Field Nats News No.280

Understanding Our Natural World

Newsletter of the Field Naturalists Club of Victoria Inc.
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Governor of Victoria

Office Hours: Monday and Tuesday 9.30 am - 4 pm.

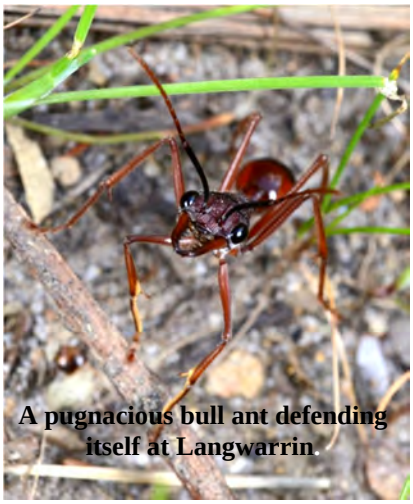
November 2017

From the President

On October 5th some *Mantid oothecae* that I have been checking daily since last autumn, produced a large number of healthy nymphs. These were then distributed around my garden to start terrorising the micro wildlife and each other, if past history is any indication. Oddly, this date saw the hatching of mantids for the last three years. At night many geometrid caterpillars are now dangling from threads throughout the garden. I presume it is a defence strategy. If so it didn't seem to help the one shown in photo right.

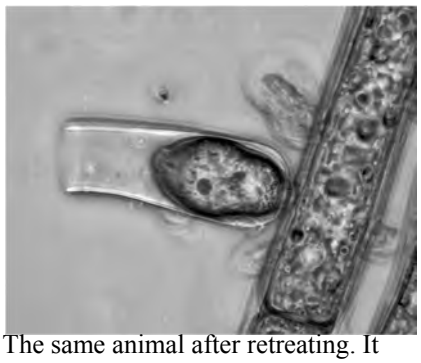

Huntsman with caterpillar

On Sunday October 8th there was a TIG excursion to Langwarrin Flora and Fauna Reserve and despite sunny weather there were very few insects and other invertebrates out and about to photograph. A few bull ants and jumping jacks, *Myrmecia* were observed. (Photo left) The wildflowers, on the other hand were extraordinary with a great display of orchids, native peas, mistletoes, sundews and Proteaceae. There are more TIG excursions to come. so keep an eye out for them and join in. The principal "focus" is invertebrate macrophotography.


A pugnacious bull ant defending itself at Langwarrin.

I recently collected a sample of water from a small, backyard fish pond in Boxhill which proved to contain many interesting protozoa and other infusoria. In particular, a peritrich ciliate, *Cothurnia* was abundant. In this instance the animals were attached to very fine filamentous algae not much thicker than a human hair. (Photos below) These have a lorica or cup in which they reside, popping out to feed and retreat into if threatened. The lorica is attached to algae via a short pedestal. The lorica is not much wider than the average thickness of a human hair (circa 60 microns, range 17-181). The cell length of species of *Cothurnia* ranges from 50 – 150 microns. Sometimes two animals may be observed in each lorica. This is a good time to examine pond water before the transient ponds and puddles dry out for the Summer. **Maxwell Campbell**


Conthurina actively feeding. (Phase contrast)


The same animal after retreating. It was bumped by a rotifer. (Monochromatic phase contrast)

All photos: M. Campbell

The deadline for FNN 281 will be **10 am on Tuesday 31st October. Note because of Cup Day this is a week early.** FNN will go to the printers on the 14th November. It will be a double issue covering Dec 2017 and Jan 2018

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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 the leader.

November

Saturday 4th to Tuesday 7th - Fauna Survey Group Survey: *Winton Wetlands*. Contact: John Harris 0409 090 955; wildlifeexperiences@gmail.com ***Prior registration essential.***

Monday 6th – Fungi Group—No Meeting

Thursday 9th to Sunday 12th - Terrestrial Invertebrates Group Excursion: *Western Grampians/ Black Range* based at Mountain Dam, Rocklands/Cherrypool Rd, Black Range State Park. Leaving at 9 am every morning; participants can join on any day. Mobile phone coverage is limited. Mountain Dam is a free camping area with picnic tables and a pit toilet and surrounded by good bush. There is no drinking water available in Black Range State Park. Those not wishing to camp will have to research options for nearby accommodation. Major centres e.g. Hamilton, Halls Gap and Horsham are all about 100km away so be aware of that with regards to fueling vehicles. Please express your interest early in attending this event to aid with planning. **Final date to register will be Sunday 5th November** so you can receive an updated itinerary and notification of any changes to plans. Contact: Reiner fncv@rnr.id.au

