



*Society for Growing Australian Plants
Cairns Branch*

NEWSLETTER

Newsletter No 251

June, 2025

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*SGAP Cairns Branch Meeting at Stratford Library
Wednesday, 11 June, 2025.*

We will meet in the Stratford Library meeting room, corner Dalgety St and Kamerunga Rd, Stratford. A General meeting to commence at 6.30 p.m. will include general business and plant show and tell. We will need to discuss July's Cooktown excursion. This will be followed at about 7 p.m. by our speaker, Rachel Platte, coordinator of Mulgrave Landcare. Rachel will speak about mangroves and biodiversity.

Bring a plate to share with a cuppa and any ideas you have for future excursions.

SUNDAY 15 JUNE, 2025

Our next excursion, on Sunday 15 June is to the giant Stockwellia trees at Boonjie. We will meet at 10 a.m. at the Gillies Cafe and Bar, corner Gillies Range Road and Lake Barrine Road (that is, the turnoff to Lake Eacham and Malanda). After a meet and greet and perhaps a coffee, we will proceed to the start of the Stockwellia Track which leads off the Gourka Road in Topaz. This two km long rough rainforest walk along an old logging track will take us to one of the most botanically interesting places in the Wet Tropics.

Wear good walking shoes and bring water, leech repellent and a packed lunch. If the weather is too wet for the Stockwellia Track, we will take a look at the tracks around Lake Eacham.





Tapeinochilos ananasse

Now is the time for members and their friends to pay a little closer attention to their gardens. Our Branch sponsors a prize at the Cairns Show for the most points gained from entries in Class 22094 through to Class 22100 which includes from Callistemons, Grevilleas, Leptospermums, any other native shrub, tree or vine flower, to a spike of native foliage. See cairnsshow.com.au for the Horticulture Competition entry form and fees.

Back Scratcher Ginger, *Tapeinochilos ananassae*, Photo Helen Lawie (who had to have the last word) Currently flowering in Mum's garden, but will it still be in prime condition when Cairns Show Day comes around?



The State Conference is being held at Maroochydore (22-25 August, 2025) and a grant of \$300 is on offer to northern branches to subsidise transport costs.



May Excursion Report Mulgrave Mangroves and More

Helen Lawie

Located at the end of Ross Road, Deeral, well past the boat ramp, is a Mulgrave Landcare revegetation site. Its story is similar to the Fig Tree Wetlands site just a few kilometres North: Seasonally swampy land on the banks of the Mulgrave River, drained for cane growing in the 1960s or 70s, farmed with varying degrees of success, now reclaimed for nature some 50 years later.

The oldest plantings are around five years old, with many flood-friendly species that will one day blend seamlessly with the fringe of trees left along the river bank. They have already stabilised the bank and reduced erosion. Furthermore, despite a bunch of weeds not yet shaded out, some trees were in fruit - *Ficus racemosa*, and quandongs, encouraging birds and providing opportunities for the next generation of seedlings.

Low tide and our Health and Safety Briefing permitting, we explored the adjacent mangroves with Mulgrave Landcare Coordinator, Rachel Platte. With careful consideration of our footing and occasional perimeter checks for crocs, we gradually picked out the differences in the forest of mangroves.

Does the mangrove have a rough bark, a plethora of knee roots, and a scattering of red elf-capped propagules? Chances are it's an Orange Mangrove, *Bruguiera gymnorhiza*. Does the tree have a pale greyish trunk with large buttresses, leaves silver underneath, and lots of epiphytes? Looking-glass Mangrove, *Heritiera littoralis*, most likely. Would it look great at SGAP Christmas lunch? It must be Holly Mangrove, *Acanthus ilicifolius*.

This fascinating ecosystem dominates the swamp zone, while beyond the reach of tidal salt water on raised banks Native Gardenia, *Atractocarpus fitzalanii*, and Red Beech, *Dillenia alata*, grow.

The technical part of the day was led by SGAP Branch President, Stuart Worboys. (Refer to our May Newsletter for instructions on how to download iNaturalist). You can use this app to identify plants and also to record instances of plants, insects and birds. Once you've had a few successes with iNaturalist you will be hooked.

