Field Nats News No.268

Understanding Our Natural World
Est. 1880

Newsletter of the Field Naturalists Club of Victoria Inc.
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October 2016

From the President

As I have previously indicated, the FNCV is frequently invited to have input into matters involving the environment. At the last Council meeting, the formation of an environment committee was approved. The membership is open to Council members and members of the Club. If you are interested in being involved in such a committee, please contact me or Sue Bendel, or the FNCV office.

Max Campbell

The deadline for FNN 269 will be **10 am on Tuesday 4th October 2016.** FNN will go to the printers on the 11th, with collation on Tuesday 18th October.

The President & Council of the Field Naturalists Club of Victoria Inc

have pleasure in inviting you to the presentation of the

2016 Australian Natural History Medallion

awarded to Max Moulds

for his contribution to the field of entomology.

The Medallion will be presented by Dr W.D. Birch AM, President, Royal Society of Victoria

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Monday 7th November at 1 Gardenia Street Blackburn

6.30 pm: Reception, with two-course buffet

8.00 pm: Presentation of the Medallion followed by a talk from Max on his study of cicadas

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Please book for buffet by **21st October** **Cost $22**

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

NB. No need to book if attending the presentation only

This year the **Whitehorse Spring Festival** is on *Sunday 16th October*.

We will again have an FNCV stall - it's always very popular, particularly with children, gives us good publicity and is well worth the effort. As usual, we ask for volunteers to give an hour or two of their time to help. If you are able to assist please email admin@fncv.org.au - it runs from 10 am to 4 pm. So far we have few volunteers.

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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.

OCTOBER

Monday 3rd - Fungi Group Meeting: ***Members' Night.*** Planning for 2017. Contact: Virgil Hubregtse 9560 7775

Tuesday 4th - Fauna Survey Group Meeting: ***The importance of vegetated linear strips (roadsides and creek lines) within agricultural landscapes for birds and native invertebrate pollinators.*** Speaker: Mark Hall PhD Candidate, Latrobe University Contact: Ray Gibson 0417 861 651.

Saturday 8th & Sun 9th – Fauna Survey Group Symposium. ***Reptiles & Amphibians of Victoria.*** **Venue: Manchester Unity Hall, 8 Main St, Blackburn.** Some of Australia's leading herpetologists and researchers will discuss a variety of reptiles and frogs as well as specifically threatened species. 9.30 am to 4.30 pm each day. Lunch and morning/afternoon tea included. Registration form in the August FNN 266, or visit the FNCV website.
Prior registration & payment required. Contact: FNCV office, admin@fncv.org.au 039877 9860.

Sunday 9th – Juniors' Group Excursion: ***Yarra River Keeper, Warrandyte*** with Ian Penrose. Meet at 10.30 am at Black Flat car park in Tills Drive, Warrandyte (Melways Page 23 H11). Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

Monday 10th - Marine Research Group Meeting: ***Marine Sciences.*** Speaker: Dr Tim O'Hara, Deputy Head Marine Sciences, Museum Victoria. Contact: Leon Altoff 9530 4180 AH; 0428 669 773.

Tuesday 18th—Collate FNN, starting about 10.00 am. All welcome. Contact FNCV office 8977 9860 or admin@fncv.org.au Contact Joan Broadberry, 9846 1218.

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

Wednesday 19th - Microscopy Group Meeting. For details contact Philippa Burgess 0409 866 389.

Thursday 20th – Botany Group Meeting: ***On the Trail of Giants – our largest trees.*** Speaker: Brett Mifsud Contact: Sue Bendel 0427 055 071

Monday 24th - FNCV Council Meeting - 7.30 pm sharp. Agenda items and apologies to Wendy, 9877 9860 or admin@fncv.org.au

Tuesday 25th – Day Group. Excursion: ***Spring wildflower walk in Wombalano Park, Ringwood East***
Meet 10.30 am. Park in Rotherwood Avenue, off Pinewood Ave off Canterbury Rd (Melways p50, C10/11). BYO chair and join us for a picnic lunch. Leader: Cecily Falkingham. Contact: Joan Broadberry 98461218.

Wednesday 26th – Geology Group Meeting: Meeting: ***Palaeomagnetic Dating of Marsupial Fossil Evolution in Australia.***
Speaker: Associate Professor Andy Herries, archaeo-geophysicist from Dept of Archaeology & History, Latrobe University
Contact: Ruth Hoskin 9878 5911; 0425 729 424; rrhoskin@gmail.com

Friday 28th – Juniors' Group. Meeting: ***The Big Roo Count.*** Speaker: Dr Jenny Martin of Melbourne University
Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

Saturday 29th to Tuesday 1st November - Fauna Survey Group. Field work. ***Venue to be advised.***
Prior registration essential. Contact: Su Dempsey 0437 172 333

Saturday 29th to Tuesday 1st November – Juniors' Group. ***End of Year Camp.*** To be held on private land near the Twelve Apostles. Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

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.

Welcome Welcome

Warmest greetings to these new members who were welcomed into our club at the last Council meeting*: Elise Ireland, Susan Kruss, Ellie Renowden, Mia Renowden, Jarod Renowden, Christina Renowden, Cameron O'Mara, Affrica Fankhauser, Ruby Albury, Jan Smith and Linda Keane.*

Fauna Survey Group

Arboreal mammals around the Grampians

In our work with Parks Victoria (PV), one of our projects involved surveying for arboreal mammals around the Grampians. A particular target was the Squirrel Glider (*Petaurus norfolcensis)* which is considered endangered and listed under the *Flora and Fauna Guarantee 1988* (FFG).