Saturday 11th – Juniors' Group Excursion: *Field trip to Toolangi* . Meet 10.30am at intersection of Myers Creek Road and Sylvia Creek Road, bring lunch. Leader: Jordan Crook. Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

Monday 13th – Australian Natural History Medallion: *Reception & Buffet 6.30 pm, presentation 8.00 pm*. The 2017 Medallion will be presented by the president of the Royal Society of Victoria followed by a talk from the recipient, Paul Adam. For buffet bookings ($25) please contact the FNCV Office by Monday 6th November - admin@fncv.org.au 9877 9860. **See p9.**

Monday 13th - Marine Research Group—No Meeting: *ANHM*

Tuesday 14th - Fauna Survey Group Meeting: *Journey through southern Africa.* Speaker: Mark Smith. Contact: Robin Drury 0417 195 148; robindrury6@gmail.com; 0417 195 148

Wednesday 15th - Terrestrial Invertebrates Group Meeting: Speaker: To be advised. Contact: Max Campbell 0409 143 538; 9544 0181 AH; mcam7307@bigpond.net.au

Thursday 16th – Botany Group Meeting: *Threatened plants and animals of the Central Highlands.* Speaker: Jordan Crook. Contact: Sue Bendel 0427 055 071

***paper wasps (Polistes sp.)*2/2009**

Friday 17th to Sunday 19th - Fauna Survey Group Survey: *Swamp skinks on Mornington Peninsula.* Contact: David De Angelis 0409 519 829; d.deangelis@latrobe.edu.au

Sunday 19th - Terrestrial Invertebrates Group Excursion: *Land for Wildlife property at Wonga Park* Meet at 10 am at the home of FNCV member Alastair Traill, 3 Freyne St, Wonga Park, which backs on to Jumping Creek. Bring your own BBQ lunch. **Registrations essential as numbers are limited**. Contact: Reiner Richter fncv@rnr.id.au

Tuesday 27th - Collate FNN starting about 10 am. All welcome. Contact: Joan Broadberry 9846 1218

Wednesday 22nd – Geology Group Meeting: *The providence of provenance: a 'ripping yarn' of gold, travellers & ship-wrecks.* Speaker: Dr Dermot Henry, Acting Head of Sciences, Museum Victoria. Contact: Ruth Hoskin 9878 5911; 0425 729 424; rrhoskin@gmail.com

Friday 24th – Juniors' Group Meeting: *Blackburn Lake Sanctuary*. Speaker: Lisa Moloney. Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

Monday 27th - FNCV Council Meeting: 7.30 sharp. Agenda items and apologies to Wendy 9877 9860; admin@fncv.org.au

Tuesday 28th – Day Group Meeting: *Introduction to marine biology*. Speaker: John Eichler, Marine Research Group. Meet at 10.30 am for coffee and a chat. Speaker at 11 am. All welcome. Contact: Joan Broadberry 98461218

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 for excursions 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: fnnews@fncv.org.au by the first Monday in the month.

Welcome

Warmest greetings to the following new members who were welcomed at our last Council meeting.

Leslie Sorensen, Josh Poole, Sarah Teh, Jordan Teh, Jason Teh, Louisa Soh, Natalie Froud, Jeremy Benwell, Amie Rossborough, Edmond Ulanovsky, Zachary Ulanovsky, Rudi Ulanovsky, Margarita Ulanovsky and Lexie Slingerland

Antonio Park

The city of Whitehorse has many natural bushland areas in which to walk and explore. Antonio Park is 7.2 h.a (17.8 acres approximately). Some extra land, once called *The Newlands,* which is nearby has been included and it is now all called *Antonio Park Reserve.*

The property was given to the then city of Nunawading by John Thomas Antonio in 1955. It is thanks to public-spirited people like him that we have this land which represents what Mitcham looked like before settlement.

Birds in Antonio Park are surprisingly varied despite it being an urban park. Just recently I saw the resident pair of Common Bronzewings. Other species include Crested Pigeons, King Parrots, Grey Fantails, Grey Butcherbird, Mistletoebirds, Grey Shrike Thrush and Brown and Striated Thornbills.

In springtime *Pandorea pandorana* (Wonga Vine) is looping its way throughout the bushland, making a lovely show, as are *Hardengergia violacea, Hibbertia stricta, Glycine clandestine* and *Hovea heterophylla*. Of the many wattles that occur there the most showy is *Acacia paradoxa.*

Orchids seen recently are : *Diuris pardina, Glossodia Major, Lyperanthus suaveolens, Pterostylis nutans and Pterostylis melagramma*.

If you have not visited Antonio Park yet, it is located next to the Antonio Park Primary School, near the corner of Whitehorse Road and Deep Creek Road, Melway reference Map 49 C8. Car parking is available.

