Field Nats News No.274

Understanding Our Natural World
Est. 1880

Newsletter of the Field Naturalists Club of Victoria Inc.
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May 2017

Vale Alan Louey Yen

The FNCV was greatly saddened to learn of the death of Dr Alan Louey Yen on 20th March. Alan was a well-known and highly-respected member, and a former President of the Club.

He had served the FNCV at Council level for ten years, from 2001 to 2010, and also took a leading role in many other Club activities over a period of almost 30 years.

Alan joined the FNCV in January 1993, but his enduring connection with the Club began some years before that. In 1989 he published a paper in *The Victorian Naturalist* , the first of 25 articles solely or jointly authored by him and published in the Club's journal over a period of 24 years up to 2013. In that time he also acted on many occasions as a referee for submissions made to the journal, always offering insightful and helpful comments on the manuscripts.

In November 2001, Alan was co-opted to join FNCV Council as a Vice-President, to fill a casual vacancy. He remained on Council in that capacity until May 2007, at which time he was elected President. After serving two terms in the chair, he stood down in May 2009, but remained on Council, once again as a Vice-President until the 2010 AGM. During his decade of Council involvement Alan was instrumental in bringing about change to a number of aspects of Club operations. At the April 2002 Council meeting, Alan, an invertebrate ecologist, suggested that a new SIG be established, one that would focus on terrestrial invertebrates. In the following month the group was formed at an informal meeting, called to gauge the level of interest in the study of insects. Alan remained as Convenor of the group until April 2013.

In 2004,Alan suggested that the FNCV adopt a 'formal' structure, which led to continuing discussion within Council. His aim in proposing a re-structure was to make the workings of the Club more transparent and easily understood by the membership, particularly new members. Looking ahead, he was concerned that SIG activities would decline unless the groups' roles and functions became better known to members.

If possible could you have copy for FNN 275 ready by **10 am on Tuesday 25th April, a week early and yes, I will be working on Anzac Day. However, the official deadline will remain 2nd May.** FNN will go to the printers on the 9th May with collation on the16th May . Thanks to all.

Alan also had a keen sense of history, within both his area of scientific expertise and of the FNCV itself. In the months preceding the 125th anniversary of the Club in 2005, he was concerned that the FNCV had no formal history, and felt that we should commemorate our coming anniversary. He was the prime mover in staging a two-day symposium in May 2005, to mark this important anniversary. Assisted by a small committee comprised of the Club's Admin Officer, Mimi Pohl; Sheila Houghton, FNCV Librarian and Archivist; and Anne Morton and Gary Presland, two editors of *The Victorian Naturalist*, Alan organised a programme of 17 speakers over the two days of the symposium.

In characteristic fashion, in his own paper to the symposium Alan looked to the future, rather than the past. 'From cabinets of curiosities to black boxes: the future of the Field Naturalists Club of Victoria' considered the prospects for the study of natural history, and what part the Club could play in that future.

Alan Yen will be sorely missed by his many friends and acquaintances in the FNCV — for his readiness to offer his expertise and knowledge to assist with Club activities, his preparedness to lead field excursions and give talks and, not least, for his gentlemanly demeanour and his sometimes wicked sense of humour. The Club extends its deepest condolences and good wishes to Alan's wife Pam and their sons Luan and Jian, and their families.

Gary Presland

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.

MAY

Monday 1st – Fungi Group—Meeting: ***Fungal Futures – Can Foraging and Conservation be Aligned?*** Speaker: Alison Pouliot who will ask how more sensitive and sustainable foraging practices could be encouraged in Australia, so as to minimise potential environmental damage, poisoning risk and the need for regulation. Alison has a background in Research Ecology and is very well known as a natural history photographer with a fascination and passion for the environment on a world-wide scale. See http://www.alisonpouliot.com Contact Carol Page 9857 6388; cpage356@gmail.com

Tuesday 2nd - Fauna Survey Group—Meeting: ***Using cameras to survey for arboreal mammals – the work of the Fauna Survey Group, FNCV.*** Speaker: Robin Drury. Contact: Robin Drury 0417 195 148; robindrury6@gmail.com

Sunday 7th – FNCV Annual General Meeting 2 pm. Join in this important event and congratulate our new Long Term (40 year) members including our speaker: David Cheal. His presentation will be, ***Can we restore what we've lost? Mammal reintroductions in the Mallee'***. Invitation page 8 FNN 273. Contact FNCV Office 9877 9860; admin@fncv.org.au

Sunday 7th – Fungi Group—Foray: ***Bunyip State Park, Gembrook.*** Meet at 10.30 am at Mortimer Picnic Ground, off the Gembrook–Tonimbuk Road (Mel Ed 37 Map 14 R12). Contact Carol Page 9857 6388; cpage356@gmail.com
Use mobile on the day of foray only 0438 446 973

Sunday 7th – Juniors' Group—Excursion: ***Mortimer nature trail, Bunyip*****—j**oining with the Fungi Group. Details as for fungi group above. Contact Claire Ferguson 8060 2474; toclairef@gmail.com

Monday 8th – Marine Research Group—Meeting: ***Annual field trip roundup.*** We will be looking at the locations and animals we have seen over the field work season. Members who joined us on our field work will bring along images, exhibits and items of interest. Contact Leon Altoff 9530 4180 AH; 0428 669 773

Tuesday 16th—Collate Field Nats News. About 10 am in the hall. All welcome. Contact Joan Broadberry 9846 1218.

