



*Society for Growing Australian Plants  
Cairns Branch*

NEWSLETTER

*Newsletter No 237*

*February, 2024*

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*18 Manilla Close, Mount Sheridan – Sunday, 18 February, 2024*

Welcome SGAPers to 2024. Once again Helen and Mark have offered their home, out of the rain, out of the sun – airconditioned – to hear our guest speaker, Matthew McIntosh, a previous Cairns Branch Secretary. Matthew will discuss an area of interest in which he has expertise. Bring your lunch for a 12 noon start, and any show and tell/show and ask, as well as items for the raffle. If you happen to lose your way phone Helen on 0403 046 809 for directions.

Our March meeting will be our AGM – venue to be decided – commencing at 12 noon for lunch when we will brainstorm our program of excursions for the year. Where do you want to explore and why? Would you like members to visit your garden?



*Cairns Art Gallery Visit*

Pauline Lawie

Our November visit to the Cairns Art Gallery was quite enlightening. Ellis Rowan is renowned as a botanical artist. Her paintings were pleasing to view yet we found much to comment upon – some species have unsurprisingly been retaxed. Of the two local artists, Melanie Hava's work showed an interesting way of looking at plants and the creatures they support. Daniel Wallwork's installation was complex and inspired much thoughtful discussion.

Our *Melicope rubra* flowered prolifically this month and Don brought a cutting in to grace our dining table. As the flowers matured I was struck by the fact that the buds did not actually open so I went to the most reliable source of information I know for a botanical explanation..

Rob Jago supplied this glorious photograph with his explanation:



*Melicope rubra*

Photo Rob Jago

I have attached a photo of the flowers I took yesterday in my garden. I am not aware of any special botanical term that describes how the stamens and style emerge from the flowers of *Melicope rubra*. Normally as a flower bud develops the growth and expansion of the petals puts increasing pressure on the connective tissue between the petals eventually forcing the connective tissue to rupture along the suture lines of the bud.

In *Melicope rubra* the growth and expansion of the filaments of the stamens appear to also play a part in the rupture of the connective tissue. The style emerges from near the apex of one of the slits between the petals sometime after the stamens have emerged.

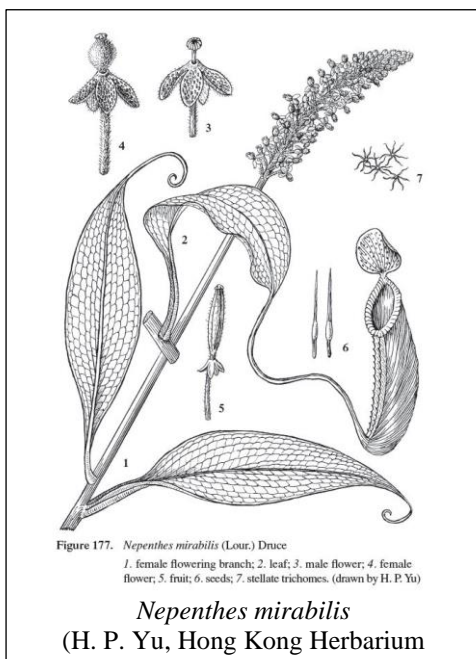
This probably happens in a lot of different species but what is unusual about *Melicope rubra* is that the petals do not completely split apart but remain joined at both the apex and at the base.

Offhand I cannot recall any other species that does this.

From our travelling botanist

## NEPENTHES

Sundews are not the only plants to supplement their nutrition by devouring animals. Another, that lives amongst us, here in the Cairns area, is the tropical pitcher plant, *Nepenthes mirabilis*. Like all carnivorous plants, pitcher plants use leaf modifications to attract, trap, kill, dissolve and absorb their prey.



Pitcher plants are climbing or scrambling vines in the family Nepenthaceae. They produce normal looking leaves terminated in a tendril which the plant uses for climbing. Pitchers develop at the end of some of the tendrils. The generic name *Nepenthes* comes from the Greek nepenthe, the drug Helen mixed with wine in Homer's *Odyssey*. This is thought to be in reference to the shape of the pitcher resembling a drug container.



Lid  
 Peristome  
 Smooth  
 Inner Wall  
 Glandular  
 Zone.

All *Nepenthes* pitchers have four components: Lid, peristome, smooth inner wall and glandular zone. Each of these components plays an important role in the capture and consumption of prey.

The **lid** is brightly coloured and usually overhangs the pitcher mouth which helps prevent rainwater entering and washing out the nutrient rich contents. The underside is often covered in large numbers of nectar glands which helps to attract insects.