Cecily Falkingham

Common Bronzewings
***Photo:* C. Falkingham**

Wonga Vine,
Pandorea pandorana
***Photo*: C. Falkingham**

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

Many thanks to those who helped collate and label FNN 279

Hazel Brentnall
Edward Brentnall
Andy Brentnall
Barbara Burns
Ruth Hoskin
Sarah Paterson
Ann Warren
Ray Gibson
Sheina Nicholls

Thanks to the editorial and layout team who put together FNN 280

Joan Broadberry
Wendy Gare
Sally Bewsher

Fungi Group

Report of meeting held 4 September 2017

Investigation of toxicity within southern Australian members of the mushroom genus Agaricus in a phylogenetic context

A presentation by Grace Boxshall
MSc Student, The University of Melbourne, Deakin University and Royal Botanic Gardens Victoria

Grace Boxshall is the 2017 recipient of the Australasian Mycological Society Research Award and the Australian Systematic Botany Society Eichler Research Grant. At this meeting, Grace presented a comprehensive overview of the fungus genus *Agaricus*, followed by a detailed explanation of her research into the toxicity of some of the species in this genus.

Worldwide, *Agaricus* contains more than 400 species, 200 of which are tropical, and 14 of which are present in Australia. Some are edible, while others are poisonous. Edible species include the familiar 'supermarket mushroom' *A. bisporus*, while one of the better known poisonous species is the 'yellow stainer' *A. xanthodermus.*

The genus *Agaricus* is divided into 11 sections, seven of which are present in Australia. Three of these seven sections, Minores, Arvenses, and Xanthodermatei, are yellow-staining. Section Xanthodermatei contains approximately 20 species worldwide, all described as poisonous. Three of these species, including *A. xanthodermus* and seven or eight cryptic species, occur in Australia.

Agaricus xanthodermus is present in many parts of Australia, but absent in Western Australia and the Northern Territory. It closely resembles edible species such as the 'supermarket mushroom', and is often identifiable by the square-ish cap in young fruit-bodies, the yellow staining on the cap or base of stipe when cut or bruised, and its phenolic odour. However, its morphology is highly variable. The young caps can vary in shape, and the staining varies in intensity: some fruit-bodies stain bright chrome yellow, while others stain only faintly yellow. Also, the phenolic odour varies in intensity, and 50% of the human population can't smell it at all.

Phenol is believed to be responsible for the toxicity. *A. xanthodermus* causes 89% of poisonings in Victoria. Records dating back to the original description of the species by Léon Gaston Genevier, in 1876, indicate that some people can eat this mushroom without problems, while others experience severe gastrointestinal irritation. No-one is sure why this is.

(Below) *Agaricus xanthodermus* showing bright yellow staining.
Photo: Grace Boxshall

(Below) Young *Agarcus xanthodermus*
Photo: Grace Boxshall

Through her research, Grace hopes to find out how many species of *Agaricus* are present in South Australia, Victoria and Tasmania; whether all these match described species; the nature of the relationships between these species; whether known toxic compounds such as phenol are present in all species; if the toxicity varies within a species; and whether the apparently variable toxicity in *A. xanthodermus* is associated with habitat or developmental stage, or results from the presence of a complex of species.

Agaricus xanthodermus
Photo :Grace Boxshall

This work involves studying collections held in the National Herbarium of Victoria as well as field collections, using gas chromatography and mass spectrometry to measure the presence and abundance of phenol in specimens collected in the field, conducting DNA sequencing, creating a phylogeny using sequence data, and mapping morphological and toxicity characters. Grace is also using herbarium collections of all seven sections of *Agaricus* to study the diversity of this genus in southern Australia.

So far, 39 herbarium collections have been sampled, and 45 field collections have been made – mainly from urban localities – using maps of local government areas to ensure broad geographical sampling. Colour swatches are used to standardise yellow-staining observations.

Grace hopes that her research will result in a phylogeny of southern Australian *Agaricus*, improved understanding of the species present, and the identification of potentially new species.

A big thankyou to Grace for an excellent and highly informative presentation. We will look forward to hearing the results of her research later next year.

Virgil Hubregtse

Fungi Group Foray 16/7/2017
Toorongo Falls, near Noojee

TOORONGO FALLS AND AMPHITHEATRE FALLS LOOP WALK

GPS Reading at carpark 37° 31’ 06” S 146° 02’ 39” E


Amphitheatre Falls Photo: R. Richter

A frosty morning soon turned into a pleasant day, and eleven enthusiastic members arrived to make the most of it. Although the main flush of fungi was finished and some of us were not optimistic about finding much, there were still plenty of fruit-


Panellus stipticus & Mycena interrupta
Photo: Reiner Richter

bodies to be found, especially by the sharper-eyed forayers.

