



Understanding  
Our Natural World  
Est. 1880

# Field Nats News No 331



Newsletter of the Field Naturalists Club of Victoria Inc.

1 Gardenia Street, Blackburn Vic 3130

Telephone 03 9877 9860

P.O. Box 13, Blackburn 3130 [www.fncv.org.au](http://www.fncv.org.au)

Newsletter email: [joan.broadberry@gmail.com](mailto:joan.broadberry@gmail.com)

(Office email: [admin@fncv.org.au](mailto:admin@fncv.org.au))

Editor: Joan Broadberry 03 9846 1218

Founding editor: Dr Noel Schleiger

Reg. No. A0033611X

Patron: The Honourable Linda Dessau, AC  
Governor of Victoria

Office Hours: Monday and Tuesday 10 am - 4 pm

July 2022

## From the President

However, it has certainly been very cold and wet and many people are suffering from colds and influenza in addition to the Corona Virus that has not gone away. We therefore recommend that, where possible, masks be worn at gatherings and a safe distance maintained.

We are very much back to normal with meetings in the hall and everyone is enjoying the camaraderie of real meetings and hot drinks.

**The deadline for FNN 332 will be, as always, the first Tuesday of the month, Tuesday 5th July.**

Please use  
[joan.broadberry@gmail.com](mailto:joan.broadberry@gmail.com)



Photo 1: Leech contracted on cold concrete.  
*Philaemon pungens*

### A bloodthirsty tale from a wet forest.

On Sunday May 8<sup>th</sup> I decided to visit Mortimer's Picnic Ground to see what fungi had popped up during the heavy rain. It was very wet, but a reasonable crowd of visitors had decided to brave the persistent drizzle and cold temperatures for a Mother's Day Picnic.

There are always leeches at Mortimer's but this time the trails were patrolled by thousands of very active leeches. They were dropping from the foliage and inching up from the litter. I have been crawling about in wet forest for many decades in both the tropics and cool temperate regions, but I have never seen as many leeches as this at one time. There seemed to be two kinds, one smaller with blue dorsal spots and an orange venter (*Philaemon pungens* ?) and a larger, predominantly brown species. They were all over my coat sleeves and trouser legs in no time at all. There were lots of fungi to photograph but the leeches climbed all over the camera whenever I approached for a macro photograph. We pulled dozens of them from our clothing and continued to do so after beating a hasty retreat to the relative safety of the camping area.

I placed some of the leeches onto the cold concrete bollards whereupon they contracted, with their bodies pointing up at about 45 degrees (Photo 1). I moved my hand slowly towards them and they elongated but remained relatively still (Photo 2) until I triggered their IR proximity alert. At that point they exploded into frantic "whipping" about their posterior sucker and elongated to full length. Once they worked out where I was they looped towards my hand as they whipped about until they touched my fingers (Photo 3).

(Continued on page 4)



Photo 2: Same Leech extended, but relatively still as my hand approached. *Philaemon pungens*

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## CALENDAR OF EVENTS

*All meetings are held at the FNCV Hall, 1 Gardenia St. Blackburn at 8 pm., unless otherwise indicated. On days of extreme weather conditions, excursions may be cancelled. Please check with leader.*

### JULY 2022

**Sunday 3<sup>rd</sup> – Fungi Group Foray: Mount Worth State Park, Seaview.** Meet at the Moonlight Creek Picnic Area at 10.15 for a 10.30 start. (Melway Edition 45 Map X912 U8) GPS reading at carpark: 38° 16' 58" S 146° 00' 28" E  
*NOTE: The foray advertised in the COE to Blackwood cannot be held as the walking paths are closed due to storm damage.*  
 Register with Anna Brady [anna21brady@gmail.com](mailto:anna21brady@gmail.com) 0448 711 116

**Monday 4<sup>th</sup> - Fungi Group Meeting: VIA ZOOM Soil Mycology.** Speaker Sandra Tuszynska  
 Please contact Melvin Xu [fungifncv@gmail.com](mailto:fungifncv@gmail.com) 0410 522 533 for the zoom link.  
*Note this meeting has been altered from that advertised in the four monthly calendar of events.*

**Tuesday 5<sup>th</sup> - Fauna Survey Group Meeting: Wildlife of the Australian Rainforests - the lesser known states: a look at the wildlife residing in rainforests in Victoria and Western Australia** Speaker: John Harris, Zoologist and Director, Wildlife and Ecology. Contact Ray Gibson 0417 861 651; [rgibson@melbpc.org.au](mailto:rgibson@melbpc.org.au)

**Saturday 9<sup>th</sup> – Fauna Survey Group Equipment day** 10 am – 3 pm in the FNCV Hall. Join members of the FSG to help repair and label equipment. Drop in for an hour or stay for the day. BYO lunch.  
 Contact Ray Gibson 0417 861 651; [rgibson@melbpc.org.au](mailto:rgibson@melbpc.org.au)

**Monday 11<sup>th</sup> - Marine Research Group No Meeting: Winter Break.**

**Saturday 16<sup>th</sup> – FNCV Trivia Night.** Enjoy a fun night with your fellow Club members and bring your friends. There will be prizes. More details to come. **Prior registration required.** Details to come via email from the office.