During our early work in June 2014, we detected a *P. norfolcensis* on remote camera at Heatherlie in the northern Grampians and also some hair samples from a Brush-tailed Phascogale (*Phascogale tapoatafa*), also listed and considered vulnerable, at Heatherlie (Grampians) and Lonsdale Flora and Fauna Reserve. There were no *P. tapoatafa* records in the Victorian Biodiversity Atlas for either the Grampians or Lonsdale NCR. This early success led to larger surveys in these and adjacent reserves, with *P. norfolcensis* also being recorded at Lonsdale NCR in August 2015 (Fig 1).

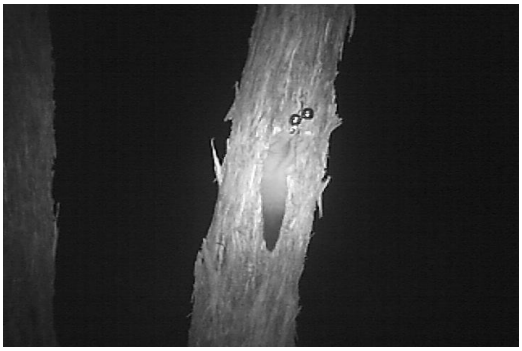

Fig 1 – Squirrel Glider recorded on remote camera at Lonsdale NCR, east of the Grampians

The work continued this year with surveys at Dadswell's Bridge (between Stawell and Horsham) in May and Deep Lead (just west of Stawell) in June. Overall 18 members attended either one or both surveys. On each occasion 28 remote cameras were deployed. Cameras were deployed in trees and on the ground. We supplemented cameras by spotlighing at night along 500 metre transects. During the day we carried out bird surveys along the same transects.

At both locations numerous arboreal mammals were recorded, mainly Sugar Glider (*Petaurus breviceps*) (Fig 2) and Common Brushtail Possum (*Trichosurus vulpecula*). At Deep Lead we recorded a Feathertail Glider (*Acrobates pygmaeus*). Other mammals recorded included Red-necked Wallaby (*Macropus rufogriseus)* and Yellow-footed Antechinus (*Antechinus flavipes*).

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

Fig 2 – Sugar Glider recorded on remote camera at Deep Lead NCR, near Stawell

Although, subject to some confirmation, we did not record any Squirrel Gliders or Phascogales at these two reserves, parallel work being carried out by PV and other volunteers saw the recording of a Brush-tailed phascogale (Fig 3) in the Ararat Hills.

Fig 3 – Brush-tailed Phascogale recorded on Parks Victoria camera in the Ararat Hills

The survey work has shown the importance of small reserves, not only for the mammals but also for bird species. In our survey at Deep Lead, which is only 12 km from Stawell, we recorded 50 bird species including three individually listed under the Flora and Fauna Guarantee Act. These were Swift Parrot (*Lathamus discolour*), Hooded Robin (*Melanodryas cucullata*) and Brown Treecreeper (south-eastern ssp.) (*Climacteris picumnus*). Another seven are listed as part of Victorian Temperate Woodland Bird Community.

When we retrieved the cameras we took part in the recording of a TV news item which appeared on WINTV Bendigo on 26 July and encouraged citizen scientists to get out and look in their own backyards after the discovery of rare wildlife.

Robin Drury

Day Group

NEW ZEALAND SOUTH ISLAND
Geology for the Tourist
Presenter: Rob Hamson
Tuesday 23rd August

In this talk the intention was to couple my interest in geology with what I saw on a recent visit to South Island, New Zealand, and share my experiences with the Day Group. Many of the audience had visited South Island and their questions and contributions added to everyone's understanding.

My visit started at Christchurch and coincided with the fifth anniversary of the devastating earthquake of 22 February 2011. Much construction of new steel-framed buildings is taking place, while older buildings such as the Arts Centre are being repaired in traditional style. However, there are many vacant lots and the Cathedral remains shored up but neglected, its future uncertain. Re-START, the shipping container mall set up as a temporary shopping centre is still going while elsewhere shipping containers are used as massive walls to protect passers-by from still unstable building facades.

Christchurch Cathedral -1881

Our next stop travelling south was Oamaru, a very picturesque town, much of it built of Oamaru stone, in fact the Otatara Limestone of Early Oligocene age 34-32 Ma. Apparently early settlers found no useful timber to build with; the landscape was covered with cabbage trees, so they were fortunate to find such an excellent building stone on hand. The stone was exported and the former Bank of Australasia 1874-6 on the corner of Queen and Collins Streets is a fine example of its use in Melbourne.

Opera house 1907, Oamaru. Oamaru stone is Otatara Limestone, early Oligocene, 32-34

Just inland from Oamaru, at the small town of Duntroon, is the small museum Vanished World Centre which displays fossils found in the somewhat younger Oligocene Otekaike Limestone 24 Ma. At this time there was not much of New Zealand above sea level, just shoals and small islands in a lime-rich sea. The Centre is the starting point for a 20-stop geological trail including Elephant Rocks and the Anatini whale fossil site where the bones of a baleen whale can be seen preserved in situ under a perspex cover.

Continuing south down the east coast, one comes to Moeraki Boulders, a tourist stop catering for coach parties. The huge spherical boulders on the beach are septarian nodules (= concretions) which have formed in Paleocene mudstone c 60 Ma. Septarian nodules when broken open reveal cracks lined with calcite crystals. These veins can look like plates or septa dividing up the interior: hence the name.

Baleen whale. Jaws on left, ribs on right. Estimated length, 8-10 m when living.