Wednesday 17th - Terrestrial Invertebrates Group— Meeting: ***Eucalyptus Leaf Beetles.*** Speaker: Martin Lagerwey Contact Max Campbell 0409 143 538; 9544 0181 AH; mcam7307@bigpond.net.au

Thursday 18th – Botany Group—Meeting: ***Systems Gardens.*** Speaker: Dr Andrew Drinnan.
Contact Sue Bendel 0427 055 071

Friday19th to Sunday 21st - Fauna Survey Group—Survey: ***Survey and Nest-box checking at Rushworth***
Contact Ray Gibson 0417 861 651

Friday 19th to Sunday 21st – Fungi Group—Weekend Foray: We are staying at the Anglesea Beachfront Caravan Park, 35 Cameron Road Anglesea, 3230Tel. 5263 1583,email info@angleseabeachfront.com.au We are making individual bookings, under the banner of 'The Field Naturalists Club'. Official forays will be on Saturday and Sunday, and destinations will be determined by weather events and local knowledge. Contact Carol Page 9857 6388; cpage356@gmail.com for details.

Tuesday 23rd – Day Group—Excursion: ***A morning walk in the Dandenong Ranges.*** Meet at 10.30 am at Grants Picnic Ground. Melway 75 J/K 4. (Parking and toilets available). Bring a snack and lunch. Wear suitable footwear.
Contact Sally Bewsher 9752 1418

Wednesday 24th – Geology Group—Meeting—*Earthquakes and Landscape.* Speaker: Dr Mark Quigley, Associate Professor in Active Tectonics & Geomorphology, School of Earth Sciences, University of Melbourne. Contact Ruth Hoskin 9878 5911; 0425 729 424; rrhoskin@gmail.com

Friday 26th – Juniors' Group—Meeting 7.30 pm *Astronomy*. Speaker James Murray from Mt Burnett Observatory
Contact Claire Ferguson 8060 2474; toclairef@gmail.com

Monday 29th— FNCV Council Meeting 7.30 pm sharp. Agenda items and apologies to Wendy, 9877 9860; admin@fncv.org.au

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. **Rosemary Martin, Eric Wilkinson, Maxwell Brick, Stephen Brick, Guinevere Brick, Aviva Brick, Tom Sell, Helena Romero Herrera, Karen Thomas, Murray Williams, Lenoid Vaner, Joshua Vaner, Lilija Stefjuka, Karen Weil, ENSPEC Pty Ltd, and Dianne Davies.**

Is it a Wasp or a Moth? By Wendy Clark

A fast moving colourful insect scooted by as I was enjoying the hot weather. That certainly stirred me up!
I watched this strange looking small insect, moving very fast and with jerky movements. It was dark blue / black with orange markings and tips on their feelers. It was so fast that I couldn't get a good look at it. It moved like a wasp (it walked, it did not fly) but looked to me like the flightless irridescent blue & orange moth that I had occasionally seen.
Finally I caught it, put it in a jar and into the fridge to slow it down. After I had a good look I found it was definitely the Australian Bag Moth *Cebysa leucotelus.* It is so named because the makes a bag that it resides in. They feed on lichen.
The female has short wings and cannot fly (but certainly runs fast). It has a large ovipositor which it seems to be able to retract.

Female Bag Moth

Male Bag Moth

WORKING BEE

Only three people attended: myself, Deborah Zinn and Ray Gibson. Ray cleaned out part of the gutters, Deb and I did garden pruning, weeding and picking up rubbish. The garden looks a lot tidier though there is still more to be done. We were not able to get to any inside cleaning jobs. The windows particularly are looking quite grubby.

I will not run the working bee again on Saturday but will try a weekday.

Barbara Burns

***Facebook*—4786 followers. Thanks once again to Ian Kitchen and Claire Ferguson.**

Many thanks to those who helped collate and label FNN 273

Andy Brentnall
Hazel Brentnall
Edward Brentnall'
Keith Marshall
Ruth Hoskin
Cecily Falkingham
Joan Broadberry
Barbara Burns

Thanks to the editorial and layout team who put together FNN 274

Joan Broadberry
Wendy Gare
Sally Bewsher

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

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

Extracts from SIG reports given at the last FNCV Council Meeting

Geology Group: Phil Bock presented a detailed and fascinating introduction to the complex world of Taxonomy at the Geology SIG meeting on 22nd March. Attempts to order the biological world began with Linneaus in the 1735 and have continued ever since. Phil examined a number of these later classifications with particular emphasis on the highly detailed book and website 'The Tree of Life' (tolweb.org). What amazed me was what must be many thousands of clades (groups of organisms which are derived from a common ancestor) and in particular the numbers of these which are now extinct. It made Homo sapiens look very unimportant indeed!

Phil also commented that increasingly classifications are being made on molecular evidence along with fossil evidence depending on which is more appropriate. This has added even more complexity to the task of clarifying the evolutionary relationships between individuals or groups of organisms. Thanks to Phil for a most enlightening study of what could be a very dry subject.