About half of the fungi we found were growing on wood. A pretty display of Yellow Jelly Bells *Heterotextus peziziformis* decorated one of the wooden rails in the car park. Large eucalypt logs were home to the pored yellow bracket *Flaviporus brownii* (with brilliant yellow pores), White Brain Jelly *Tremella fuciformis*, the light brown ‘shells’ of *Panellus stipticus* (sticky when squashed), and handsome clusters of *Hypholoma brunneum*. Stumps and dead tree trunks were being digested by Artists Conk *Ganoderma australe* and *Armillaria novaezelandiae*, while some very rotten pieces of wood were colonised by Brown Forest Cup *Urnula campylospora* and *Lycoperdon subincarnatum*.


Peziza varia
Photo: J. Hubregtse

The ground and leaf litter were the substrates for about one-third of the fungi, including the lovely lilac *Ramariopsis pulchella*, a green *Hygrocybe* sp. (possibly *H. stevensoniae*), Collared Earthstar *Geastrum triplex*, and a species of *Setchelliogaster* (not *S. tenuipes*, because of its much smaller spore size), scarcely visible on the side of the track.

A group of large *Peziza* sp. was found on litter on the ground. Jurrie Hubregtse collected one of these to examine it microscopically in hope of determining the species. The results showed:
Asci size = 292–326.5 × 12.5–16 µm; Spore size = 15–17.5 × 8–9.5 µm. This did not fit with *P. vesiculosa*, which has a spore size in the range of 20.5–24 × 11–12.5 µm. However, it did fit with *P. varia*, which has a spore size in the range of 14.5–17.5 × 8–10.5 µm. DNA analysis has shown that *P. varia* is synonymous with *P. cera*, *P. micropus* and *P. repanda*.

Several fungi were growing on tree fern trunks. These included *Deflexula fascicularis*, *Lactarius eucalypti* (also seen on a tree fern trunk in 2016), *Ramariopsis crocea, Ramaria filicicola* and *Trichoglossum walteri*.

As always, there were plenty of fungi that we couldn’t identify, examples being a slender white coral club with a brownish stem, reminis-


Trametes versicolor Photo: Torbjorn von Strokirch


Ramariopsis pulchella
Photo: R.Richter

cent of *Clavaria tenuipes* but with a rounded rather than flattened tip, growing on mossy ground, at least three types of truffle, and several *Mycena* species.

Additional photos by Torbjorn von Strokirch:
https://www.flickr.com/photos/123586702@N08/sets/72157686352540816/with/35628152630/
Additional photos by Reiner Richter http://photos.id.au/2017/07/16/

Virgil & Jurrie Hubregtse

FUNGI GROUP FORAY
MACEDON RANGES NATIONAL PARK
30th July 2017

SANATORIUM LAKE Vegetation - Wet messmate/gum forest and introduced species (pine, poplar, holly etc). It was a bright day, but chill, and the group was joined by several members from the Bendigo Field Nats. We had to look hard for fungi as the cold seems to have affected them, and many were old and decayed. Most were found on wood, only the corals and *Singerocybe clitocyboides* **(***Clitocybe clitocyboides*) were mychorrizal.

The log barriers that surrounded the car parking area were covered in old and decayed brown gilled fungi. Luckily one or two young 'spiky' specimens identified them as *Psathyrella echinata*. They were also found throughout the foray, as were numerous old, black woody Red-staining Polypore *Amauroderma rude* around and on tree stumps. These black fruit-bodies had a woody cap and stem, but one showed the characteristic paler gills that stained a brownish colour. Also numerous were groups of *Galerina patagonica* readily recognised by its robust habit, central umbo and persistent annulus, and typically found on decaying wood.

One of the freshest species was *Flammulina velutipes*. They were young with orange caps (that were not slimy), and had velvety stems darkening towards the base. According to Dr Tom May (senior mycologist at the RBG) it is one of the fungi species that doesn't mind the cold and frost.

Under pine trees near the car park, we again saw Wrinkled Coral *Clavulina rugose,* last seen 2015. These were found in the contorted form and distinguished from the similar-looking *C. subrugosa* which only grow in native forests. There are three white/off white *Clavulina* spp. and the table below shows how they can be differentiated

Further along the trail we came across other coral fungi, some groups growing in an arc. These turned out to be two different species. From the samples I collected, one group was the Ash-grey Coral *Clavulina cinerea* with fat, blunt branch tips and wrinkled branches with a hint of purple, the other was the Pale Buff Coral *Ramaria filicicola* . These typically, had the pale buff, short stem and branch tips with either 2-5 sharp points or blunt protrusions. Several scattered groups were growing in the litter. Les Hanrahan later found a yellow coral near Sanatorium Lake which appears to be an old *Ramaria lorithamnus*. This is a medium-sized, multibranched yellow coral with a small whitish stem. One of the distinctive characters is that the fruit-body stains red/brown when old or bruised.