**Sunday 17<sup>th</sup> – Fungi Group Foray: Cathedral Range State Park.** Meet at Ned's Gully Campground Carpark, Little River Road, Taggerty at 10.15 am for a 10.30 am start. (GPS: -37.36, 145.75, Melway Edition 45 Map X910 T9)  
<https://goo.gl/maps/Zz1Hva2So1F1Tgp26> Register with Anna Brady [anna21brady@gmail.com](mailto:anna21brady@gmail.com) 0448 711 116

**Wednesday 20<sup>th</sup> - Terrestrial Invertebrates Group Meeting: To be advised.**  
 Contact Max Campbell 0409 143 538; 9544 0181 AH; [mcam7307@bigpond.net.au](mailto:mcam7307@bigpond.net.au)

**Thursday 21<sup>st</sup> – Botany Group Meeting: Proteaceae Part 2. Cluster roots and distribution.** Speaker Ken Griffiths.  
 Contact Ken Griffiths [botany@fncv.org.au](mailto:botany@fncv.org.au)

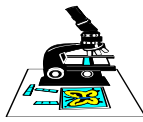
**Monday 25<sup>th</sup> - FNCV Council Meeting: 8 pm. VIA ZOOM** Apologies and agenda items to Wendy Gare  
[admin.fncv.org.au](mailto:admin.fncv.org.au) Max will send the zoom link.

**Tuesday 26<sup>th</sup> – Day Group Meeting: Travels in Arnhem Land.** Speaker: Eve Kolar.  
 Coffee and a chat 10.30 am speaker at 11 am. All welcome. Contact Joan Broadberry [joan.broadberry@gmail.com](mailto:joan.broadberry@gmail.com)

**Wednesday 27<sup>th</sup> – Geology Group Meeting: To be advised.** Contact Ken Griffiths [geology@fncv.org.au](mailto:geology@fncv.org.au)

**Friday 29<sup>th</sup> – Juniors Group. No Meeting**

**Sunday 31<sup>st</sup> – Fungi Group Foray: Toorongo Falls.** Meet at the Toorongo Falls Reserve Carpark, Toorongo Valley Road at 10.15am for a 10.30 am start.  
 (GPS: -37.85, 146.05, Melway Map X928 B5. Vic Roads Map 81 B7) <https://goo.gl/maps/zp7VTnd2jjiXQFMC8>  
 Register with Anna Brady [anna21brady@gmail.com](mailto:anna21brady@gmail.com) 0448 711 116



The policy of the FNCV is that non-members pay \$5 per excursion and \$3 per meeting, to contribute towards Club overheads. Junior non-member families, \$4 per excursion and \$2 per meeting.

# Members' news, photos & observations

We always have space for member photos and natural history observations. Please share with us what you have noted in your daily life, travels or garden. Email: [joan.broadberry@gmail.com](mailto:joan.broadberry@gmail.com) by the first Monday in the month.

Welcome  
Welcome

Warmest greetings to these new members who were welcomed into our club at the last Council meeting:

CamilleTruong, Shoko Terry, Hanuki Terry, Eris O'Donnell, Bernadette Cameron, Rodda Power, Ebony Bain Perkins, Meghan Mussehl, Audrey Beard, Rohan Jenger, Linda Cropper, Rachel Newby, Mary Zettl, Zoe Jacobson, Katie Jacobson and Penelope Johns.

## Queens Birthday Honours

Our warmest congratulations to FNCV member Dr. Margaret Rowe, who was awarded the OAM for services to conservation and the environment, in the recent Queens Birthday honours.

*The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the FNCV.*

## Advertising in the Field Nats News

**VERY REASONABLE RATES**

Contact Wendy in the Field Nats Office

[admin@fncv.org.au](mailto:admin@fncv.org.au)

9877 9860

(Mon – Tues 10 am – 4 pm)

**Facebook followers:**  
23,755

## COVIDSafe

Members are reminded that they should not attend FNCV activities if they are unwell. Wearing a mask if physical distancing not possible is recommended.

At meetings members are no longer required to register, but are asked to sign the attendance book. As a courtesy, some SIG organisers may appreciate members registering beforehand.

However, it is necessary to register for excursions, surveys and camps. In some cases participants must also register with Parks Victoria on ParkConnect.

Registering ensures participants can be contacted, often at short notice, if arrangements change. This has happened last month due to a late forecast for dangerous winds.

## Thank you to all those who helped produce FNN 331

Joan Broadberry, Wendy Gare, Sally Bewsher, Pat Grey and Sheina Nicholls.

[bookshop@fncv.org.au](mailto:bookshop@fncv.org.au)  
for any orders or bookshop queries.

If you don't have access to email, the FNCV office will pass on your message. Kathy will then be in contact with you.

The capture and handling of all animals on FNCV field trips is done strictly in accordance with the Club's research permits.

## Are you ready for a trivia night?



What Are These?