In the very southernmost part of South Island at Curio Bay in the Catlins, is a fossil forest of Jurassic age ,170 Ma laid out on the rocky shore platform. Here the trees were felled when flood waters carrying sand, mud and ash from nearby volcanoes swept over the conifers, cycads and tree ferns. The buried trunks became petrified. At this time Zealandia was still part of Gondwana. It was not until the Cretaceous that Zealandia, a slice of continental crust half the size of Australia, split off from the eastern edge of Gondwana as the Tasman Sea opened up. The earliest sea-floor in the Tasman is dated at 83 Ma.

Our journey now took us to the west coast and the two most-visited glaciers Fox and Franz Josef. The authorities are very safety-conscious and visitors can only get so close. Anyone wishing to set foot on the ice must take a helicopter. All the classic features of glaciation are there to be seen, the viewing points not much more than 30 minutes' walk from the car park.

Near Franz Josef is one of the few places where one can see the Alpine Fault and stand astride two tectonic plates if one wishes. The fault stretches for 600 km and separates the northward moving Australian plate from the southward moving Pacific plate. The tour is named "Exposed" and passes two boreholes before one reaches the fault. At the fault-line, green cataclasite is thrust up and over 12,000-year-old river gravels. Cataclasite is ground-up fault material coloured green by chlo-

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rite, a common metamorphic mineral. The fault remains locked for several hundred years before the tension is released in major earthquakes measuring 7.5-8 in magnitude with a horizontal displacement of 15 m and 1.5 m vertically. The last one was in 1717.

Rob with the Pacific plate on left, Australian plate on right.

Our last stop at a geological tourist spot on South Island was Pancake Rocks at Punakaiki, much further north on the west coast. Here there are the classic features of marine erosion: caves, blowholes, arches and stacks, all of which are in a remarkably uniformly layered limestone again of Oligocene age. The layering gives the name pancake and the most recent explanation is that this banding is a form of stylolites, dark lines along which the limestone has been removed by solution leaving insoluble mud.

If one takes a tour of the Beehive and Parliamentary buildings in Wellington, one can see in the basement that the whole complex is supported on 417 base isolators. This New Zealand invention consists of a series of steel and rubber plates around a lead core. It will absorb much of the movement during an earthquake. The same system can also be seen in situ in the basement of Te Papa, the Museum of New Zealand, which sits on 152 of these devices supporting a weight of 50,000 tonnes.

Petrified forest, Curio Bay, The Catlins.

The talk concluded with a slide of the 1.5 m diameter ammonite in Te Papa - spotted in a road cutting in 1977 and removed using explosives!

Rob Hamson

Rob offered to present to the Day Group and wrote a report on his own talk. All photos are his. Many, many thanks. Joan Broadberry, co-ordinator.

Library News

The following books and periodicals have been added recently to the Library's collection.

Books

Braby, Michael F(2016) *The complete field guide to butterflies of Australia.* Second Edition (595.78 BRA)
Flora of Australia (2005) *v.44B: Poaceae* (3582/94 FLO)

King, Robert J(2013) *Field guide to Royal National Park* (919.446 FIE)
May, TW; Milne, J; Shingles, S; Jones, RH (2003) *Fungi of Australia, v.2B: catalogue and bibliography of Australian fungi 2: Basidiomycota p.p. & Myxomycota p.p.* (589.2 FUN)
Priest, Michael (2006) *Fungi of Australia: septoria* (589.2 PRI)
Swanson, Kerry (2012) *Bacteria, fungi, lichens & plants* (586 SWA)

Periodicals

Australian Journal of Botany 64(4) reports an investigation into possible ways of controlling invasive agricultural weeds in coastal saltmarsh. The investigation was based at Lang Lang and focused on tall wheat-grass *Lophopyron ponticum*.

Australian wildlife Winter 2016 (a different publication) focuses on the reintroduction of locally extinct mammals such as numbats, bilbies and quolls.

Emu: Austral Ornithology 116(3) has an article assessing the effects of climate change on the swift parrot. An important influence will be the effect of the sugar glider, a nest predator introduced to Tasmania.

Records of the Auckland Museum 50 (2015) has an article recording 78 sea slugs from the north island of New Zealand.

In the *WA Naturalist* 30(3) the silver gull is reported as a vector for invasive olives in WA.

Wildlife Australia 53(2) has lots of interesting articles, on topics including the variety of animals and strategies involved in pollination, cicadas, and dealing with the risk that our population is losing its connection with the natural world.

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

Extracts from SIG reports given at the last FNCV Council Meeting

Geology Group: At our meeting on Wednesday 27th July, Professor Peter Betts, a geophysicist from Monash University, spoke on the topic Plate Tectonics; we have come a long way but have a long way to go.

Peter began by giving an overview of the development of the concept of Plate tectonics from the early theories of Plate tectonics by Alfred Wegner. Wegner did not have a mechanism to explain the movement of continents across the earth's surface. Discoveries since the end of the Second World War have built up a picture of how plate tectonics function. These discoveries include: the discovery of mid-oceanic spreading ridges and convergence zones where less dense crust is dragged under more buoyant crust producing subduction zones; the youthful age of the world's oceans, less than 210my; palaeomagnetism; improving techniques in dating; as well as gravity; magnetic and seismic imaging etc.

Peter then went on to discuss the latest developments in the tectonic history of Victoria. Much of Victoria is buried beneath younger post cretaceous sediments and new imaging techniques have offered a window into these buried terrains. Peter introduced us to the concepts of the Selwyn Block, Vandieland, oroclines and micro continents. The large group in attendance were certainly left with a lot to think about. Peter and his co-authors' work on numerical modelling of the Delamarian and Lachlan Fold belt of SE Australia during the Silurian was published in the prestigious journal Nature in 2014.

Juniors' Group: A group of 23 Junior members, family and friends, met on August 14th at Serendip Sanctuary at the base of the You Yangs.