White shells with widely spaced gills were found attached to moss on a fallen log. I thought that they may have been an *Arrhenia* species, but as Richard Hartland pointed out, they were more like *Rimbachia* – pure white, with no trace of grey or brown such as *Arrhenia* spp. would have. The cap diameter was ca 6 mm, width 4 mm and the gill folds were white and widely-spaced. The shells had no stem and were attached directly to the moss, on which it is parasitic. Genevieve Gates and David Ratkowsky describe a species that looks very much like the one we saw - *R.* cf. *bryophila* (A Field Guide to Tasmanian Fungi, 2016, 2nd edition, p 139).

Richard Hartland noted that last time we were here (2015) along this track *Cordyceps* were seen – and there they were - several brown spikes of *C. robertsii* under a Silver Wattle *A. dealbata*. The thin, brown spikes were difficult to see, but once seen several forayers found more. This was the first species of *Cordyceps* to be noted from Australasia (1831). *Cordyceps* spp. internally parasitise the living larva of certain insects. In this case the host larva would have been the large Victorian Swift Moth *Oxycanus diremptus.* After the larva dies its entire body cavity, except the alimentary canal, becomes filled with the fungal mycelium, so that the body again fills out to its former size and rigidity and becomes decay resistant due to the antibodies manufactured by the *Cordyceps*. The avoidance of the alimentary canal may be because it has no nutritional value or that it contains toxins harmful to the *Cordyceps*. After the mummification of the host, the fungus produces its long, stalk-like fruiting body. This generally follows the insect's own burrow to the surface and its length varies according to the depth of the host below (P Grey & R Barker. 1993. Cordycepts or Plant eats Animal! *The Victorian Naturalist* vol 110. 2. p 98ff). *Cordyceps gunnii* was seen in the picnic area and also by Les Hanrahan near the Sanatorium Lake "I dug down 150mm alongside the *Cordyceps gunnii* before it got too difficult to continue because of the mass of tree roots" . The fresher one showed a thick, dark club, which ran smoothly into the yellow stem. All were found under Silver Wattles.

(Continued on page 7)

Table showing details of the three white to off-white *Clavulina* species

Species	Wrinkled Coral *Clavulina rugosa*	Spiky Coral *Clavulina cristata*	White Club *Clavulina subrugosa*
Habitat	under conifers and hardwoods	native forests, woodlands and heath. Also under conifers	under eucalypts throughout south-east Australia
Habit	single, gregarious or in clusters	single, gregarious or in clusters	single or in clusters
Branches	smooth to wrinkled, white, yellowish with age	smooth, white, yellowish with age	off-white, greyish with age
Branch Tips	blunt but occasionally crested	Flattened and crested with several sharp points	rounded, not acute or crested
Spore Print	white	white	white
Comments	unbranched or sparingly branched	sparingly to repeatedly branched	usually simple to sparsely branched

(Continued from page 6)
Michael Barkla was able to identify the slime mould *Trichia verrucosa* consisting of groups of white stalks often joined together and topped by white round heads, slimy in texture and also the green-fingered lichen *Cladonia ochrachlora* with finger-like projections on the ends of which were clusters of pinkish round fruit-bodies.

Two *Lachnum* species were found on wood. The white *L. virgineum* and the yellow-cup *L. lachnoderma.* The former is a minute stalked cup (cup to 1mm and smooth), with a white very hairy outer cup and stalk. These hairs are white and some rise above the rim of the cup**.** It is a similar size to *L. lachnoderma* which has a yellow cup, where the outside cup and stem are covered with dense white hairs that are often tipped with rusty-coloured exudates (although today we did not see that). These hairs thickly cover the outside and roll over the rim of the cup. G Gates (*Ascomycota of Mt Wellington)* notes that *Lachnum lachnoderma* (photo below) (Berk.) G.G. Hahn & Ayers forms small, individual, shortly stalked, cream-coloured or yellowish discs with white hairs densely covering the underside of the fruit body found on small twigs and branches.

Along the track to Days Picnic Ground we found several groups of *Pleurotopsis longinqua* (*Panellus longinguus).* Because of their age and the weather conditions, most did not have the beautiful pinkish-coloured caps, some were white, others were brownish, but all were slimy with a furry attachment and white gills. Nearby, another log was covered with *Panellus stipticus* which have small, thin, soft tan-brown caps with pale gills and may have cross gills. A milky latex makes it sticky (and even if it is dry, pressing the cap produces a stickiness on the fingers). In the past, the juice from this fungus was used as a styptic to coagulate blood.

