South Australia. In northern Queensland it can be found

Pimelea decora commonly known as Flinders Poppy, it is a perennial to 1 m high, often multi-stemmed at the base, the greyish leaves are opposite, rarely alternate with a length:breadth ratio rarely exceeding 3. Likes grassland on heavy textured soil. Flowers throughout the year, base of flower cream but red above.

Pimelea haematostachya has various common names, including Red Poppy and Pimelea Poppy. It is a multi-stemmed perennial to 1 m high with opposite or sometimes alternate, green to grey leaves with a length:breadth ratio 3-7. Has been collected from around the Gilbert River in North Queensland south to about the Burnett district. Found in grassland particularly on heavy clay soils. Flowers throughout the year, perianth yellow towards the base, red above.

Pimelea latifolia is a shrub to 1.5 m high with alternate leaves. Some former subspecies with opposite leaves have been raised to specific rank. It is endemic to eastern Queensland with a distribution extending from Townsville to just



Pimelea linifolia (Image by Keith Townsend)

from coastal habitats to ranges and western areas. Flowers chiefly collected from July to January, perianth ranges from white to pink or rarely yellow. Sometimes known as Slender Riceflower.

Pimelea plurinervia is a shrub to 2 m high and with alternate leaves. It is endemic to north-east Queensland where it is known from Hinchinbrook Island, Bishop's Peak (on the mainland opposite Hinchinbrook Island), and in the Tully Falls area south of Ravenshoe. It inhabits wet sclerophyll forest with rainforest elements, rainforest margins, and rocky mountains with *Allocasuarina littoralis*, *Banksia plagiocarpa* or *Kunzea graniticola*. In all cases, the geology is granite, and the soil is shallow or skeletal. Flowering probably occurs most of the year. Perianth white.



Pimelea linifolia (image by Keith Townsend)

Pimelea sanguinea is an herb to 0.3 m high with opposite, narrowly ovate to linear leaves. It occurs throughout the Australian tropics, usually associated with Eucalypt woodlands but has been collected in other habitats. Flowers have been collected from February to August Perianth red. In the Flora of Australia Volume 18 this species was placed in the genus *Thecanthes*.

Pimelea sericostachya is a shrub to about 1 m high with alternate leaves. It is endemic to north-east Queensland with a distribution that extends from Bellevue Station (west of Port Douglas) to the Sellheim River, south-east of Charters Towers, and east to the Dicks Tableland, west of Mackay. It occurs mainly away from the coast, except in the Townsville area. It inhabits hills and ridges in sandy or sandy-loam soil, derived from sandstone or granite. Flowers have been collected throughout the year, perianth greenish-yellow to yellow.

Pimelea simplex subsp. *continua*, has not been recorded north of latitude 22°S but I would not be surprised if it crept over the line! It is an herb to 40 cm high, leaves alternate, perianth yellow. It is a species with a nasty reputation, possibly because of it being a small herb, it may get eaten more frequently by stock.

Pimelea trichostachya is a small plant to 60 cm high with alternate leaves. It is a very widespread species in Queensland in areas west of the Great Dividing Range, extending as far east as Milmerran, and north to Aramac, with an outlier north-west of Mount Isa. It also occurs widely in all other mainland states and territories. It grows in flat or undulating terrain in red or brown sand or sandy-loam. Commonly associated tree species include *Eucalyptus melanophloia*, *E. populnea*, *Acacia aneura*, *Angophora melanoxylon*, *Acacia excelsa* and *Callitris glaucophylla*. Flowering occurs throughout the year, perianth yellow. Also known as Annual Riceflower.

Key to Species adapted from Bean (2017)

| | | |
|---|---|---|
| 1 | Internodes and leaves glabrous, may be a few hairs at nodes | 2 |
| | Internodes and lower leaf surface with at least some hairs | 6 |

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| 2 | Largest leaves 35-70 mm long | 3 |
| | Largest leaves 10-35 mm long | 4 |
| 3 | Leaves 1.5-3 (3.5) times longer than broad, hairs on fruit 4-6 mm long | <i>P. decora</i> |
| | Leaves 3-7 times longer than broad, hairs on fruit 1.5-2.5 mm long | <i>P. haematostachya</i> |
| 4 | Floral tube with hairs, involucre bracts free. | <i>P. linifolia</i> |
| | Floral tube glabrous, lacking hairs, involucre bracts fused towards base | 5 |
| 5 | Erect herb with white flowers | <i>P. cornucopiae</i> |
| | Prostrate or sprawling herb, flowers red | <i>P. sanguinea</i> |
| 6 | Perianth white | 7 |
| | Perianth yellowish-green to yellow | 9 |
| 7 | Leaves strictly opposite | <i>P. aquilonia</i> |
| | Leaves alternate, except sometimes opposite at base of plant | 8 |
| 7 | Largest leaves 13-24 mm wide; lateral veins only faintly visible; 24-120 flowers per inflorescence | <i>P. latifolia</i> |
| | Largest leaves 6.5-14 mm wide; lateral veins conspicuous; 8-18 flowers per inflorescence | <i>P. plurinervia</i> |
| 9 | Inflorescences borne laterally, leaves silvery | <i>P. chlorina</i> |
| | Inflorescences terminal, leaves not silvery | 10 |
| 10 | Rachis readily visible through the persistent pedicels | 11 |