The weather was perfect for a winter's day and we were met by ranger and educator, Vanessa, who gave us a short talk about Serendip Sanctuary and the surrounding landscape. The area used to be grassland until people settled with their livestock ,which overgrazed the land. The sanctuary now has grassy woodland and wetlands and is home to numerous native species including both captive and wild birds and animals. Some of the wild species include kangaroos, wallabies, Magpie Geese, Cape Barren Geese, and other birds that fly into the wetlands and can be seen from the bird hides at the sanctuary. There are also enclosures with animals including kangaroos, wallabies, Pademelons, lizards, Tiger Quolls, Freckled Ducks, Masked Owls, various parrots, Emus, Bustards, Bush Stone Curlews and other birds. Vanessa also recommended a visit to the visitor centre which has a tank containing Growling Grass Frogs, as well as other interesting displays.

We then took off on the Wildlife Walk, with a quick stop on the way to look at a Chough's nest which Indra found in a tree near the car park. There wasn't a lot of water in the lakes but we still managed to see quite a few birds at the bird hides as well as all the birds and animals in cages. We also stopped in at the Information Centre on the way back to the car park for lunch. After lunch some of our group stayed on to do some ponding in the designated ponding area with equipment.

Meeting 29th July: John Harris spoke about his trip last year to NZ's South Island. This talk included the threats to the native land animals due to introduced animals. The greatest wildlife pest is the Brushtail Possum that was introduced to establish a fur industry in the 1800's. Others include hedgehogs, ferrets, stoats, weasels, feral horses, cats, birds and deer, but unlike Australia, foxes aren't one of them.

Marine Research Group: Our August meeting was held on 8th August with Mel Mackenzie who made her way south to Antarctica this summer with a team of 22 international scientists to explore the seafloor around the South Orkney Islands. Mel gave an overview of some of the animals, habitats and associations the team discovered as they worked day and night on a rolling ship to study this vulnerable ecosystem.

Microscopy Group: Last month the Microscope Group met for a members' activity evening. We set up around 10 microscopes, dissecting and compound, with a huge variety of botany, marine and geological specimens. With pond water and live insect samples. We of course, also had access to our hundreds, possibly thousands of prepared slides. We all enjoyed viewing and discussing the wonderful sights to be seen. A total of nine people attended. A new member attended with a visitor and also a recently joined member came alone with a visitor. It was a great introduction to microscopy for these new attendees.

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.

Thanks to the editorial and layout team who put together FNN 268

Joan Broadberry
Wendy Gare
Sally Bewsher

Many thanks to those who helped collate and label FNN 267

Andy Brentnall
Edward Brentnall
Hazel Brentnall
Cecily Falkingham
Joan Broadberry

Fungi Group

FUNGI GROUP FORAY

29th May 2016

Mt. Worth State Park

Moonlight Creek Area

Mount Worth State Park protects a remnant of the forests that once covered the western Strzelecki Ranges. Tall wet forests of Mountain Ash, Mountain Grey Gum and Blackwood grow on the hills and slopes. Soft Tree-ferns *Dicksonia antarctica* and Rough Tree-ferns *Cyathia australis* flourish within the sheltered gullies.

Torbjorn von Strokirch had this to say "It was a lovely, though a little cool day at Mount Worth. Everything was wet from the amount of rain that had fallen in the past week. In fact in places it appeared that there had been too much precipitation with some of the small fungi showing signs of being crushed by heavy rain. While initial impressions were that fungi were in short supply, with many people complaining that the circuit walk in the morning was not very productive, there was a multitude of tiny fungi present including all kinds of *Mycena* and *Marasmius* species in the dense wet fern gullies beside the tracks. These included the pretty blue *Mycena interrupta*, the rarer pink *Mycena roseoflava* and the tiny *Mycena* 'tiny blue lights'.

The afternoon walk was more productive in that it produced a range of seldom-seen fungi. Reiner Richter located a patch of *Mycena roseoflava* (photo above) and *Physalacria australiensis (P. inflata)*. Richard Hartland found *Pseudomerulius curtisii* (*Meiorganum curtisii, Tapinella curtisii*) (wrinkly yellow gilled things) and later also found an example of *Cordyceps hawkesii* on the mill track."

Virgil Hubregtse had this to say "For us, the highlights of the Mount Worth foray were seeing the beautiful little *Mycena roseoflava* growing on logs, and the impressive spread of *Physolacria* on a mossy tree branch. I (Virgil) was also pleased to see the *Hydropus* sp. that Paul pointed out to us in 2014. However, there were fewer fruit-bodies this time" [VH - the cap is convex with papillate umbo and has a finely fibrillose appearance. The stem's surface is covered in very fine black fibrils, the spore print white. They have been found on the bark of a living Acacia melanoxylon, often in the cracks where the rain washes down. They also grow on A. melanoxylon logs.]

Reiner Richter noted " …next sighting was the largest colony I have seen of the not-so-often encountered *Physalacria australiensis* growing along the shady side of a *Pomaderris aspera* (Hazel Pomaderris) trunk overhanging Moonlight Creek. These appear like tiny white capsicum shaped balloons hanging from a short stipe. Once again it was an effort to try and get the exposure and depth of field as good as possible on these circa 5mm high fungi. Later we also saw a colony closer to the car park, which were also in good condition.

It was surprising to see so many *Mycena roseoflava.* I only saw them for the first time last year but this year I've found them in Sherbrooke Forest again (about 1km from where I saw them last year) and at Lake Elizabeth in the Otways. There was also a colony here at Mt Worth (near the *Physalacria australiensis* colony) and others were found along other tracks too. Late in the day I found some near Trevorrows Mill site and measured the cap of the largest at 9.5mm across."