Juniors' Group: Ponding with Max Campbell


Damsel fly

It was on a hot Sunday 19th March that 20 Juniors met at Jells Park with Max and Faye Campbell to see what we could find in the fresh water lake. With nets in hand we did our best to find a variety of different pond life creatures including freshwater shrimp, *physa acuta* (introduced snail), damselfly larvae, flatworms, etc. We then viewed them under microscopes to see all their finer features. Most of us then explored Jells Park further with a walk around the lake to see all the various wetland birds and plants. On our return Max explained to us what we had found, a little about each of the creatures and what the finding of them meant about the health of the lake. A big thanks to Max and Faye for bringing along all the gear, running our excursion and cleaning up the equipment after our use.

Photos: Claire Ferguson.

Microscopy Group: Only three people attended the meeting on 15th February. They participated enthusiastically in an activity.

Botany Group: On the Thursday night meeting Sue Bendel presented on the Flora of Annuello Flora and Fauna Reserve mainly featuring the families *Myrtaceae*, *Fabaceae*, *Chenopodaceae* and *Asteraceae*. Fourteen people attended.

Terrestrial Invertebrates Group: The TIG meeting of 15-03-2017 was very well attended and Reiner Richter delivered an interesting and informative presentation of macro photography in the field. He covered the basics of camera optics and the various parameter settings for good results. Wendy Clark also presented some macro images and discussed the methods for obtaining them. There was a high level of interaction throughout the evening and those who brought along their own cameras were given an opportunity to photograph some of Max Campbell's live scorpions. Full report p10

Geology Group

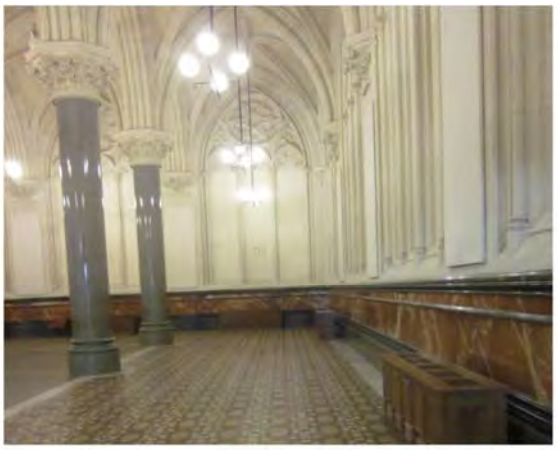
Mary Chapman, Landscape Architect and Project Manager for the City of Melbourne presented a most interesting talk at the Geology SIG on 22nd February. She described how the special white limestone from Oamaru and Mt Somers in New Zealand was used in buildings - in walls, spires, ceilings, facings, decorative carvings, fonts and pulpits and showed examples of its extensive use in Australia and overseas. Unfortunately, many buildings have since been demolished. Some examples of surviving uses are shown in the accompanying photographs. Mary has a particular interest in these limestones as she was born in the area in NZ. It was a particularly interesting talk as it combined geology, history and architecture.

Oamaru limestone dressings on the Barrabool stone of the Uniting (Presbyterian) Church, Toorak (1876)

Editor: Apologies to the Geology Group.. As the photo essay was not included in FNN 273, the report has been reprinted

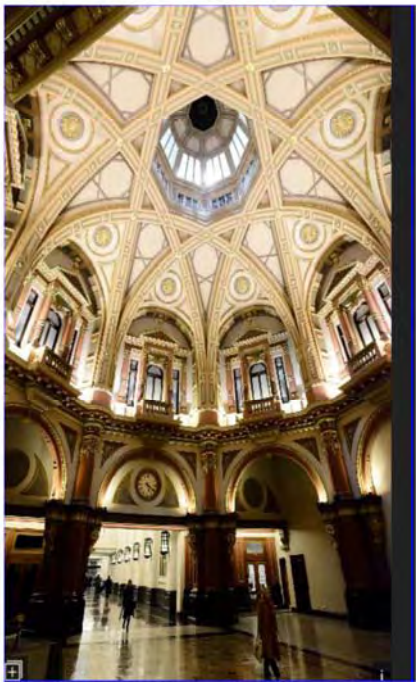
Above: Bank of Australasia, Adelaide (c 1885.

Below: Ornate use of Oamaru stone in the Cathedral Room of the former Stock Exchange building, Collins Street, Melbourne (1881)



Above: Oamaru limestone dressings on the Barrabool stone of the Uniting (Presbyterian) Church, Toorak (1876).

Below: External decoration and facings, Ormond College, University of Melbourne



Above left: Beautiful pulpit, Hunter Baillie Memorial Church, Sydney (1889).

Above right: Inside the dome of the former Commercial Bank of Australia building, 333 Collins St, Melbourne (1891).

Kaye Oddie & Ruth Hoskin

Fungi Group

The ties that bind: fungi in terrestrial ecosystems'

A presentation by

Dr Sapphire McMullan-Fisher

***Fungimap Conservation & Biodiversity Subcommittee*, 6th March 2017**

Sapphire's presentation on fungal ecology emphasised the important role that fungi play in the environment, and the urgent need to preserve whole ecosystems instead of trying to save a few iconic species of plants and animals. Through land clearing and increasing urbanisation, humans have altered, fragmented or destroyed much of the environment, paying little attention to fungi – except for those that cause diseases.