Lachnum lachnoderma Photo: Richard Hartland

At the end of the foray continued on **"**I continued along the track, after you turned back to go home, for another 150 metres and took a track on the right that soon led to Sanatorium Lake. I took the photo of the truffles near there". Similar-looking orange-coloured truffles were found earlier along the track to the lake. The skin was dry, texture smooth soft and sponge-like, and inside there was convoluted small chambers. The orange skin looked too bright to be *Zelleromyces* cf *daucinus* which is reddish-brown (and shows the internal convolutions through it) and exudes a white latex when cut, although there

Aleurodiscus limonea Photo: Pat Grey

was no sign of a stipe. Its outer colour looked more like *Arcangeliella* sp. – smooth, dry (1-2 cm diameter), but that species also exude a white latex when cut and also has a remnant stipe which ours did not have (see Gates and Ratkowsky 2016 p168 & p 171).

After the foray, up near the Camel's Hump, Richard Hartland showed us *Aleurodiscus limonea* (photo above). These are small yellow/orange resupinate patches (to 20 mm long) with a white edge and forms irregular discoid colonies on dead trunks, branches and small sticks. On fresh specimens the smooth discs often have a powdery appearance due to the white spores, and fluid droplets are often seen on the disc. Here, the ones growing on a Wattle *Acacia dealbata* were very pale and dried out, but a fresher group of orange patches was seen on the side of a *Eucalyptus radiata* trunk, a tiny edge showed the furry outline. Richard notes that this is the only place he has seen it, and our group has one other sighting by John Eichler at Cambarville April 2016.

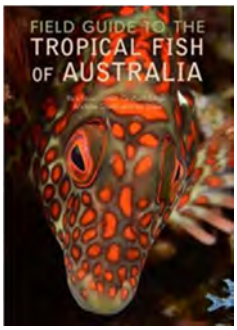
Thanks to Michael Barkla, Les Hanrahan, Richard Hartland, Alannah Matheson and Ray Wallace for contributions to identification in the field, which add to our knowledge of the species. Thanks to the photographers Michael Barkla, Pat Grey, Les Hanrahan, Richard Hartland and Carol Page who supplied photos of their sightings to select for the report.

Pat Grey & Ed Grey

NEWS FROM THE BOOKSHOP (November 2017)

As the countdown to Christmas begins, the display cabinets at the clubrooms in Blackburn have never before offered as much variety. The shelves are full, to over flowing!! But there is always room for more, and this week we are promoting four new titles plus an old favourite. Two of the books *Tropical Fish of Australia* and *Barnacles* have been inspired by the recent and very successful Marine Symposium. Two other books, *Rockhopping* and *Australia's Volcanoes,* have come from member requests. With this year's wonderful display of wildflowers who doesn't need another book on wildflowers! A reminder not to miss out on the current extensive range of good quality, relatively recent, second hand books on display. Come into the clubrooms and have a look at the full range of books available on the shelf, or to order or inquire about a book, please send an email to me, at, **bookshop@fncv.org.au** and I will reply as soon as I can. Your support is greatly appreciated.

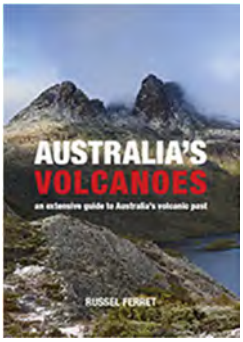
Happy reading, Kathy



Field Guide to the Tropical Fish of Australia (Stuart-Smith, Edgar, Green & Shaw) covers almost 1,100 species, often with multiple images for important life stages. This field guide represents the most comprehensive collection of the tropical fishes found on Australian reefs, including the Great Barrier Reef, Coral Sea, Ningaloo Reef, Lord Howe Island and Norfolk Island. The authors have decades' worth of collective experience studying and photographing reef fishes around the world. **(PB, 512 pp., Nov 2015) RRP $45, Member $36**

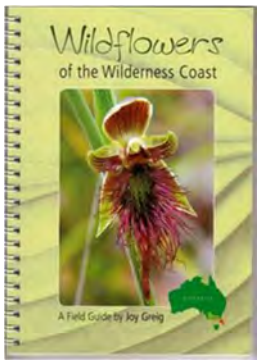
Rockhopping (T. Balla) . Join Clancy and Uncle Egg on a rambling, rockhopping adventure in Gariwerd (the Grampians), to find the source of the Glenelg River. This is a story about following your flow, and the unexpected places you may go. Winner of the Children's Book Council of Australia Awards: Young Readers Book of the year 2017. **(HB, 80 pp., March 2016, 8-12 yo) RRP $24.99, Members $20**