Mycena roseoflava Photo: Reiner Richter

Further to the notes by Torbjorn, Virgil and Reiner: *Mycena roseoflava,* growing on a large fallen log across the creek, is a beautiful, small pink-capped species with a cap diameter of less that 5 mm (or as Reiner has seen to 9.5 mm) and pale pink gills. It may prove to be a rival to our present iconic symbol, the blue *M. interrupta*. However, Paul George had discovered from Index Fungorum that the Current Name is *Insiticia roseoflava* (G. Stev.) (determined by E. Horak, N.Z. Jl Bot. 9(3): 450 (1971), although G. Gates identified this as *Mycena roseoflava* and Cheryl Grgurinovic(2003) only lists *M. roseoflava* in a brief note (p250), in *The Genus* Mycena *in South-Eastern Australia,* and does not mention the name in *Insiticia.*

The Bladder Fungus *Physalacria australiensis* is a white, pendant inflated sac with a stalk and was growing in a massed group on a mossy upright tree trunk. The pure white thin-skinned sacs were c 5 mm wide with a 5 mm long white stem that narrows towards the base and ends in a brown knob with a mass of white mycelium where it enters the woody substrate. Both the sac and stem were minutely pubescent. Glenda Walter of the Queensland Mycological Society notes: "This small white balloon-shaped fungus on a stalk grows in troops and is easily recognizable, but there are very few records. Corner described it and placed it in

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his Clavariod fungi. More recent work has suggested that it is an agaric and related to *Oudemansiella".* The *Pseudomerulius curtisii* found by Richard was a bright yellow species with strong, yellow wrinkled gills and the cap a paler yellow, feeling like kid leather. The strong yellow colour in the gills is most unlike the pale colour shown by Bruce Fuhrer no 281 (*A field guide to Australian fungi.* 2011). There were shelves of them on cut logs. The *Cordyceps hawkesii* can be differentiated from *C. gunnii* by the ridge dividing the pale cap from the infertile stem.

Ed Grey noted that most of the fungi seen on the day were either on wood or bark with few gilled species on the ground. Jelly Bells *Hetertextus peziziformis* group were common during the foray with their yellow-orange yellow bell-shaped fruit-bodies on small twigs and branches. *Maramius* spp. included *M. crinisequi* ('pimple in a dimple'), *M*. sp. horse-hair stem orange caps, and interestingly, a quite large pinkish-capped *Marasmius* sp. with brown-black thin stems and pale moderately close gills was growing on a large twig. The cap was convex, 8-10 mm diameter, which is large for a small *Marasmius*. A small dead branch had the long-awaited tiny (to 1 mm diam.) yellow almost stemless discs of *Bisporella sulfurina.* This species appears to be uncommon, as we more often see the larger 2-3 mm diam. *B. citrina*, which we had seen earlier and discussed the size. In this, although the smaller fruit-bodies were under 1 mm, there were larger ones to 2 mm diam. confirming *B citrina.* On another fallen log were the cushions of *Hypocrea rufa* (photo above). In contrast to *H. victoriensis* that we saw at Mortimers Reserve (Bunyip, Gembrook) the ostioles were pale and the colour of the cushions a dense orange-brown.

The grey coral growing on the ground alongside the white spiky coral, *Clavulina coralloides*, was *C. cinerea.* The multi-branched fruit-bodies were to 85 mm tall by 40mm wide, smooth, dull fawn-grey with evident bloom. The branches arose from a common base. Some of the branch tips were pointed, some blunt and some crested, which is a normal variation for this species. Spore print white.

A standing tree on the Moonlight Track had yellow fruit-bodies. At first they were thought to be *Phlebia subceracea* (*Mycoacia subceracea*)(viewed from track by Ed Grey), but close inspection revealed a maze of the yellow curved and joined jelly bean shaped slime mould together with its yellow coalescing plasmodium – Yellow Scribbles – *Hemitrichia serpula* (also seen in the morning). This is one of the new Fungimap Target Species. The yellow, firm and powdery fruiting body is a network of vein-like strands (plasmodiocarp), which form a net, where each strand measures about 0.5 mm across (Fungimap Newsletter 28, 2006). Lachlan Tegart found two more slime moulds, another yellow species looking like pins, which had round yellow heads on a pale red-brown stalk that widens towards the substrate and *Ceratiomyxa fruticulosa,* which is a white (pink or pale yellow) crystalline-looking mass of translucent rosetttes, like snowflakes (another new Fungimap Target Species, Fungimap Newsletter 28, 2006)

At Woodlands (near Melbourne Airport) in 2013 we discovered *Hjortstamia crassa,* which is a deep purple crust (drying to dark brown) fuzzy-looking mauve to pale lilac margins and

Hypocrea rufa Photo: De'ana Williams

formed very furry shelves. On this foray we thought we had found it again. The fruit-body had a beautiful furry purple margin, but on closer study it looked to have pores under the shelf, and further under, long teeth. Heino Lepp (mycologist in Canberra) thought that the species with pores might be *Trichaptum* sp. because it has furry margins and colours that are strikingly purplish in younger or fresh specimens but which can become brownish with age or on drying, although the margins may remain purplish. *Trichaptum* ?*biforme* keeps a marked sterile margin but inwardly develops irregular pores which become increasingly tooth-like as the fruit-body matures. MushroomExpert.com website notes "Pore Surface: Purple to lilac, with the strongest shades near the margin; fading to buff or brownish in age; with 3-5 angular pores per mm; usually eroding and developing spines or teeth with maturity (sometimes appearing more like a toothed mushroom than a polypore); not bruising." It is an annual bracket and caps can grow to 50 mm diameter often growing in tiers and fusing together laterally. Website California Fungi *Trichaptum abietinum* shows an image similar to our species with long teet, but notes that *abietinum* means 'inhabiting fir trees' (trees of the *Abies* genus), although this wood-rotting bracket will also attack other kinds of conifers and, very occasionally, some hardwoods too. Thus it seems more restricted to conifers