Fungi often remain unnoticed because they usually live within substrates or inside animals or plants, and are seen only when they are reproducing – fruit-bodies such as mushrooms are the reproductive parts of fungi. Yet these remarkable organisms are what hold the ecosystems together; they even form networks that enable them to communicate.

Ecosystems are hugely complex, and are inhabited by a vast array of organisms. Sapphire spoke about several categories of these, and showed how fungi play a vital part in all of them:-

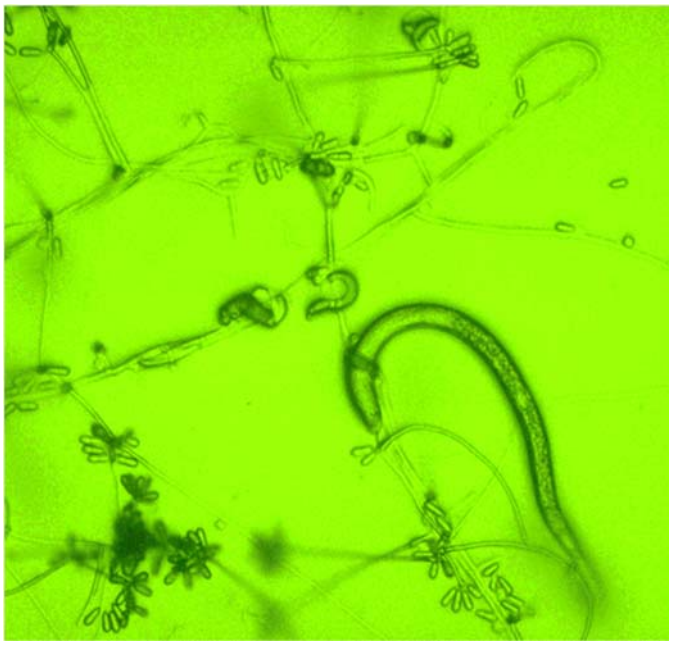
Lichens consist of a mycobiont (fungus component) plus a photobiont (photosynthetic component, i.e. an alga or cyanobacterium). The photobionts are the primary producers of the ecosystem, capturing atmospheric carbon dioxide and turning it into carbohydrates that are food for the fungus. Lichens come in various forms, such as leaf-like (foliose), shrubby (fruticose) or crust-like (crustose).

Cyanolichens have a cyanobacterium photobiont. Some cyanobacteria can fix atmospheric nitrogen. In *Nostoc*, for example, nitrogen fixation occurs in special cells called heterocysts, which contain the enzyme nitrogenase, vital for nitrogen fixation. Cyanolichens cannot grow well in low light conditions, or if nutrients such as phosphorus are in short supply.

Herbivores, both invertebrates and vertebrates, are browsers or grazers, and most of them – especially mammals – depend on anaerobic gut microbes such as bacteria, protozoa and fungi to aid their digestion. In ruminants, 'rumen fungi' such as anaerobic chytridiomycetes are present. (These are not the same as the chytrids infecting frogs).

Carnivores include not only invertebrates, fish, birds, mammals and some plants, but also fungi! There are very few fungi that prey directly on animals, but the **nematode-trapping fungi** produce a network of mycelium in soils, with loops that catch nematodes passing through. These fungi then absorb the nutrients from their prey. Carnivorous plants employ a similar strategy.

Decomposers such as bacteria, protozoa, invertebrates and fungi are the recyclers of the ecosystem, and without them most nutrients would not be released from dead matter. Invertebrates often do the mechanical work of chewing up dead matter into smaller pieces, which are then broken down by microbes or



Nematode trapped in a mycelial loop

fungi (e.g. yeasts and wood rotters). Fungal fruit-bodies can also be decomposed by fungi. Some beetles that breed in wood can carry spores of their preferred fungal inoculum to places where they lay their eggs. The larvae 'eat' the wood but digest the fungal mycelium within it.

Myco-heterotrophic plants obtain their food from fungi that decompose substances in the ecosystem. Orchids are myco-heterotrophic for at least the germination stage, and many remain dependent on their fungal partners. The Vanilla Orchid *Pseudovanilla foliata*, *Thismia*, and *Balanophora* species are dependent on saprotrophic fungi.

Yeasts and moulds help humans to obtain nutriment, through the process of fermentation (as in the production of beer, wine, bread, chocolate and cheese). They are also important sources of antibiotics.

Biotrophs are organisms that live off living organisms. They may be detrimental to the host (e.g. diseases, viruses) and so are thought of in negative terms. Rusts, smuts and mildews are common plant diseases, especially where monoculture is practised. In natural systems, diseases help drive natural selection, because susceptible individuals are less likely to reproduce. However, some biotrophs have a positive effect on the host, as in relationships called 'mutualisms'. In the

Pine seedling with mycorrhizae

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last half century many plant mutualisms, including endophytic and mycorrhizal fungi, have been discovered.

Endophytes are fungi that live in plants, helping them to improve their drought tolerance and resist both disease and consumption by herbivores. They are present in many plant tissues, and at this stage are poorly understood.

