



Society for Growing Australian Plants

Cairns Branch Inc.

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Bryophytes for Beginners

Helen Lawrie

Guest speaker for our February meeting was Dr David Tng, Centre Director of the Australian Centre for the School for Field Studies (<https://fieldstudies.org/centers/australia/>) Located at the top end of the Gillies Range, the School for Field Studies (SFS) includes teaching facilities, laboratory, student accommodation and a new field herbarium. David could easily have chosen a selection of bryophytes from this rainforest setting for us to examine. However, he quickly chose a variety of bryophytes from suburban Mount Sheridan in our first lesson of the day: when our attention can be diverted away from charismatic flowering plants, a world of wonder can be found in the lower orders right on our doorstep.

For members who missed out on David's presentation "Bryophyte Tapestry" I will attempt to give an overview, any errors are my own.

In the evolutionary sequence, bryophytes developed as the first land plants once algae

emerged from the oceans. They have no vascular system, instead each plant cell diffuses and

absorbs water and nutrients via processes such as osmosis. Reproduction is reverse to that of flowering plants, with asexual reproduction in the dominant life phase of the plant, followed by sexual reproduction in the following short-lived and inconspicuous life phase. "Root" like structures called rhizoids function more to anchor rather than feed the plants. The "leaf" like parts photosynthesise but can sometimes be only one cell thick in places and are not true leaves. The "flowers" are spore packets – sporophytes - on



Val Carnie waits patiently whilst Jeni checks out a moss under a stereo microscope. Dr David Tng and Dr Rob Jago stand in the background.

stalks: the colour, duration, and size of which vary

widely. It is the combination or exclusion of these various elements that classifies bryophytes into 3 subgroups:

- Hornworts with approximately 300 species worldwide,
- Mosses, with approximately 12,000 species worldwide, and
- Liverworts approximately 9,000 species worldwide.



Liverwort found at Forest Gardens

Not surprisingly they inhabit niches across the globe from Siberian peat bogs to the Utah desert and the Aussie Outback, in addition to our beloved tropical humid climes.

David had very kindly brought a couple of microscopes with him, and we each took turns to examine specimens. Demonstrating dissection and making slides as we went, David shared the magic as we put our new learnings to use. We watched mosses spring back to life once hydrated. We observed for ourselves the cell structure so beautifully illustrated in David's PowerPoint. And we developed our own appreciation for this tiny world.

A big Thank You to Dr David Tng for sharing his enthusiasm, knowledge and time so generously. We promise to bring our hand lenses on every future excursion!



David delivers his PowerPoint.



Shepherd's Crook Orchid, or *Geodorum densiflorum*, is commonly seen in freshly laid mulch around gardens., not just in northern Australia, but across much of tropical Asia and the western Pacific. Being so common, we probably don't often stop to admire its beauty as much as we should. Thanks to Patsy for this reminder.

The Summer of 2022 - 2023 in our garden.

Garry Sankowsky

The photo album is now complete. You can view it online at the following link -

<https://www.flickr.com/photos/39383176@N03/albums/72177720303592564>

Just click on the first image to open it then forward and backwards arrows will appear on each side of it. If a "+" sign is on your cursor you can click again and the image will be enlarged, if the "+" sign is still there it can be enlarged again. When full size the cursor will change to a "-" sign, click again and the navigation arrows will appear again so you can continue.

What's Happening?

Cairns

Sunday 19 March 2023. Meet at the Picnic Shelter and barbecue , Copperlode Dam for the Annual General Meeting. Bring a folding chair, cold drinks and some chops to throw on the barbecue, and get ready to be volunteered for duty on the 2023 committee! After business is complete, we can explore around the forest edges and enjoy the views of Lake Morris and Lamb's Head.

Townsville

NPQ Townsville normally meets at 7 p.m. on the second Wednesday of the month, February to November. The meeting venue is the Oonoonba Community Hall, Shannon Street, Oonoonba.

Tablelands

Sunday 26 March 2023. Meet at the toilets in Dimbulah at 9:00 AM for a 9:30 start. We will head west through Petford and Almaden and may end up at the Tate River. On the way back if there is time, go down the Lappa Junction road part way.

Forest giants of Mt Spurgeon



Agathis atropurpurea near Mt Spurgeon

On the remote, unlogged, western peaks of the Carbine Tableland, there remain a handful of giant *Agathis atropurpurea*, the purple kauri. These rarely seen trees are the biggest of their kind. This gnarled ancient, located about 12 km northwest of Mt Carbine, is 7.6 m in circumference.

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