Margaret Margitta "Whilst the fungi kept all very busy, I took the chance to enjoy two longer walks, just 2km each but a marvellous opportunity to enjoy the HUGE old trees (giants), magnificent tree ferns, sounds of quite a few small scrub wrens, yellow robins and others. It was impossible for me to get any pace in my step as there were just so many interesting photo opportunities. Walking poles were needed on some of the muddy tracks. How nice it was to experience the wet our forest needs so much!"

Thanks to all the forayers for hunting and photographing the species we found. Special thanks to Torbjorn von Strokirch, Virgil Hubregtse, Reiner Richter and Margaret Margitta for sending in their contributions to the report. Also to Virgil Hubregtse, Margaret Margitta, Reiner Richter, Torbjorn von Strokirch and De'ana Williams for their contribution of many photographs. Thanks to Virgil Hubregtse for checking the report and species list.

Ed and Pat Grey

FNCV FUNGI GROUP FORAY

5th June 2016

Badger Weir, near Healesville

Wet Forest, most commonly dominated by Mountain Ash *Eucalyptus regnans.*

Torbjorn von Strokirch: "The forecast for the fungi foray to Badger Weir was dire. Talk of 20-30mm of rain and storm warnings with 'heavy rain' forecast most of the day. However the radar showed the bulk of the rain seemed to the moving towards Gippsland and that proved to be the case. The day was fine apart from a tiny amount of drizzle until rain set in again about 4pm just as the last members of the group were packing up to go home. The wet weather had the leeches out in force. People had them on their legs, hands, faces, necks and even in their mouths. Delightfully friendly little creatures!

Clitocybe clitocyboides Photo: Ivan Margitta

Again the bulk of the fungi were growing on logs and trees since rainfall has been somewhat erratic making it hard for things to get established in the leaf litter. The recent rain did have *Coprinellus disseminatus* starting to come up on logs and around the base of trees as it does after a wet period. A number of specimens of *Anthracophyllum archeri* were discovered on dead twigs hanging in trees and Ed was pleased to find *Ramaria ochracea* next to a comfortable sitting rock.

Afternoon additions to the list included *Fistulina hepatica*, *Fistulinella mollis*, *Lactarius eucalypti*, *Entoloma readiae*, *Tubaria rufofulva* and *Campanella olivaceonigra*."

The car park area provided a range of fungi including clusters of smooth-skinned puffballs, *Lycoperdon* sp. They were considered to be *L. perlatum* as no woody substrate was found. Two very large eucalypts had been felled and on the stump of one was a large group of the Australian Honey Fungus *Armillaria luteobubalina* where the sandpaper-like scales had washed off the yellow caps. Near the toilet block was a small group of the brilliant red Ruby Bonnets *Cruentomycena viscidocruenta*, glowing in the litter. These were also seen later but as single specimens. And the most beautiful group of the Green Skinhead *Cortinarius austrovenetus (Dermocybe austroveneta*) (photo10 Torbjorn von Strokirch) was seen at the edge of the carpark.

On the Lyrebird Track a number of familiar but welcome species were found. The Golden Curtain Crust *Stereum ostrea* with brown and yellow zoned upper surface and yellow lower surface were in troops on either standing dead trees or fallen logs. Some of the fruit-bodies were large – approaching 150 mm across. The Saucer Earthstar *Geastrum triplex,* showing the saucer-like depression around the spore sac, were in numbers all along the track. Yellow Earthballs taken to be *Scleroderma cepa* were all along the track and their yellow fruit-bodies, one was to 40 mm diameter, shone out against the dark litter.

On a dead eucalypt log and on a fallen branch were the purple-spreading crusts of *Hypoxylon* aff *placentiforme*. The name *H. rubiginosum* in *A field guide to Australian fungi* by Bruce Fuhrer 2011 refers to the European species. Some of the perithecia were showing evidence of the black spores emerging from the ostioles. It was pleasing to find once more the rare Delicate Coral *Ramaria ochracea* (photo p10 Paul George) with its fine, thin branches to 1.5 mm diameter growing in the same place as last year (opposite Ed's rock). This species appears to have become more established as there were several of the small fruit-bodies in the area. Good eyes are a great asset and Carol Page's were instrumental in seeing the White-club Scum-lover *Multiclavula mucida* growing in slimy algae on a wet log. There were two mature fruit-bodies, with whitish clubs differentiated from the thinner and more translucent stem, and numbers of juveniles emerging.

Carol Page: "The *Lachnum* sp, minute stalked cups to 1mm. Exterior densely hairy, pale lemon, reddish exudate visible on very few. Inside cup I would say, quite a bright yellow. On *Cyathea australe* rachis". We found this *Lachnum* sp. (photo 4 Carol Page) growing on a lot of the Rough Tree-fern rachises (*C. australis*). The size to 1mm makes them a fairly large. *Lachnum pteridophyllum* as described by Spooner BM 1987 (Helotiales of Australasia: Geoglossaceae, Orbiliaceae, Sclerotiniaceae, Hyaloscyphaceae in *Bibliotheca Mycologica Band* 116, 1-711) is that the fruit-body is to 0.8 mm, cup shaped, stipitate, densely clothed with yellowish, buff, or white hairs bearing amber coloured particles. Stipe densely covered with hairs. Disc yellow. Growing singly or gregariously on dead petioles or rachis of fern. Note that the colour of the hairs can be yellowish, buff or white. This description of *L. pteridophyllum* ties in with that given by Carol. In comparison Spooner mentions two other species that grow on Tree-ferns *L. lanariceps* has a pale yellowish disc, to 0.5 mm, pale yellowish stem and long white hairs with a red exudate, and *L. varians* has a pale orange disc to 0.6, whitish to pale buff hairs with amber-coloured particles. Thus it is important to measure the size of the disc and note its colour, and the colour of the stem and hairs, and whether there is any coloured exudate in the hairs.