Mycorrhizae (from the Greek words 'mykos' meaning fungus and 'rhiza' meaning root) are symbiotic relationships that form between fungi and plants. Fungi colonise the root system of the host plant. Their network of mycelium provides the plant with increased water and nutrient absorption capabilities, while the plant provides the fungi with carbohydrates formed

Red Gum woodland with 'fungal mycelium' superimposed, from Mark Newbound

from the process of photosynthesis. Most terrestrial plants have several mycorrhizal partners, and grow poorly – or not t all – without them. Most eucalypt seedlings will not grow past the 6 leaf stage without a mycorrhizal partner. Healthy mycorrhizal networks are 'carbon sinks', helping to mitigate global warming. Examples of mycorrhizal fungi are the **truffle-like fungi** that evolved as this continent became drier: they could retain more moisture by not exposing themselves to the elements.

Food! An important role of fungi in ecosystems is to provide food for many animals as well as humans. The process of organisms consuming fungi is called **mycophagy** (or fungivory). Some birds, mammals, insects, gastropods, bacteria, fungi, as well as other organisms, are known to eat fungi. Animals such as potoroos eat the truffle-like fungi mentioned above, and spread the spores. Unfortunately, in many areas loss of habitat and the associated animals – and fungi – has resulted in this link being broken. Our fungi, the ties that bind, are threatened, but people aren't noticing.

Sapphire finished her presentation with photos illustrating the wonderful diversity of fungi that can be associated with just one tree in a forest.

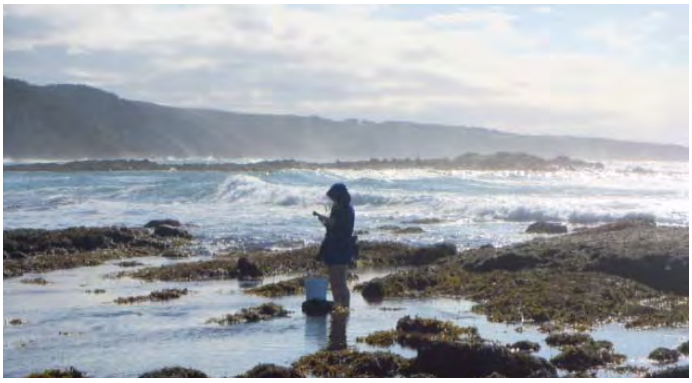
A big thankyou to Sapphire for making our first meeting for 2017 so interesting.

Virgil Hubregtse

Marine Research Group

These images were taken during the MRG's recent field work near Apollo Bay.

Joan Broadberry



Below: *Nectocarcinus tuberculosus*, *Austraeolis ornata*

FNCV FUNGI GROUP FORAY
7th AUGUST 2016
CATHEDRAL RANGE, NED'S GULLY

Vegetation: Riparian Forest with Manna Gum Tall Open Forest along Little River. Open forest with Red Stringybark/ Broad-leaved Peppermint/Longleaved Box on 'Hygrocybe Hill'.
We went along the river track and up to 'Hygrocybe Hill' where we found a number of brightly-coloured *Hygrocybe* spp. and corals. We didn't find much along the track but up on 'Hygrocybe Hill' we saw a lot of *Hygrocybe*. and Coral species.

Along the track Richard Hartland found *Peniophora cinerea* under the bark at the base of a *Eucalyptus viminalis* This is a flat, grey patch of fungus. MycoBank: *Peniophora cinerea* is easily identified by its closely adnate thin and grey basidiomata and from its waxy context. It is totally resupinate and attached to the substrate, appearing through holes or lenticels in the bark; first as rounded patches, then confluent; generally of small dimensions but sometimes covering the whole undersides of the wood; colour variable, but generally predominantly grey or greyish blue. Lachlan Maroske found a good display of Golden Curtain Crust *Stereum ostrea* all along a fallen log. The velvety upper surface showed coloured bands from brown near the base through orange and yellow to a pale yellow margin, and the lower surface was smooth and golden.

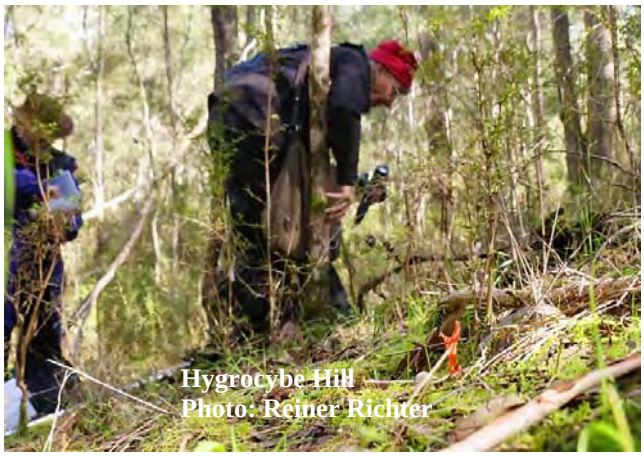
Further along the track on the trunk of *E. viminalis*, Richard found a slime mould. Paul George had this to say :

> "The slime mould is, as Tom May said, an *Arcyria* sp. The short cylindrical sporangia on short stalks were crowded into a patch several centimetres across. The colours of the sporangia range from pale buff, to rusty brown and dull red. Most of the sporangia were still intact, but near the edge of the group a few could be seen unravelling their typical long pale rusty threads (capillitia), which can be quite long. If you look closely you can see that some of the cups at the end of the stalks are empty and the ends of the capillitia had become detached. This is a useful diagnostic feature. The reddish colour of the sporangia can be found on *A. denudata*, *A. incarnata* and *A. ferruginea*, although the first two are somewhat brighter red. *A. denudata* has the capillitium firmly attached to inner surface of the cup (calyculus), whereas the capillitium is easily detached from the other species. The final clue is the pale pink colour of the young sporangia as they transform from the plasmodium. As the first two species have a white plasmodium, I think this is *A. ferruginea*, which has a rose-red or cream plasmodium."