Photo 3: This one located on my hand and was searching for a feeding site. *Philaemon pungens*



Photo 4: Site located. *Philaemon pungens*

(Continued from page 1)

One found a good place to commence feeding (Photo 4). I removed it before it had excised a decent puncture wound. In the meantime, unknown to me, a larger brown leech was drinking lustily from under my left knee resulting in a swollen, red, hot, painful and itchy lump (tumor, rubor, calor, dolor and pruritus) which, if past experience is any indication, will persist for up to a week. I believe I am now quite allergic to the fluids and organisms they inject. It is not the blood they take that concerns me, so much as what they leave behind. I also extracted quite a few from my neck, hair and beard.

A number of our members take anti-clotting medication which can dramatically enhance the appearance of a leech bite (Photo 5).

I strongly recommend taking as many precautions as you can to leech-proof yourself for any field trips this winter. They can be particularly problematic if they get into ears, nostrils, the oral cavity or into the eye socket. It is hard to keep track of them when they are in large numbers.

For those who may be wondering, I did manage to get a few fungi photos that day (Photos 6 & 7).

(Continued on page 5)



Photo 5: The synergistic combination of blood thinning medication and a leech's own anticoagulants. Mortimers Picnic Ground 2008



Photo 6: Many fungi were visible everywhere. *Hypholoma fasciculare*



Photo 7: *Hypholoma fasciculare*



Photo 8: *Tetrapyrgos olivaceonigra*. (This is the current name according to Index Fungorum.)



Photo 9: *Crepidotus* sp. Damaged by fly larvae, clearly visible



Photo 10: *Stereum ostrea*

(Continued from page 4)

The later fungal foray of Sunday May 15<sup>th</sup> to the same location provided many more opportunities for photographing exquisite, delicate fungi (Photos 8-10). There were still plenty of leeches but nowhere near as many as the previous week. Nevertheless, I still managed to donate blood to several of them and had to endure a few days of discomfort.

Max Campbell

## PLATYCAM

Tune in to Platycam – the world's only livestream of platypus in the wild.

The livestream of Platycam will be turned on in Hamilton in Western Victoria, on Monday May 30, which will beam the waters of the Grange Burn, and its platypus, around the world.

The camera was part of a wider project undertaken by the Glenelg Hopkins CMA which installed and supported platypus habitat in the waterway, a known habitat for this curious endangered species.

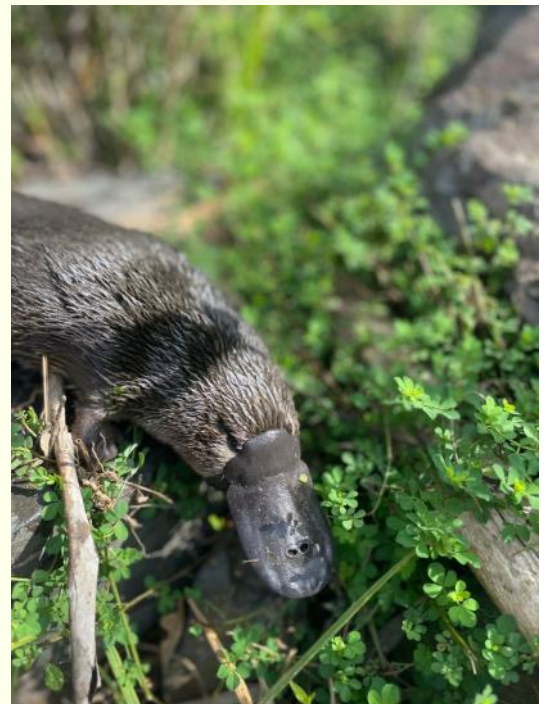
Platycam will stream 24/7 the waterway and the new habitat and people can turn in and see this amazing animal in its native environment. We can't promise when you'll see a platypus because it is a wild livestream, but they are most active at dawn and dusk.

The project is part of the Victorian Government's \$250,000 cash injection to carry out restoration works at key habitat sites to ensure the future of the unique mammal and was completed by Glenelg Hopkins CMA with support from the Arthur Rylah Institute and Southern Grampians Shire Council.

You can see the vision from Platycam at [www.platycam.com.au](http://www.platycam.com.au)

We can't promise you'll see a platypus all the time - this is a livestream of them in the wild - but you might catch the other Grange Burn residents, the Rakali (native water rat) and the family of ducks who live just up around the bend in the river.

Not near Hamilton but want to see what the project has installed? You can join the livestream of the in-person launch here: <https://fb.me/e/7wQ1xhndB>



Andrew Geschke (He/Him) | Science Manager - Impact and Collaboration, Arthur Rylah Institute for Environmental Research | Biodiversity Division



## Extracts from SIG reports given at the last FNCV Council Meeting

### Botany Group: Meeting 19<sup>th</sup> May

Dr Maria Gibson spoke about a study of Box-Ironbark forest where the respective mineral nutrient acquisition strategies, usually from roots, of various plants were measured. The benefits to the forest from senescent leaves, for example, were assessed. Indeed leaf adaptations were also described. 12 attended.