Barnacles (Poore & Syme) is a guide that covers barnacles of mainly south-eastern Australia and begins with information about their biology, habitats and diversity. A description of each animal is accompanied by a colour photograph. A key is also provided for easier identification of common barnacles, and also includes some of the rarer and less visible animals related to barnacles.
(PB, 69 pp., 2009) RRP $24.95, Member $20



Australia's Volcanoes: An Extensive Guide to Australia's Volcanic Past (R. Ferret) takes you on a journey of discovery through Australia's volcanic landscapes. Every State contains evidence of past cataclysmic volcanic upheaval. Features such as Mount Warning in New South Wales, Tower Hill in Victoria, Cradle Mountain in Tasmania, the Undara lava tubes in Queensland, the diamond deposits in Western Australia's Kimberley region and Mt Gambier's crater lakes in South Australia are results of volcanic activity from thousands to millions of years ago. The book explains what happened all those years ago to create the volcanic landforms that you see today.

(PB, 160pp., May 2016) RRP $29.99, Members $24



Wildflowers of the Wilderness Coast: A Field Guide (J. Greig). The unique coastline of Victoria's Wilderness Coast encompasses many habitats, and the diversity of flowering plant species is only now becoming appreciated by botanists and the general public. This guide is aimed at increasing awareness of our beautiful flora as a means of preserving it. This is a field guide to over 230 wildflowers in coastal forests between Marlo and Mallacoota, East Gippsland Victoria. The book includes full colour photographs and habitat descriptions.

(PB, 66pp., July 2017) RRP $25, Members $20

The President and Council of The Field Naturalists Club of Victoria Inc.
have pleasure in inviting you to the presentation of the

Australian Natural History Medallion 2017

to **Paul Adam**

for his contribution to conservation, natural history and education.

The Medallion will be presented by

Mr David Zerman, President, Royal Society of Victoria

On Monday 13th November 2017 at
1 Gardenia Street
Blackburn Vic 3130.

Reception at 6:30 pm with light buffet. **Cost $25**.

Presentation of the Medallion will be at 8 pm and is free for those who do not require the buffet.

Following the presentation, Paul Adam will speak on

Opportunities and challenges for Natural History in the twenty first century.

Please RSVP to Wendy (03) 9877 9860 or admin@fncv.org.au

Payment for buffet by 6th November please,
preferably direct into the Club's bank account, details are:

Bendigo Bank: BSB 633-000 Account No: 123098725
Account Name: The Field Naturalists Club of Victoria Inc.
Please put "ANHM" along with your surname as your reference.

If you would rather pay by cash, cheque or card, that's fine.
Cash would need to be brought into the office between 9.30am and 4 pm on Mondays or Tuesdays.
For card payments, it would be easiest to phone during those hours and I'll take down your details.

A tax receipt will be issued by email for your payment.

Day Group

Melbourne's Boggy Beginning

A large audience welcomed our September Day Group speaker, historian and author Gary Presland. His presentation was entitled *Melbourne's Boggy Beginnings.* The notes below are an attempt to convey just a little of the absorbing window into the making of our city that this talk opened up.

Wetlands above all other features of the natural landscape have helped to shape Melbourne. Wetlands can be viewed in different ways. The pre-European, indigenous perspective saw wetlands as a highly valued resource providing food such as plants, birds and fish, fibre and medicine. In contrast, the 19th century European perspective saw 'swamps' as places of disease and barriers to movement and agriculture. From about the 1930s, a growing understanding of the ecological importance of wetlands, gradually replaced this with a more positive view.

Melbourne, settled by Europeans in 1835 close to the mouth of the Yarra River, did indeed have boggy beginnings. The accompanying map *(right)* dated 1863, shows the original course of the Yarra and the extensive areas of wetland that existed in the immediate area of the town. These included the West Melbourne Swamp, (also known as Batman's Swamp), Sandridge Lagoon and Elwood Swamp. Further out was the Carrum Swamp, a very large wetland up to 8 kilometres wide and extending 15 kilometres from Mordialloc Creek in the north to the mouth of Kananook Creek in the South. When superimposed onto a modern map *(left)* the size and impact of this wetland is impressive.

Today only remnants of these wetlands remain, most of them having been drained and reclaimed. As Gary himself expresses it, "No feature of the original landscapes of the Melbourne area has been so deliberately altered as the wetlands and drainage patterns." * For example, the section of today's Yarra River extending from Herring Island to its mouth is entirely artificial. The original waterway was difficult to navigate due to its narrow, meandering course, sandbanks, mudflats and other obstructions. In addition it was prone to flooding. A huge engineering project, begun in 1879, was designed to improve access to shipping by shortening and straightening the river. An 11 kilometre canal, designed by Sir John Coode, caused the shallow, narrow and winding Fishermans Bend to be cut off, along with other sections of the river including its original junction with the Maribyrnong River. The canal was opened in 1886. The more efficient flow of water also served to mitigate flooding.