Lunchtime Kookaburras gathered in the tree next to where we were eating and De'ana, seated with Mark on the other side of the car par, lost her bread-bun to a hungry Kookaburra; luckily that wasn't the only lunch she had. Richard was again on the hunt for *Coltriciella (Coltricia) dependens*, (resupinate bracket, pores uppermost with short stem/attachment) which he found again, but NOT on burnt wood. We shall have to amend the description from 'always to "usually" on burnt wood'

Reiner Richter made this contribution:

> "I have long heard the legend of "Hygrocybe Hill", an almost mythical east-facing, lower slope of the Cathedral Range, about 100km north-east of Melbourne. I have been on this foray with the FNCV, but I don't think on any of the trips I've been on, the *Hygrocybe* fungi put on a particularly strong showing. There wasn't a huge number this time but there were quite a few different species. *Hygrocybe* is a genus of mushrooms many of which are quite colorful eg the yellow, glutinous.
>
> Something that I noticed a lot of were Geoglossaceae, which includes *Geoglossum*. This is a family of mostly dark earth clubs, inconspicuously sticking a few centimetres out of the moss. Previously I had only ever seen a handful of one species at a time but here there were numerous colonies and the more I became aware of them the more I found. At the time I thought most were the same *Geoglossum* species and the one with the browner stem was *Glutinoglossum glutinosum*.I was quite happy with this but ignorance is bliss as once I reviewed my photos at home I realized that there were at least two *Geoglossum* species present [looks like three species]. Now I'm thinking about the several colonies I walked past thinking I had already taken a photo of that species.
>
> That's the problem with cryptic species — several Geoglossaceae can be difficult to tell apart and really need microscopic examination. *Hygrocybe* on the other hand are mostly differently brightly colored, making identification in the field easier and also finding them easier. (There are of course different species of *Hygrocybe* that are similar in appearance). There are over 80 species of *Hygrocybe* and we saw perhaps 10 species, or around 12%, but only about 20 species of Geoglossaceae and I photographed at least 3 species, or 15%. Therefore I now move to rename this slope "Geoglossa Hill"! (Ducks and hides in the corner to avoid the flack.)" [YES you may well have to!]



Hygrocybe Hill
Photo: Reiner Richter

Up on 'Hygrocybe Hill' (photo above) apart from a range of scattered Corals, we did see various *Hygrocybe*. Among the Corals were *Clavuliopsis amoena, C. sulcata, C. corallino-rosacea*; the multibranched yellow *Ramaria lorithamnus* in a fairy ring 6 metres across and a 'cauliflower' fungus, which I thought might be *Ramaria capitata* var. *ocraceosalmonicolor* but the knobby viscid tips and the yellowish colour showed that it was *R. capitata* var. *capitata.* At the end of the day, the last coral we saw was deep purple. Was it *Clavaria zollingeri, Ramaria versatilis* var. *latispora or Ramariopsis pulchella*? I

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thought that it was too large to be the *Ramariopsis*, but could not see whether it had a white (*Clavaria*) or yellow-brown (*Ramaria*) spore print. Important features to note are the size of the fruit-body and its brittleness. At home it produced a white spore print on a slide, and the spore size, shape and lack of ornamentation determined it as *C. zollingeri*.

Amongst the *Hygrocybe*, we were able to recognise the deep red, shiny, glutinous cap of *Gliophorus perplexus (Hygrocybe psittacina* var. *perplexa)* from our sighting and John Eichler's description last week at Kinglake, the tiny red species probably *H. miniata* with a convex, scarlet-red cap and a crenulate margin, and *H. graminicolor* with a pale green stem. Paul was very enthusiastic about this *Hygrocybe* which had a brown cap and tapering red stem.

Virgil Hubregtse saw a white *Hygrocybe*:

> "Two different-looking fruit-bodies were growing close together. Specimen one had a convex cap with a small umbo. The cap's diameter was 16 mm, its surface very finely fibrillose and its colour creamy white with a pale brown centre. The gills were decurrent, creamy white and distant, with smooth edges. The stipe measured 45 x 2 mm, a little wider at the top and tapering toward the base; creamy white, solid, with white basal mycelium. The flesh was also creamy white, and the odour was absent until the specimen was cut, after which it smelt fungussy. Specimen two was much smaller and had a centrally depressed cap with a diameter of 10 mm. The colour was creamy white with a light brown centre. The rest of the fungus, apart from the size, was similar to Specimen one.) and I wondered whether it was *H. rodwayi* or *H. virginea.* I noticed the light buff at the centre of the cap and according to Young 2005, p 78 *H. virginea* is 'without any trace of brown in the centre of the pileus', while the cap of *H. rodwayi* (p 75) may become light buff-brown. (AM Young *Fungi of Australia: Hygrophoraceae*). I confirmed *H. rodwayi* microscopically."