Under some rotting bark, Richard Hartland found the uncommon, cryptic ?*Lepiota* sp.(sensu Fuhrer no 161, *A field guide to Australian fungi* by Bruce Fuhrer 2011). This tiny species can be identified by its size (to 15 mm cap diameter), white colour and the amber globules covering the cap and stem. Unlike other *Lepiota* sp. it does not have a ring on the stem, which may eliminate it from that genus. Richard also pointed out *Marasmius cylindraceocampanulatus* - on a Tree-fern stem - could there have been a longer name for this tiny fungus?, and today they were minute. I wasn't tall enough to see them on the Tree-fern! The parabolic-shaped caps were yellowish fawn

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and c 1mm diam and 1mm deep with truncated top and wavy margin (photo 6 Jurrie Hubregtse). The few gills are widely, spaced and wavy, while the stem can reach 10 mm long although they were much shorter in this case.

Torbjorn and Richard found an interesting *Cordyceps* sp., which had white simple clubs to c 5 mm, surrounded by a mass of white mycelium. Paul then dug it up to reveal its parasitic host, an insect larva, probably a *Lepidoptera* sp. That this is the conidial stage of a *Cordyceps* is indicated by the white powdery floccules on the clubs. It is not *Paecilomyces tenuipes,* which is the anamorph (asexual stage) of *Cordyceps takaomontana,* because that species consists of a number of whitish to pale yellow stems covered with a white feathery deposit but they do

Cortinarius austrovenetus Photo: Torbjorn von Strokirch

always parasitise either a pupa/cocoon of a moth or butterfly larva. Regarding *Paecilomyces* species, recent DNA work (Luangsa-Ard J et al 2005, On the relationships of *Paecilomyces* sect. *Isarioidea* species. *Mycological Research* 109 (5) 581-589) indicates that all these should now be listed as *Isaria* sp. eg *P. tenuipes* becomes *I. tenuipes*. We are unable to identify the *Cordyceps* sp. found today, but suggest it may be an *Isaria* sp.

On the main track back to the picnic area was a small group of the White Clubs *Clavulina subrugosa.* These off-white clubs showed both the simple and the sparsely-branched form. On the roadside were scattered small fruit-bodies of brown zoned rosettes of Podoscypha petalodes. We also saw a very deformed clump of what we thought was *Clitocybe clitocyboides*, with a number of caps on large rather flattened stems. Richard Hartland said that they can become deformed if, when they begin to grow, there is a lot of rain, and thus spurts the growth forming abnormalities. It had all the macrocharacteristics of *C. clitocyboides* – smooth waxy, pale caramel, funnel-shaped cap, with a slightly darker umbo, creamy-white decurrent gills, and a buff stem that widens towards base and Ivan Margitta saw the more 'typical' form nearby. However, Virgil Hubregtse had this to say "I have looked at this wavy *Clitocybe* and, amazingly, it is not *C. clitocyboides*. The peel of a *C. clitocyboides* cap taken in 2013 shows the inflated cells that distinguish this species, while the Badger Weir Clitocybe sp. does not have them. Also the hyphae and the spores are smaller than those of *C. clitocyboides*."

Ramaria ochracea Photo: Paul George

Thanks to all the forayers for hunting and photographing the species we found. Special thanks to Carol Page and Torbjorn von Strokirch for sending in their contributions to the report. Also to Paul George, Jurrie Hubregtse, Carol Page, Bill Leithhead, Richard Hartland and Torbjorn von Strokirch for their contribution of many photographs. Thanks to Virgil Hubregtse for checking the report and species list.

Pat and Ed Grey

Junior Field Nats, a big part of my Life

I was born a Naturalist – my earliest memories are playing with or observing animals and insects. I always had to touch them and had been bitten by many different creatures by the age of three. In time, I learnt to respect the potential for being bitten and handled them more carefully. I had no fear of any creatures except spiders and even that I turned around by studying them.

Juniors' president & camp Organiser 1970's.

I found the Junior Field Nats when I was 12 years old. There was a Nature Show put on by the Senior Club in the Lower Melbourne Town Hall and the Juniors had a large area where they exhibited their interests and collections. As soon as I saw it I knew I had to join. That was 50 years ago now, and I am still a Field Nat.

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Marine Research Group News

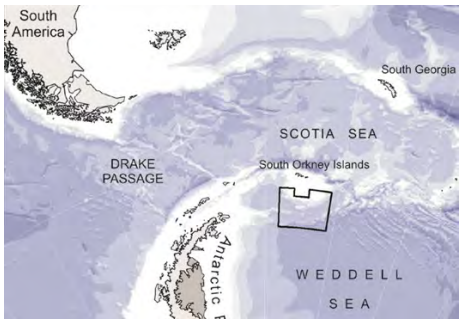
Report on MRG meeting held Monday 8 August, 2016: Melanie Mackenzie, Marine Invertebrate Collection Manager and echinoderm taxonomist at Museum Victoria, spoke on the topic '**Science in the South Orkneys—state of the Antarctic ecosystem'.**

Melanie spoke on a recent research visit to the Antarctic region. With expertise in collection management, holothuroid taxonomy (having worked on material from historic expeditions and from more recent Antarctic expeditions), and previous experience in Antarctic research (see FNN 223, p.11 & also FNN 234, p.11), Melanie was invited by the British Antarctic Survey (with the support of Museum Victoria) to join 21 other scientists in a survey of the seafloor around the South Orkney Islands during February-March, 2016. These islands (within the red ellipse in the map below) are claimed by the United Kingdom and also Argentina, and lie 600 km NE of the Antarctic Peninsula.