Top tips from the Pres are to use the best or prettiest photo first. Take several photos, always of the same plant; you are documenting one plant with each observation. Include the underside of the leaf, showing leaf veins, or spore patterns for ferns. Finally, please DO avoid cultivated plants; this is citizen science, so let's lean into the Science. With considered entries this useful and fun app can really contribute to the picture of species distribution in our complex tropical landscape.

STORIES FROM THE COLLECTION

Stuart Woyboys

The Australian Tropical Herbarium contains over 180,000 pressed, dried specimens, an invaluable scientific resource used worldwide by researchers. They were largely collected from the Wet Tropics bioregion: from the peak of Mt Bartle Frere to cracks in the pavement of Abbott Street, Cairns; from the dry rocky slopes of Rattlesnake Island to the back yard of the Lion's Den Hotel near Cooktown. Each specimen has a story - the how, why, and when it was collected. Here is the story of just one.

Specimen No. CNS 153454

Rhododendron lochiaie

So much of the ATH's collection was acquired to support scientific research projects. For example, 7.3% of the collection is Lauraceae (the avocado family), much of which was collected to support Bernie Hyland's incredibly detailed taxonomic studies. By comparison, the number of species of Lauraceae is less than 1% of the total number held in the Herbarium.

Another well known project was the rainforest fruit paintings of William T Cooper. He and Wendy Cooper spent years collecting, identifying and painting rainforest fruits. Each

painting is represented by a specimen, called a voucher specimen, held at the Herbarium.

One particularly adventurous project was undertaken as part of an Honours research program by avid bushwalker and native plant grower, Mary Gandini. Her fascination was with Australia's native rhododendrons, small shrubs with vivid red flowers that only occur on a few peaks in the Wet Tropics bioregion.

Mary's goal was to understand the similarities and differences between plants growing on different peaks, and to determine if there was evolution of unique features in the separate populations. The project took her to some of the region's most remote and physically challenging locations.



Rhododendron lochiaie

Mary's collections helped show differences between isolated rhododendron populations, and laid the foundations for future tropical mountain plant science research projects. One of her rhododendron collections comes from part of Mt Bartle Frere rarely visited by bushwalkers - the eastern peak, not far from the site of the 1942 B-25 plane crash.



Rhododendron lochiaie specimen collected from the remote eastern peak of Mt Bartle Frere



If iNaturalist is not for you.....

Methods of Plant Identification

Occasionally, we come across a plant whose identity is a mystery. The plant may have an unusual growth form, spectacular flower or suspiciously weedy habit that catches our attention. How do we obtain a name for this plant so we can satisfy our curiosity or take action? The first step is always to gather an adequate specimen. By this, we mean a generous length of leafy branch with flowers and/or fruits. Another option is good quality photos of the plant, showing closeups of leaf arrangement, trunk as seen from a metre away (if a tree), flowers from ALL angles, the growth form (i.e. is it a vine, a herb, a tree etc.) and habitat. Once this information is gathered, we can start the identification process. Generally, there are three ways a lay person can determine the identity of a plant:

- Expert Determination
- Comparison and Recognition
- Identification Keys

Expert Determination

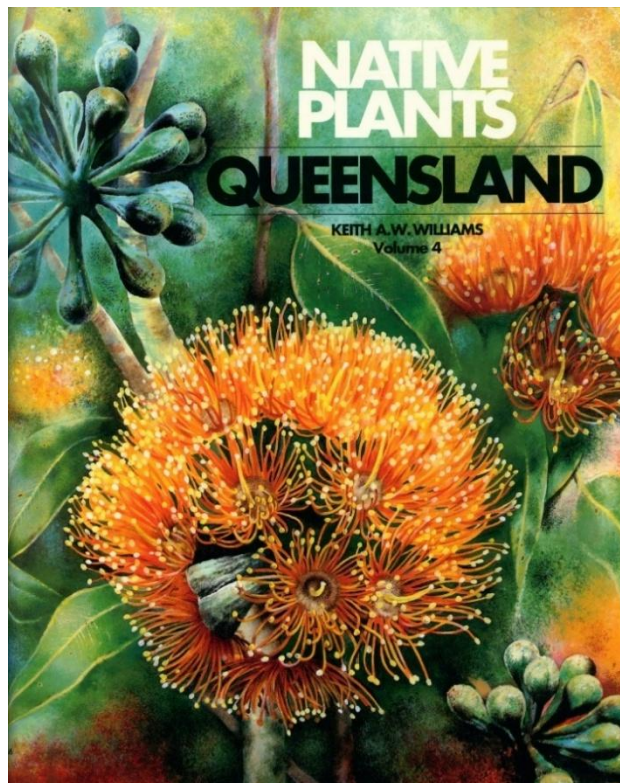
This method engages recognised experts, both amateur and professional who use their experience, and/or pressed dried specimens and identification keys to identify a plant. Small numbers of identifications are usually free with prices increasing for greater volumes and for commercial enquiries.

Comparison and Recognition

The unknown specimen is compared with a named specimen, illustration, photograph or description. The reference for this method is often an herbarium specimen or field guide. A far less reliable method is to use Google Images.



Herbarium Specimen (Hopper, S)



Field Guide (Keith A.W. Williams)

Identification Keys

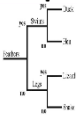
Two common types of plant identification keys are dichotomous keys, and multi-access keys. Key systems use morphological characteristics to match a specimen to its identity. Characteristics used include structures of seedlings, stems, roots, leaves, flowers and fruit.

Dichotomous keys are the most common keys encountered. They may be laid out in various ways but usually form a series of numbered questions arranged in pairs (hence dichotomous = dividing into two parts) as shown below.

Each time a question is answered, the user is directed to the number of a new pair of questions. This continues until, instead of a number, the name of the species (or other taxon) is given. The structure of the key is such that each question is like a tree branch that has smaller branches proceeding from it, as demonstrated for keying out four "egg-laying animals".

| Egg Laying Animals | | |
|--------------------|-----------------------|--------|
| 1. | Feathers present..... | 2 |
| | Feathers absent..... | 3 |
| 2. | Swims..... | Duck |
| | Does not swim..... | Chook |
| 3. | Legs present..... | Lizard |
| | Legs absent..... | Snake |

Simple Dichotomous Key



Dichotomous keys consist of a series of contrasting statements. Each pair of statements requires a step of choice. This leads to another pair of statements where another choice is needed.

The below example is a Dichotomous Key to Australian Cordylines.



Flora of Australia: vascular plants: Species of Cordyline

From: Pedley, L. (1986). Cordyline. In: *Flora of Australia* 46. Australian Biological Resources Study, Canberra.

Interactive

Bracketed

Indented

About

| | | |
|----|--|------------------------------------|
| 1 | Petiole not distinct from lamina, or petiole distinct but flat and not distinctly grooved or tubular in section; petals longer than sepals | 2 |
| 1: | Petiole distinct from lamina, grooved or tubular and crescentic in section; sepals and petals equal | 4 |
| 2 | Fruit black when mature; leaf up to 2 cm wide; petiole not distinct from lamina | Cordyline stricta |
| 2: | Fruit red or orange-red when mature; leaf 2 cm or more wide; petiole usually distinct from lamina | 3 |
| 3 | Leaf margin especially at junction of lamina and petiole breaking down irregularly, rough; inflorescence congested, with several branches at the same node | Cordyline congesta |
| 3: | Leaf margin at junction of lamina and petiole smooth; inflorescence not congested | Cordyline rubra |
| 4 | Lamina usually less than 15 cm long, abruptly narrowed and almost rounded at junction with petiole; petiole less than 5 mm wide | Cordyline murchisoniae |
| 4: | Lamina usually more than 20 cm long, more gradually narrowed at base; petiole more than 5 mm wide | 5 |
| 5 | Leaves usually 20–50 cm long, glaucous beneath especially when fresh | Cordyline cannifolia |
| 5: | Leaves 25–80 cm long, not glaucous beneath | 6 |
| 6 | Pedicels 7–12 mm long (longer in fruit) | Cordyline manners-suttoniae |
| 6: | Pedicels to 2 mm long | 7 |
| 7 | Petiole 30–50 cm long, strongly inrolled; perianth 6–7.5 mm long | Cordyline petiolaris |
| 7: | Petiole 8–20 cm long, concave above; perianth 9–12 mm long | Cordyline fruticosa |