| | | |
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| | Rachis obscured by the tightly packed persistent pedicels | 12 |
| 11 | Annual herbs, leaves to 2.8 mm wide | <i>P. trichostachya</i> |
| | Perennial shrubs, leaves 3-9 mm wide | <i>P. sericostachya</i> |
| 12 | Petioles 1.5-1.8 mm long; lower leaf surface with sparse to moderately dense hairs | <i>P. approximans</i> |
| | Petioles 0.3-1.5 mm long; lower leaf surface with dense to very dense hairs | 13 |
| 13 | Hairs on upper leaf surface 0.7-1.5 mm long, hairs white to silvery | <i>P. amabilis</i> |
| | Hairs on upper leaf surface 0.3-0.6 mm long, hairs shiny, transparent | <i>P. confertiflora</i> |

Species with white flowers are: *P. aquilonia*, *P. cornucopiae*, *P. latifolia*, *P. linifolia*, and *P. plurinervia*.

Species with yellow or yellowish flowers are: *P. amabilis*, *P. approximans*, *P. chlorina*, *P. confertiflora*, *P. sericostachya*, *P. simplex* and *P. trichostachya*.

Species with red flowers are: *P. decora*, *P. haematostachya*, and *P. sanguinea*.

For key to other species visit keybase.rbg.vic.gov.au, and under Flowering plants of Australia is the key based on the Flora of Australia. There is a key for most States on Keybase.

Paul Kennedy from the Hakea Study Group writes:

"As leader of the Study Group my endeavour is to grow all 169 species and sub species from across Australia so that I can do research and provide further information to Study group members. I have some 160 species established here in Colac, Victoria...

I need to obtain seed of three tropical species from North Queensland. They are *arborescens*, *persiehana*, and *pedunculata*. I am aware of the situation of collecting seed in the wild, however I was hoping you may know someone who has these [in cultivation]... The late Mrs [Radke] ... originally sent me seed of *Hakea persiehana* from a plant at the nursery but unfortunately the seed was picked too early... I am [enquiring] if you or one of your members can help me. Unfortunately all [*Hakeas*] do not retain their seed, so it is a bit of hit and miss in being there at the right moment unless bagged beforehand."

If anyone can assist with obtaining *Hakea* seed, Paul can be contacted directly by email: hakeaholic@gmail.com

| <i>Dnnisfail Branch</i> | <i>Townsville Branch</i> | <i>Tablelands Branch</i> |
|--|--|--|
| <p>Meetings at 4 p.m. on the second Wednesday of each month at 1 Stitt Street, Innisfail.</p> <p>Contact: innisfail@npq.org.au</p> | <p>Meetings on the second Wednesday of the month, February to November, in Annandale Community Centre at 8 p.m.</p> <p>Excursions the following Sunday.</p> <p>Contact: johnelliott@sgaptownsville.org.au</p> <p>www.sgaptownsville.org.au</p> | <p>Meetings on the 4th Wednesday of the month.</p> <p>Excursion the following Sunday.</p> <p>Contact: Chris Jaminon on 4091 4565 or email hjaminon@bigpond.com</p> |

Cairns Branch - next meeting

Sunday 18 March 2018. Annual General Meeting

Meet midday at the Cairns Botanic Gardens Visitors Centre, Collins Avenue Edge Hill. Lunch at midday, followed by the Annual General Meeting, commencing at 1 p.m. We will also discuss plans for 2018 excursions.

Sunday 1 April 2018. Special excursion - Mt Emerald

An Easter Sunday excursion for mountain goats. Mt Emerald, part of the Great Dividing Range, rises to 1100 m immediately behind Tolga. The infertile soils on the range here are derived from rhyolite, and they support a heath-like flora, rare in northern Queensland. There are several threatened and highly restricted species, including the lovely *Homoranthus porteri*, *Melaleuca uxorum* and the awkwardly named *Comesperma anemosmaragdinum*.

From Smithfield Shopping Centre, it's about an hour to the Rocky Creek War Memorial Park (between Walkamin and Tolga). Meet here at 8:30 a.m. From here we proceed to the commencement of the walk - drive across the Kennedy Highway and follow Frazer Road to a T-intersection. Turn right here into Marnane Road. Follow Marnane Road westwards, across Rocky Creek. After Rocky Creek, take the first left onto a gravel road called Anderson Road. Head along Anderson Road as far as a 2WD will take you - it ends in a rough cul-de-sac with 4WD tracks continuing on. We walk from here.

The walk is steep, rough and exposed, so bring tough shoes, sunscreen, plenty of water and lunch.

Please advise Stuart Worboys if you're coming - worboys1968@yahoo.com.au or 4039 3842.