We also saw an *Entoloma* growing close to a log, which had a brown pointed umbo in the centre of the buff cap. The umbo colour was not dark enough to be the 'eye' of *E. readiae* (which usually grows on wood), so cupping the fruit-body with my hands I was sure I could smell the 'bubblegum' of *E. aromaticum*. However, no-one else could smell anything, so Virgil took it home and microscopically identified it as *E. aromaticum*.

Tom May introduced us to the *Pseudobaeospora* sp. (below)

Pseudobaeospora sp.
Photo: Paul George

and Paul provided the description:

> "These small mycenoid fruitbodies in the soil amongst the moss, have fairly long thin stipes. There were a number of fine white rootlets at the base of the stipe (which is characteristic of this genus). The cap was conical to flattened with a slight broad umbo, dull brown with a hint of dull lilac, darker towards the centre and very finely felty. The gills were free, and pinkish to livid colour. The stipe was a darker dull red, livid colour with white fibrils or floccules. A discussion of the genus can be found in C. Bas, 'A Reconnaissance of the Genus *Pseudobaeospora* in Europe II', *Persoonia* v18 n2. 163-199, (2003). See also Gates & Ratkowski (2014) p.137. There is a superficial resemblance to *Callistosporium* sp. (Gates & Ratkowski (2014) p.36), but the 'hairs' at the base of the stipe distinguish this genus." (*A Field Guide to Tasmanian Fungi*).

Reiner also saw a tiny (1 cm diameter) cup with a very small cup opening at the top and a very rough exterior and thought it was *Urnula* sp. I looked on the Web page Project Noah which showed a very similar image to Reiner's called *U. platensis*. "The description: small inner smooth black cups 1-2 cm diam. deeply furrowed at the base of the stipe, found in singles and in clusters on eucalypts twigs and crevices of tree." The photo and description matched the species Reiner saw. He also saw *Pseudomerulius curtisii* (*Meiorganum curtisii, Tapinella curtisii*) 'Yellow shelf' with amazing wrinkled gills. The cap is fan-shaped, yellow and smooth like kid leather, the gills are deep yellow, very wavy and convoluted, and radiate out from the attachment.

Sue Forster had this to say

> "I really enjoyed our foray at Cathedral Range State Park on Sunday. The weather was perfect and the Lyrebirds' songs were enthralling, not to mention the *Hygrocybe*. Unfortunately I couldn't identify any of my better photos because I know so little about the genus and my two books weren't much help. At the risk of annoyance, I'm sending you a few photos anyway and you may pass them on if you recognise any of them! I should apologise to everyone for losing the rather nice Hygrocybe cluster. The second photo with my thumb in it is just to show you the gills, but it's too blurry to redistribute). Next season I'm going to add bright ribbons and balls of wool to my kit so I can always retrace my steps!".

Sue also commented "I was also sorry to learn so late in the day that De'ana and Mark are unlikely to join us again and I wondered whether you might thank them in your report for their contributions to the group and wish them well from all of us". I thought that was very well put and endorse the message. Thank you De'ana and Mark, you will be greatly missed.

Thanks to all forayers for searching and photographing the species we found throughout the season. A special thanks to those who have contributed to the reports and species lists: Ian Bell, Marc Campobasso, John Eichler, Cecily Falkingham, Scott Ferguson, Mike Forster, Sue Forster, Paul George, Ed Grey, Pat Grey, Les Hanrahan, Richard Hartland, Jurrie Hubregtse, Virgil Hubregtse, Bill Leithhead, David Lockwood, Ivan Margitta, Margaret Margitta, Carol Page, Reiner Richter, Torbjorn von Strokirch, Lachlan Tegart and De'ana Williams. Thanks to Virgil Hubregtse for checking the reports and species lists.

Ed and Pat Grey

Terrestrial Invertebrates Group

MACRO PHOTOGRAPHY
Speaker: Reiner Richter

The TIG meeting of 15-03-2017 was very well attended; in fact it was packed with people interested in close-up photography. Reiner Richter delivered an interesting and informative presentation of macro photography in the field. He covered the basics of camera optics and the various camera settings and lighting conditions needed for good results. Wendy Clark also presented some macro images and discussed the methods used to obtain them. There was a high level of interaction throughout the evening and those who brought along their own cameras were given an opportunity to photograph some of Max Campbell's live scorpions.

Close-up or macro photography has been made a lot easier in these days of digital cameras and superlative optical systems. In particular, macro (micro) lenses have come a long way and are now built into most point and shoot cameras. It is possible to take reasonable macro images without spending too much money. Nevertheless it pays to follow the basic rules regarding aperture, shutter speed, ISO value and lighting. Taking close up shots of small insects in the field is always problematic. For the most part insects and other active invertebrates do not want to be photographed and seldom remain still for long enough to compose a picture let alone take it. Plants and fungi on the other hand don't run away when approached and allow plenty of set-up time for both camera and tripod. The subject you wish to photograph will influence your choice of camera.

Small movements of subject and/or camera translate into blurred images and with close-up work, optical stabilisation systems are hard put to improve the outcome. Heavy professional cameras are not easy to haul about in heavy terrain and bad weather. Light weight, point and shoot cameras with good zoom lenses are easier to carry and simple to use. Selecting a camera that meets your personal needs and budget is necessarily time consuming but worth the effort in the long run. A number of different cameras and lighting systems will be compared at a TIG meeting later in the year. I will be inviting experts in the field of close-up photographic equipment to discuss the options available from entry level to serious semi-professional level.