Below the lid is the pitcher mouth, which is lined with a rim of hardened tissue; the **peristome**. The peristome forms an overhanging wall which projects into the pitcher mouth. On its inner surface are more nectar glands that tempt visiting insects to forage for nectar around the pitcher mouth. To reach these nectar glands, insects must venture onto the third component of the pitcher, the **smooth inner wall**. This places them at maximum risk of falling into the digestive fluid, as the smooth wall is covered in wax plates to reduce friction and make it very difficult to climb up. Most insects that fall into the pitcher fluid drown but some manage to clamber back up the wall to the peristome. This is where the second main function of the peristome comes into play. The overhanging rim forms a barrier that most insects cannot overcome, preventing their escape. Eventually after several attempts, most insects tire and drown in the pitcher fluid.

The walls of the lower parts of the pitcher are covered in glands which secrete acids and digestive juices. The acids and enzymes help to digest the captured prey. Recent studies suggest that these digestive juices play only a secondary role in the decomposition of the bodies of dead insects. A group of organisms have adapted to life inside pitchers, and it is thought that these spiders, tadpoles, mosquito, midge and fly larvae, do the main work allowing the enzymes break down the tissues more quickly. The dissolved nutrients are then absorbed through the wall of the pitcher for use by the plant.

*Nepenthes* are dioecious, producing unisexual flowers on separate plants. In Far North Queensland you can find four *Nepenthes* species if you go hunting. But remember to take your croc repellent with you.

## MANGROVES OF THE RUSSELL- MULGRAVE RIVERS

The Russell and Mulgrave rivers were named by Commissioner Dalrymple during his 1873 voyage in search of an area that could be used as a port. The two names refer to the family names of Queensland Governor, Lord Normanby, and his wife, Lady Normanby. Arising high in the mountains south of Cairns, Far North Queensland, the two rivers, after a short but turbulent journey, unite just a few kilometres from the Coral Sea and flow to the ocean in a wide estuary. The terrain at the rivers' junction is undulating and the velocity of the water slows, allowing a build up of ephemeral mud islands among the winding tributaries.

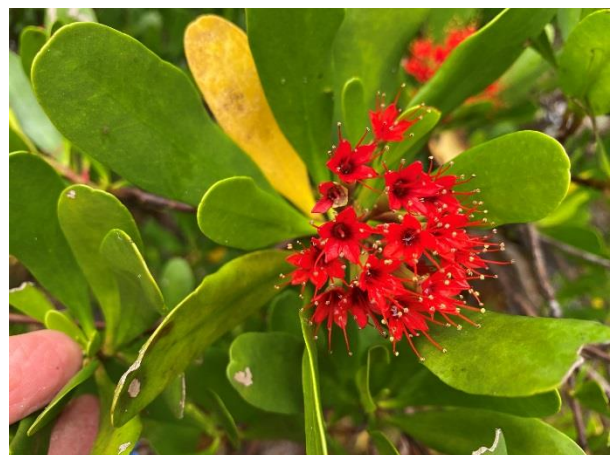
The conjunction of high ambient temperature and rainfall with a nutrient-rich sedimentary build up creates an ideal habitat for mangrove plants. Such plants are classified as "mangroves" if they conform to a set criteria, principally a high tolerance of salty water. Not necessarily related to one another there are over 30 species of mangrove throughout Queensland, representing about 20 plant families. Flowering plants have evolved with varied and beautiful – to human eyes – inflorescences which compete for the attention of their pollinators.

A past president of the Cairns Branch of the Society for Growing Australian Plants (SGAP), Mrs Patsy Penny, has traversed the twin rivers for many years (aw, not that many!) and has trained her lens on the remarkable feast of flowers awaiting the discerning eye.

We present here a selection of Patsy's pictures which demonstrate the beauty that can be found among the mud, mangroves, mosquitoes and crocodiles.



*Sonneratia caseolaris*: Mangrove Apple. *Sonneratia* flower at night so the keen photographer has to arise early to catch the beauty of their crimson stamens.



*Lumnitzera littorea*: Black Mangrove. Another red-flowering mangrove, *Lumnitzera littorea* grows to not more than two metres in height.



Osbornia octodonta: Myrtle Mangrove. Grows to 5 metres in height, small white flowers and fruit. Crushed leaves redolent with Eucalyptus oil.



Cynometra iripa: Wrinkle Pod Mangrove. A mangrove that prefers an input of fresh water, *Cynometra* slowly reaches a height of 5 metres. The name Wrinkle Pod refers to the small, convoluted brown fruit.



Xylocarpus granatum: Cannonball Mangrove. One of the taller mangroves, *Xylocarpus* reaches a height of 25 metres, and the fruit, consisting of interlocking pieces, really is the size of a cannonball.