Ken Griffiths

### Geology Group: Meeting 27<sup>th</sup> April 2022.

Perry Vlahos recounted how Aristarchus calculated the distance Earth - Moon using the Earth's shadow. Science builds on past work, while sometimes overturning past conclusions. So Copernicus, Tycho Brahe, Kepler, Galileo, Huygens, Newton and Halley each built up astronomical knowledge. 26 attended.

Ken Griffiths

### Fungi Group: (See FNN p 7)

The fungi group two-day trip to Tarra Bulga was an excellent showcase of fungal diversity associated with Myrtle Beech rain-forest and Mountain Ash forest. The forays took place at Tarra Valley picnic area and Bulga picnic area, with some herbarium specimens being collected from each site. Some memorable sightings include *Mycena mamaku*, *Hymenoscyphus berggrenii*, *Xylaria polymorpha*, *Neobarya agaricicola*, *Hygrocybe astatogala*, slime molds, coral fungi, and a variety of Ascomycota. See FNN p7.

Melvin Xu



## Fungi Group Reports

### *Modelling the biogeographic patterns* Meeting: Monday 2nd May, 2022 Speaker: August (Tianxiao) Hao, PhD candidate, University of Melbourne

On Monday the 2nd of May, August (Tianxiao) spoke about how he is using various datasets, including citizen science, to model biogeographic patterns of terrestrial Fungi in Australia. He opened his speech by explaining that science is never a solitary pursuit and explained that his PhD is the culmination of many collaborators.

August noted that fungi have certain quirks which can make them challenging to study. One being the incredible diversity within the Fungal Kingdom, most of which is undescribed and the other that they can be challenging to see by eye. The latter is because they often are microscopic in scale and even when they can be seen e.g. with mushrooms, they are not around all year. According to August, the challenges he faces are similar to that of scientists researching deep sea ecological data. He remarked, "we know as much about fungi as deep sea lobsters... not much!"

To show the vast divide between what is currently defined within Plantae versus Fungi, August showed the plant biogeographic regions which have been mapped and iterated over 100+ years for Australia. In comparison, there has been very limited biogeographic information that describes that of fungi. According to August, the scale of the unknowns adds to the fun of his PhD work.

August continued to show some visualisations of the data sets he has been utilising. These are sourced from databases such as ALA, iNaturalist and Fungimap, which aggregate data from both citizen science volunteers and professionals. When viewing the data overlaid on the map of Australia, it was clear that there are vast regions with virtually no fungi records at all. August explained that this is likely due to the size of the continent and accessibility challenges that individuals face. He noted that there is more data collected within an hour from the city and along roadlines as they are more accessible to a larger number of people. With his collaborators, he has formulated a series of scripts that help to clean the data and prepare it for analysis. A problem example shown was various terrestrial observations recorded in the wrong location entirely (numbers being misplaced in the Indian Ocean!). A purpose-written script helps him correct or eliminate such observations.

August has gone through a rigorous process of analysing the different types of models to use and is still defining which are most appropriate for the outcomes he desires. We were shown how he uses Species Distribution Models (SDMs) to interpolate information within biogeographic regions and how Species Archetype Models (SAMs) map various species to a few unique biogeographic groups. One finding of particular interest was that the plant and fungi biogeographic regions - the latter being described for the first time in Australia in his work - are quite different to one another. This adds to the allure of exploring areas which are not currently well sampled.

After numerous audience questions, August made a statement about how grateful he is to citizen scientists for inputting vast quantities of data that he can use to interpret. The opposite could be said too. Citizen scientists are likely excited and humbled to know that their work is being used by people like August, with the hopes of improving knowledge of the mysterious world of fungi.

Melvin Xu



## Fungi Foray—Tarra Bulga National Park



It was a brisk sunny morning when the field naturalist club fungi group met at the Bulga picnic area for the first foray of the Tarra Bulga foray weekend. Around a dozen people were in attendance. We began on the path to the visitor centre, finding a wide variety of fungi including *Hygrocybe*, *Chlorociboria*, *Mycena*, *Xylaria polymorpha*, *Crepidotus*, and *Panellus*. While not within the fungi kingdom, fungi-like slime molds were also spotted, including the honeycomb coral slime mold *Ceratiomyxa fruticulosa*, and an impressive example of a species in the mobile plasmodium phase of the lifecycle. A sample of a *Pleurotus* species was taken for herbarium collection. Another sample was taken of the distinctive cylindrical shaped *Mycena mamaku* species.

After breaking for lunch we descended into the damp shaded gully beneath Myrtle Beech trees. Numerous fungi were to be seen including many *Armillaria* as well as those species associated with Myrtle Beech such as *Mycena toyerlaricola* and *Hymenoscyphus berggrenii*.

After the walk, some of the members divided into two groups to record data and describe the morphological characteristics for the herbarium specimens under the guidance of the fungi group coordinator Melvin Xu. (See below)

On Sunday morning the group met at Tarra Valley Picnic Area and took the East Track to Cyathea falls. After lunch the Western Track completed the full loop. Some highlights include, multiple *Cordyceps* species, the parasitic ascomycota typically seen growing on agarics *Neobarya agaricicola*, *Hygrocybe astatogala*, an undescribed *Mycena* with an odour of bleach, another example of *Mycena mamaku*, a *Coltricia* species, *Physalacria australiensis*, *Postia lactea*, many ascomycota species. Again there was a great diversity of species.