All photos: Max Campbell

Max Campbell

Below: One of the scorpions photographed under UV light at the meeting. *Urodacus manicatus*

Below: Close up of ventral and dorsal sides of *Eriophora transmarina*

Right: Convolvulus Hawk Moth caterpillar *Agrius convolvuli*

Day Group

Wildlife watching on the West Coast of Mexico
Speaker: *John Harris*

On 28th March, FNCV past president John Harris spoke to the Day Group. As part of a longer 18 day trip that included Florida and the Bahamas, John and Kathy spent four days exploring the small province of Jalisco on Mexico's western seaboard.

Their trip began in PuertoVallarta. John particularly wanted to see iconic species such as Macaws, Hummingbirds and Woodpeckers. In the company of a guide, they travelled south towards Bioto. One of their first stops was a private sanctuary, home to a population of Military Macaws. Battling rain, John managed to photograph these stunning birds. It was startling to see that the artificial next-boxes, made of two inch thick boards and hauled up into the trees for the macaws, reached to the height of a man's shoulder! (see photos below). The property, wooded with pines and oaks, was once a cattle ranch. It is now run as a largely self-funded sanctuary for macaws. Posters indicated that the penalty for poaching macaws was jail but they are threatened through the stealing of their chicks, worth something like $US200 each. The sanctuary is guarded by dogs.

Another stop was at a securely fenced Jaguar conservation area run by a community organisation. A tall look-out tower allowed visitors to search for jaguars. Unfortunately, none were seen, but John did photograph a beautiful bird, Citreoline Trogan. An interesting find was *Amblypygi sp*. an ancient nocturnal arachnid species known as the Whip-tail Spider/ Scorpion. (photo right.)

During their time in Jalisco, John and Kathy spotted five or six species of woodpecker. These included Ladder-backed, Acorn and Golden-cheeked Woodpeckers. As with many of the bird species John introduced us to, he played a recording of the Golden-cheeked Woodpecker's call. Woodpeckers are the primary excavators of tree hollows. In Australia we have to wait much longer for hollows to develop gradually as trees age.

John and Kathy watched their first Cinnamon Hummingbird feeding on banana tree flowers. Later, while having lunch in the Puerto Vallarta Botanic Gardens, John was able to take some beautiful stills and video of Cinnamon, Plain-capped Star-throat and Broad-billed Hummingbirds sipping sugar-water at a feeder.

Star-throated Hummingbird

At various locations, John photographed fungi, bromeliads, and the very difficult to climb Sandbox (Jabillo) Tree *Hura crepitans*. He observed that the dominant vegetation was pine and oak forest, not quite what he was expecting. A butterfly chart was on sale at the botanical gardens and butterflies such as the Gulf Fritillary, Zebra Longwing and Julia were identified.

Another short trip went into the Sierra Madres Mountains to an old forestry camp. Amongst many bird species seen, great views were had of the exquisite Eared Poorwill, an endemic nocturnal bird resembling our Nightjar. (Photo above.

On their final day John and Kathy went on a boat cruise on the only protected estuary in Mexico, the Estero Del Salado. They sighted many bird species such as the Great Blue, Green and Boat-billed Herons, Black Vultures, warblers and the resident American Crocodiles (different to alligators).

In four days, John identified a total of 87 birds in an area containing approximately 330 species. I have mentioned some of the highlights from his presentation in this report. I am sure he would be happy to share his complete list with anyone interested.

Once again, on behalf of the Day Group I want to thank John, who, through the magic of armchair travel, introduced us to a fascinating place most of us knew nothing about. We smiled at his enjoyable tales of the quirks and pitfalls of travel. However, as naturalists we revelled in journeying with John on the road less travelled and learning a little of Mexico's natural history through his sharp eyes and photographic skills.

Joan Broadberry

From the Office…..

Dear Members, Remember that your Annual General Meeting is coming up soon on Sunday 7th May. It promises to be an interesting afternoon so try to come, but if you can't make it, don't forget to lodge your proxy vote so it's not wasted (available in the FNN April issue or at the FNCV during office hours or meetings).

Also, consider the idea of joining the FNCV Council so you can be more involved with your Club. It's only eleven meetings for the whole year (4th Monday of every month except December) and new councillors are always welcome. The nomination form is also in the April FNN, or I can email either of them to you if you prefer. (You need to contact me on or before 24th April as I will be away). They must reach the FNCV office no later than 48 hours before the AGM. (Friday 5th May, 2 pm.)

I'm lucky enough to be heading off on holidays at the end of April, just for a couple of weeks. My husband Colin and I are going to Ireland for a self-drive tour of the south, and hoping that it won't rain which apparently often happens in May. I normally work on Mondays and Tuesdays so the office will be closed on 1st, 2nd, 8th and 9th May. I will be in on Anzac Day (Tuesday 25th April) then my first day back will be Monday 15th May.

While I'm away emails will be checked weekly for anything urgent, but everything else will be dealt with on my return.

Wendy Gare, Administration Officer

DIARY DATE:

FNCV BIODIVERSITY SYMPOSIUM
Marine Biodiversity in the 21st Century

19-20th August 2017

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