KeyBase

(Pedicel: The stalk of an individual flower usually restricted to the stalk beyond the last pair of bracts.

Peduncle: The stalk of an inflorescence.)

Indented dichotomous keys are similar to the above but each lead is followed to its conclusion. One problem with indented dichotomous keys is that the alternate pair choice can be pages away.



Flora of Australia: vascular plants: Species of Cordyline

From: Pedley, L. (1986). Cordyline. In: *Flora of Australia* 46. Australian Biological Resources Study, Canberra.

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| 1: | Petiole distinct from lamina, grooved or tubular and crescentic in section; sepals and petals equal | |
| 4 | Lamina usually less than 15 cm long, abruptly narrowed and almost rounded at junction with petiole; petiole less than 5 mm wide | Cordyline murchisoniae |
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[KeyBase](#)

Dichotomous keys are found in floras, manuals, guides, monographs, revisions and electronically.

When using Dichotomous keys there are several implied rules that you should follow;

- Read the introductory comments. They will give you information on format details, abbreviations, etc.
- Read both leads of a couplet before making a choice; one may be more correct than the other e.g. leaves purple vs leaves mauve.
- Use the glossary to check the intended meaning of terms: a term used in botanical description may mean something totally different in normal conversation, e.g. “recalcitrant”
 - Recalcitrant seeds (sometimes known as unorthodox seeds) are seeds that do not survive drying and freezing during ex-situ conservation.
 - Recalcitrant person is someone having an obstinately uncooperative attitude towards authority or discipline.
 - Use a ruler or similar when measurements are required.
- When measuring, always select average sized structures, not the biggest or smallest. Also, measure several similar structures, i.e. more than one leaf length.
- Do not base your decision on a single observation. Examine several specimens.
- When dichotomies are unclear, or when information is insufficient, try both choices and make a decision as to which one is the best fit.
- Verify your result by reading the description, comparing the specimen with an illustration or herbarium voucher.

Finally, another problem with Dichotomous keys is that they are sequential. You MUST complete each step in sequence. If you can't complete a step due to absence of the part named, it is generally all over. In the below example from "Key to Families of Flowering Australian Plants", if your specimen is not in flower, you will not get past step 2.

| | | |
|---|---|-----------------|
| 1 | Monocotyledon | 838 |
| | Dicotyledon | 2 |
| 2 | Flowers with at least one perianth whorl | 3 |
| | Flowers lacking perianth | 820 |
| 3 | Either one or both perianth whorls fused into a cap | 4 |
| | Perianth segments not fused into a cap | 10 |
| 4 | Leaves invested with peltate scales | Himantrandaceae |
| | Leaves glabrous or, if indumentum present, not of peltate | 5 |
| 5 | Leaves gland dotted | Myrtaceae |
| | Leaves not gland dotted | 6 |

Key to Families of Flowering Plants (A.S. George, Flora of Australia 1, 1981)

Multi Entry Keys

Multi entry keys overcome this problem. You can pick what features you want to use for identification which is advantageous if you have no flowers or fruit. They also allow you to start your identification with any features that you wish because multi entry keys are not sequential. However, most of the rules for using dichotomous keys apply to multi entry keys.

These days there are many multi entry keys available online. For example, two that come in handy in our area are:



Australian Tropical Rainforest Plants (available at: [Australian Tropical Rainforest Plants Home](#))



Australian Tropical Rainforest Orchids (available at: [Australian Tropical Rain Forest Orchids](#))



Branch fees of \$10 can be paid on line: BSB 034 167 account no 850790