Similarly to Saturday, some group members remained to record data of *Coltricia* species that had been collected for herbarium sample.

The trip was a great showcase of fungal diversity, and also of connecting and learning with other fungi enthusiasts. An all round enjoyable weekend!

Tobi May

### Describing morphological characteristics of fungi

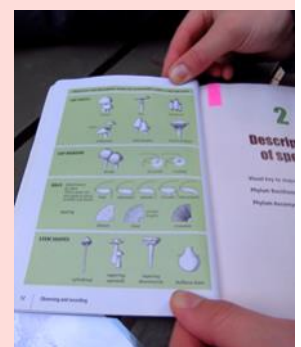
As mentioned above, those participating (photo 1), divided into two smaller groups. One group, led by Melvin, worked on samples of a species of *Pleurotus* which had been collected for the herbarium earlier that day on Ash Track. Photos 2, 3 & 4. The other group studied *Mycena mamaku*.

Some of the points discussed were:

- Date and location (GPS), description of vegetation community.
- Size—juvenile to adult
- Growth substrate, e.g. fallen logs, living wood.
- Stipe (stem): stipe shape, stipe surface, stipe attachment to substrate annulus
- Cap shape, texture, colour etc.
- Gills: how attached to the stem. Pores, spines or teeth
- Smell, colour - spore print - DNA

A detailed checklist of **things to observe and record in the field**, can be found on pages 10 and 11 of Pat and Ed Grey's book, *Fungi Down Under*. The book is also the source of some of the laminated sheets, that Melvin brought along as aids. (Page 12 *Characters and descriptive terms for fruit-bodies with a cap and stem*, (photo above) and page 146-7 *Colour chart*.) Thank you Melvin and others for an enlightening tutorial.

Joan Broadberry







## FNCV Juniors

# Tree planting in Yellingbo

On the 22nd of May 2022, a group of Junior Field Naturalists went to Yellingbo to help with tree planting.

Yellingbo is a very special place as it is home to not one, but two of Victoria's faunal emblems - the Helmeted Honeyeater and the Leadbeater's Possum.

Both of these are only found in Victoria but they are also endangered. So, helping to protect and add to their natural environment is a great thing to do.

So **well done** to all those Juniors who got their hands dirty and helped with the tree planting!



**Top right: Helmeted Honeyeater**

**Photo:** Stephan Garth

**Poster left: 50 years since Victoria's Faunal Emblems were named in 1971**

**From: *The Junior Naturalist*, Volume 60, issue 4, May 2022.**

**Editor:** One again my thanks to the Juniors newsletter editors Zoe Burton & Simon Wilton for allowing FNN to re-print their work. They do a brilliant job with *The Junior Naturalist* each month.







## Fauna Survey Group

### Warby-Ovens National Park, Joint Survey FSG and Parks Victoria \*

The activity took place, over the Queen's birthday long weekend, 2022, in the northern end of the Warby-Ovens National Park, 25 km north-west of Wangaratta. The group camped at The Forest Camp in the Killawarra Block. The weather was mainly fine with cold starts to the mornings. About 16 people attended the camp.

The aims of the survey were to:

- Ascertain the presence of the endangered Squirrel Glider and other nocturnal mammals.
- Provide species lists (and relative abundance where possible) of nocturnal mammals and owls in poorly-surveyed areas.
- Conduct bird surveys along established transects for threatened woodland birds.
- Incidental observations of other threatened fauna.
- Compare findings with previous surveys by revisiting the same transects used during FNCV surveys in 2015 and 2017 and with some of the same locations used for timed area searches for birds by Swamps, Rivers and Ranges in 2019.

The three formal activities carried out were: Bird Surveys, Remote Camera Surveys and Nocturnal Mammal Surveys.

Bird Surveys were held each morning starting at 8 am. The group was divided into teams and 30 minute surveys were conducted along 10 transects of 500 metres each. Each transect was surveyed three times. The birding was very productive as the iron bark gums were flowering profusely. The honeyeaters were prolific and included Noisy Friarbird, Red Wattlebird, Yellow-tufted, White-plumed, Fuscous, and Brown-headed Honeyeaters. Sightings of targeted species included Hooded Robin, Grey-crowned Babbler and Swift Parrot. Many other species were recorded such as Scarlet Honeyeater, Purple-crowned Lorikeet, Mistletoe Bird, Jacky Winter and Yellow, Scarlet, and Flame Robins. There was one sighting of Turquoise Parrots just outside the park along Boweya Rd, but no sighting of Regent Honeyeaters.

Remote cameras were placed at 10 locations (GPS recorded) spread throughout the Killawarra Block. There were two cameras at each spot, one aimed at a tree trunk (approx. 1.5m) with honey water sprayed on it as an attractant and the other on the ground near the base of the same tree, trained at a lure containing standard small mammal trapping mixture. The cameras were set to video mode for 15 second clips, with one minute between activation events. The cameras remain in place for two weeks after which members of the FSG will return to collect them. The cameras are then taken back and checked for images which will be mostly of nocturnal mammals, but occasionally show reptiles and other creatures.