Another example of a major alteration of a wetland was Elwood Swamp. This body of water, fed by Elster Creek, was prevented from flowing into Pt. Phillip Bay by a line of dunes. It separated St. Kilda from the city and covered a large area which could not be built on. The Elwood canal, dug in 1888, was cut to drain it. Silt and clay from the bay were then brought in to reclaim the land using a then, state of the art, suction dredge. This work was completed by 1905.

To learn more about how nature has shaped Melbourne I would highly recommend dipping into Gary's book *The Place for a Village* published by Museum Victoria. Directly relevant to this presentation is chapter three, *Melbourne's streams and wetlands* with a detailed account of the alteration of the Yarra River to be found in the section *Shaping the river*, p213 - 218.

Gary Presland and the late Sheila Houghton, together instigated the present incarnation of the Day Group and Gary coordinated it for six years. We have much to thank him for.

* *The Place for a Village* p62

Joan Broadberry

Extracts from SIG reports given at the last FNCV Council Meeting

Botany Group: Fourteen people enjoyed an interesting presentation by Dr Desley Whisson on *Lifestyles of the southern koala: diet, habitat and other interesting stuff*. We played koala bingo where we had a page with questions and we needed to find answers. The six favourite food trees for Victorian koalas are *Eucalyptus viminalis*, *E. cypellocarpa*, *E. globulus*, *E. leucoxylon*, *E. ovata* and *E. radiata*. The *other interesting stuff* was a video of two failed attempts at mating by a male koala.

Sue Bendel

Fungi Group: The Fungi Group had one meeting this month. 13 members and 3 visitors attended. A report on this meeting appears on p4.

Geology Group: No meeting

Microscopy Group: No meeting.

Juniors' Group: This month our regular meeting was cancelled as it coincided with the public holiday for the AFL Grand Final. Also September's excursion to Braeside Park with Robin Drury had to be cancelled due to strong winds and thunderstorms which were forecast for that day.

Patricia Amaya

Library News

Recently accessioned monographs:
The following publications have recently been added to the Library's holdings, and may be borrowed. Their position on the shelves is indicated at the end of each title.

Adams, Brian (1986) *The flowering of the Pacific: an account of Joseph Banks' travels in the South Seas and the story of his florilegium* [581.99 ADA]

Landy, John *A coastal diary: a study of one of Australia's wildest and most beautiful coastlines* [508.94 LAN]

Lindenmayer, D; Blair, D; McBurney, L; Banks, S (2015) *Mountain ash: fire, logging and the future of Victoria's giant trees* [583.16 MOU]

Victoria. Parks Victoria (2017) *River Red Gum Parks Draft Management Plan* [333.75 VIC]

Victorian Environmental Assessment Council (2017) *Fibre and wood supply: assessment report* [333.75 VIC]

Victorian Environmental Assessment Council (2017) *Conservation values of state forests. Assessment report* [333.75 CON]

Recent periodicals:
Australian Plants 29(231) is devoted to Tasmanian flora, ahead of the Australian Native Plants Society conference in Hobart in 2018

The latest periodicals are displayed in a rack in the library. You can borrow periodicals in the rack, as well as previous issues. Don't forget to fill in the borrowing book.

Library collections now on the website
A reminder that you can now search the library's collections on the FNCV website. Click About us – Library and you will be able to download searchable lists of books, periodicals, maps and photos.

Gary Presland, Honorary Librarian

Fauna Survey Group

DELWP Southern Ark Project

Sunday 1st—Saturday 7th October

The aim of the Southern Ark Project is to facilitate the recovery of native animals across one million hectares of public land in Far East Gippsland through the establishment of an integrated large-scale and on-going fox control program.

The Fauna Survey Group, led by Peter Homan, spent a week at Cape Conran and participated in monitoring the recovery of native animals, in particular the Long-nosed Potoroo. We were very fortunate to have had the opportunity to learn about the southern Ark Project and work with Andy and Simon in trapping wildlife. Below and over the page are a few images from our week away. Peter is preparing a more detailed report which will appear in the next FNN. **All photos: Joan Broadberry**.

Continued p12

Andy Murray, Southern Ark Project manager, with a Brushtail Possum in the bag.

Clockwise:
Echidna, released Brush-tail Possum, weighing and recording captured brushtail and a Lace Monitor sunbaking.

"All fauna captured in accordance with the FNCV's DELWP Wildlife Research Permit and National Parks Act Permit and animal ethics approved Standard Operating Procedures".

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