Spotlight surveys were carried out along 10 transects, selected on the basis of good habitat, e.g. containing larger trees with hollows. An area 25 metres either side of the centre line was searched, with team members walking the 500 metres in 30 minutes. All vertebrate species observed were recorded on datasheets. Each transect was surveyed three times. A key species that was sighted a number of times was the Squirrel Glider. A Squirrel Glider is similar to a Sugar Glider but larger, with a longer pointed face and a longer bushy tail, as wide as the body at the base.

Squirrel Glider (internet)



Setting out at 8 am on a bird recording survey. Ranger Mary Thorpe and George Paras, Asha & Brenna Billing. Photo: B. Burns



When all the data has been collected and collated a report will be prepared summarising the findings.

It will also make reference to the findings of the previous surveys carried out on the same transects.

Barbara Burns (camp attendee)

#### \*Acknowledgement:

This short article has drawn heavily on the material handed out to camp participants, prepared by Mark Antos, Robin Drury and Tim Schwinghammer.



Forest Camp, Warby Ranges. Ray Gibson, Tim Schwinghammer & Mark Antos from Parks Victoria. Photo: Barbara Burns





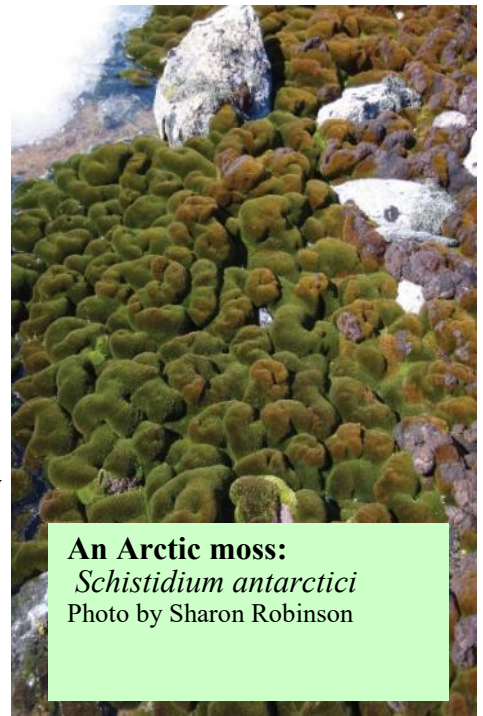
## Botany Group

### An Introduction to Bryophytes

#### Key Bryophyte Features

- Primitive/simple land plants
- Non-vascular
- no roots
- Reproduce via spores (flowerless)

Many are fascinated by the plant kingdom, yet we often overlook one of Earth's oldest extant groups. Showy and vibrant angiosperms (flowering plants) seem to steal the limelight, leaving little room for discussing and celebrating our miniature forests. The term bryophyte includes three groups: liverworts, mosses, and hornworts. Species from these groups can be found all over the globe, from cracks in city concrete to arctic tundras. At present, there are around 20,000 described species of bryophyte. Imagery of lush tropical rainforests comes to mind when first imagining bryophyte habitat, but bryophytes are incredibly diverse in the types of habitats they can occupy. Many species have adapted to life in the desert, and some are even aquatic. The only place bryophytes are not found is the ocean.



#### An Arctic moss:

*Schistidium antarctici*

Photo by Sharon Robinson



#### Marchantiophyta: Liverworts

*Marchantia* sp. Photo: Heino Lepp



#### Bryophyta: Mosses

*Dawsonia* sp. Photo: : Heino Lepp



#### Anthoceroophyta: Hornworts

*Dendroceros* sp. Photo: Bruce Fuhrer

The first bryophytes appeared in the Late Cambrian, roughly 500 million years ago. They are often described as primitive and, while this can be true of their structure, I think it is quite an unfair label and disregards much of what is fascinating about these tiny plants. Bryophytes present an array of intriguing traits, most notably their ability to survive desiccation. Numerous species can revive from complete dehydration upon rewetting. Such an ability has enabled bryophytes to colonise all corners of the earth and is an incredibly rare trait in other plant groups.

Bryophytes are an integral part of our ecosystems, and play a significant role in preventing erosion, nutrient cycling, and maintaining forest climates. The miniature wealth of microscopic biodiversity, including creatures such as tardigrades. In Australia, bryophytes are important colonisers post fire, with species such as *Funaria hygrometrica* and *Ceratodon purpureus* arriving on site first. Additionally, bryophytes contribute significantly to biodiversity. This contribution is seen most notably in our Cool Temperate Rainforests, where bryophyte diversity surpasses vascular plant diversity.

Next time you are out in the bush, look out for these inconspicuous plants. They will surely be around – on bark, rocks, and soil. Their abundance and diversity might surprise you!

Julia Askeland

#### A note on the author

Julia Askeland is a FNCV member and, while doing honours field research at Deakin University, has a Community Partnership with the FNCV. She has already spoken at two Botany Group meetings this year.

Ken Griffiths



Cool Temperate Rainforest



## *The Blackburn Creeklands keeps on giving...*

### **A Powerful Owl in Blackburn**

We were really privileged to see a Powerful Owl in the Blackburn Creeklands early this month. He (it was thought to be a male) was only seen for a day. It roosted in a gum tree, with a kill from the previous night lying at the bottom of the tree he was roosting in.

On closer inspection (via a telephoto lens) the kill was found to be a Common Ringtail Possum. I was one of the lucky observers and was able to take photos of the bird starting around 5.20pm. Fortunately it was a sunny day with good light for this late in the day.



Powerful Owl watching a jogger.



Powerful Owl waking up for the evening.

When I first started taking photos, the owl had his eyes closed. He opened them as a jogger went past on the path. As it got darker, he got more animated and started checking his kill – first by looking down at it and then flying down to a lower branch. He checked the kill again, looking down then descending to the next lower branch. By this time, it was too dark to take any more photos and the owl silently went down to his dinner. As I also couldn't see, I left him to enjoy his meal.

A few sightings have been made from time to time in the area. It is great to know that they do come this close in.

**Wendy Clark**

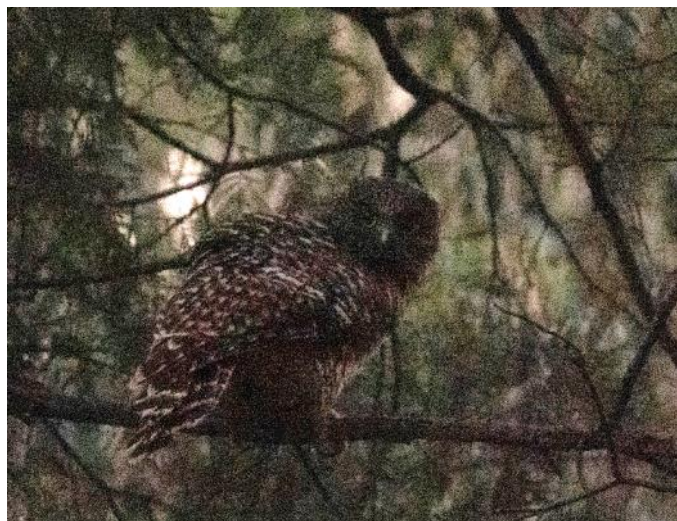
*Photos: Wendy Clark*



Dinner. A Ringtail Possum at the base of his roost tree.



Becoming more animated as dusk encroached



Descending to a lower branch to find his kill. It was very dark at this stage.



## Nearby ... Yellow-tailed Black Cockatoos at Blackburn Lake Sanctuary

In the cooler times of the year, the Yellow-tailed Black Cockatoos often fly around the suburbs in groups. Their beautiful haunting call makes one check the skies or trees to see where they are.



Often, they can be seen in wattle trees as they gnaw their way into the trunks and branches to extract large grubs to feast on. Other trees they descend on are ones with seeds or cones which they tear apart with their strong beaks.

In the first photograph where they are perched, you can see the difference between the male and female. The male has a prominent pink eye ring and a darker beak. In the second photo, the group had descended on the dead section of a pine tree. I love the look of pure enjoyment that is often seen on parrots faces as they watch the one that is flying in for a landing.

**Wendy Clark**  
Photos: W. Clark

## Wait, there is more ...an eagle has been seen as well!

Another wonderful sighting for the Blackburn Creeklands in April was of a Wedge-tailed Eagle. It was first seen flying overhead, and then landing in a gum tree. It was amazing that such a big bird could hardly be seen as it was tucked in amongst a mistletoe. (below).

Photos: Ruth Ault



Wedge-tailed Eagle being harassed by a Little Raven





## Day Group

### Wildlife of the Australian Rainforests, the Lesser-known States Speaker: *John Harris*

#### Introduction: Rainforests in Australia

Australian rainforests are considered to be some of the world's most ancient. The World Heritage-listed Wet Tropics in north-eastern Queensland are believed to be more than 110 million years old. Being rich in resources, rainforests were of huge cultural significance to First Nation Peoples, providing food, shelter and materials, in other words, their supermarkets, pharmacies and hardware stores. For example, tribes travelled long distances to meet, trade, share knowledge and stories while celebrating the Bunya Pine, *Araucaria bidwillii* nut harvest. Rainforests in the northern Kimberley contain culturally important stories and sites such as those linked to the Gwion (Bradshaw) rock art.

#### Types of rainforest:

Tropical rainforests: far north Queensland.

Subtropical rainforest: south-east Queensland

Dry rainforests: in lower rainfall areas

Monsoon vine thickets

Littoral and coastal vine thickets

Warm temperate rainforests: NSW, extending into Victoria

Cool temperate rainforests: Tasmania, Victoria, NSW

#### *Wildlife of the Australian Rainforests, a State-by-State guide*, by Peter Rowland, Angus McNab & John Harris.

Each section begins with state and bioregion overviews. A comprehensive list of key species, (birds, mammals, reptiles, amphibians and invertebrates), is followed with images and profiles of selected iconic species. For each bioregion, representative sites are described with information on access, tracks and trails with GPS coordinates, fees, facilities and nearby services

Less than 3% of Australia's total forest area is rainforest. There is a perception that most rainforests in the world occur in the wet tropics, but rainforests occur in all states and territories except South Australia with Tasmania second in area to Queensland. John prepared the chapters on Victoria and Western Australia, the states which have the smallest areas of rainforest.

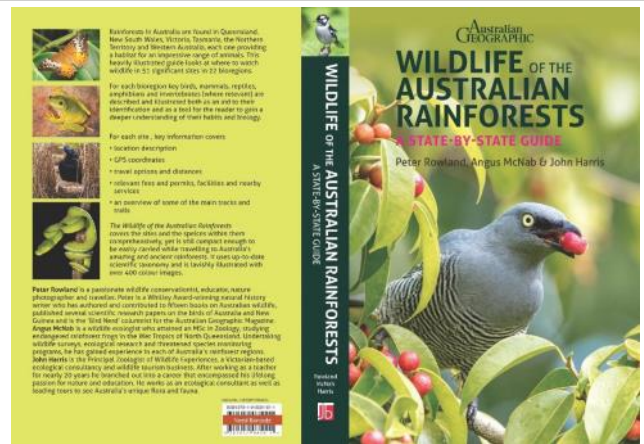
#### Rainforests of Victoria

Victoria contains only about 200 square kilometres of both cool temperate and warm temperate rainforest. These are scattered across three bioregions. Bioregions of course overlap between states. Representative sites for the South East Corner bioregion: Errinundra National Park, Cabbage Tree Flora Reserve and Lake Tyers State Park (where

John mentioned the little known Marsdenia

Rainforest Walk). Sites for the South Eastern Highlands bioregion: Otway Ranges, Yarra Ranges and Tarra-Bulga National Park.

Species profiled in the presentation included: Pilotbird, the recently declared endangered Gang Gang Cockatoo, Powerful Owl, Wonga Pigeon, Eastern Pygmy-possum and Southern Brown Bandicoot. The often-white form of the Grey Goshawk found in the Otway Ranges is an ambush predator which disguises itself by mixing with flocks of Sulphur-crested Cockatoos. The Southern Greater Glider, which lives on gum leaves, was recognised as a distinct species in 2011 and is a nationally threatened species. The Victorian Smooth Frog *Geocrinia victoriana* lays its gelatinous mass



Monsoon vine thickets at Quandong Point

Photo: Tim Willing



*Intellagama lesuerrii howittii* Eastern Water Dragon

Photo: J. Harris



Otways Black Snail

Photo: Akash Samuel

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of eggs on land attached to vegetation in areas that will later be flooded.

In the Furneaux bioregion, small areas of cool temperate rainforest and a tiny area of warm temperate rainforest are found in Wilsons Promontory National Park. Images and descriptions of some of the key species were: Australian King Parrot, Eastern Spinebill, Yellow-tailed Black Cockatoo, Olive Whistler, White-browed Scrubwren, Lace Monitor, Common Wombat and Grey-headed Flying-fox.

### Rainforests of Western Australia

Western Australia has only 70 square kilometres of rainforest. About 1,500 rainforest patches have been documented, ranging from a few canopy trees to a patch of approximately 300 ha. Rainforest was not recognised as occurring in WA, until the 1970s. It occurs where there is water, for example in sandstone gorges and behind coastal dunes. Unlike other rainforest trees, many of the trees are deciduous in the dry season.

The Northern Kimberley bioregion is largely inaccessible apart from the Mitchell River National Park which can be reached with some difficulty. John showed images of some of its many iconic species: Green-backed Gerygone, Orange-footed Scrubfowl, Pacific Emerald Dove, Rainbow Pitta and Spangled Drongo. The photo of the Arafura Shrikethrush, which was split in 2018, was difficult to get. Endemic mammals included: Rock Ring-tailed Possum, Kimberley Rock Rat and Scaly-tailed Possum. The Rough-scaled Python is endemic to the Mitchell Plateau.

The Dampierland bioregion's vine-thicket rainforest occurs in sandy soils on the leeward coastal dunes of the Dampier Peninsula, between Broome and Ardyaloon (One Arm Point) at the top of Cape Leveque. Species described included: Broad-billed Flycatcher, Brush Cuckoo, Great Bowerbird, Agile Wallaby and Delicate Mouse.

*Wildlife of the Australian Rainforests* is a very impressive book. It manages to bring together a huge amount of information covering the whole of Australia, but still remain compact. The over 400 images are stunning. Importantly, its cleverly designed layout makes it really easy to use. My congratulations to the authors.

It remains to say a huge thank you to John for a great presentation and his continuing support of the Day Group.

**Joan Broadberry**



Agile Wallaby

Photo: J. Harris



Australian Masked Owl

Photo: J. Harris



*Litoria nudidigitus* Leaf-green Tree Frog

Photo: J. Harris



*Pseudomys delicatula* Delicate Mouse

Photo: J. Harris

Copies of *Wildlife of the Australian Rainforests* can be ordered by emailing John at [wildlifeexperiences@gmail.com](mailto:wildlifeexperiences@gmail.com). The cost is \$50 including postage anywhere in Australia. John will personally sign each book before popping it in the post.