The survey work was done on the research icebreaker vessel *RRS James Clark Ross*, which Melanie joined at the Falkland Islands before it headed south to its survey destination. Melanie showed images of the Falkland Islands and their people, as well as the shipboard conditions on the research vessel and how the work was carried out. Safety was paramount and training in this area was rigorous before setting out.

The survey was undertaken because of reported evidence of high biodiversity in the South Orkneys, the need to survey since the closure of fin-fisheries in 1989 and the establishment of the South Orkney Islands Southern Shelf Marine Protected Area (MPA) in 2009 (focussing on protecting krill for penguins), and the many knowledge gaps on seafloor animals and habitats both inside and outside the MPA. The specific aims were to identify what lives there and describe any new animals; understand which animals live together and in what kind of habitats; report on presence/ distribution/ associations of known vulnerable species, and gather enough information to be able to determine how well the MPA is running.

This MPA (shown in the box below) is the first in the world to be established entirely within the high seas & covers 94,000 sq. kilometres of 'no-take' area.



Sampling (using the Agasizz Trawl for larger animals and the Epibenthic Sledge for smaller animals) occurred both inside and outside the MPA, at depths of 500 to 2,000 metres. Replicate trawls and photographs at each depth in each site (where possible) were taken. In total, there were 124 sleds/trawls and 34 additional camera deployments. Material was placed on a ship-board sieve, where a rough sort and identification of animals occurred on deck, followed by processing to finer detail in the ship's laboratories, where tissue sampling, further analysis, photography, preservation and storage for more detailed study in home institutions was undertaken. Work on board continued 24 hours per day with crew rostered to work in shifts of 12 hours on, 12 hours off. Safety training in deployment and retrieval of the sampling equipment proved essential, especially in rough weather.

Preliminary results indicated that animals from 18 different phyla were collected. Most abundant in number were the annelid worms, with over 15,000 individuals covering 82 morpho-species noted. Sponges comprised the heaviest biomass, with over 60 kilograms of material collected.

Melanie's area of expertise is with the holothuroids and she will have the opportunity to further study, identify and describe this section of the material when it is sent to Museum Victoria by the survey team for such analysis. Melanie will have plenty of work, the expedition having collected over 1,000 holothuroid specimens from 59 Agasizz trawl samples. Holothuroids were found at all depths sampled from 500 m to 2,000 m. Their greatest abundance (as Elasipodida) was at 1,000 metres. The holothuroids were living on bryozoa, rocks, corals, pencil urchins and on the sea floor.

Examples of some general finds: asteroids, fish, various crustacea, polychaete worms, pycnogonids, ophiuroids, echinoids & holothuroids.

Image of a 'sea pig' sea cucumber taken using the Shallow Underwater Camera System (SUCS)

It is noteworthy that modern technology in the form of social media (see #SOAntEco) kept the world very up-to-date on work carried out in one of the most remote areas on earth! In addition to a better knowledge of habitat & biodiversity, the survey has shone light on newly-discovered associations between organisms and is expected to yield many new species to science. We thank Melanie for her fascinating presentation and wish her well with her ongoing work-up of the holothuroid samples from this trip.

Platon Vafiadis

Image credits: First map: 2012 © L. Ivanhov CC BY 3.0. All other maps and images courtesy of British Antarctic Survey and South Orkneys—State of the Antarctic Ecosystem Benthic Survey JR 15005 (SOAntEco) scientists including Susie Grant, Claudio Ghiglione, Helena Wiklund, Cath Waller, Camille Moreau.

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The meetings were awesome! So many interesting exhibits and so many Juniors that had learnt a great deal about their subject of interest. Each meeting they brought along interesting samples and stories. So much to learn!!

Nowa Nowa Easter Camp

There were boxes of butterflies, reptiles, the odd possum, fossils, rocks, pond life, microscopes with interesting samples under them and much more.

We had huge numbers at the meetings – at the peak there were regularly 120 – mostly kids and teenagers, but some parents too. Being a bit older than most members now, some of them came by train.

For excursions, we would all meet at the Hawthorn Town Hall and car pool, ending up in exciting locations and seeing many wonderful things.

The Camps started in 1970 and we hired a bus. It was always full. Council members gave talks along the way to fill the boredom of travel, as sometimes we went long distances such as up to the Little Desert. We had large 12 x 12 canvas tents for those kids who didn't have their own (you had to be 12 years or older to come without a parent) and we had one for the girls and one for the boys.

One year, they were up in the Mallee during a mouse plague and the boys decided to play a trick on the girls. They caught quite a few mice and let them go in the girl's tent – but being naturalists they didn't scream as expected. They just caught the mice and gave them back to the boys!

Tick removal, echidna

Sometimes at Easter, I organised for us to be camped near the Mammal Survey Group and we got to see many of the bats and other mammals they caught up really close.

It is so wonderful, walking and camping in the bush. No traffic noise, clean air and so much to see and learn. I made a vow to myself that I always wanted to be in the bush under the stars on New Years' Eve. For a great many years, I stuck to that vow. Being out there replenishes my soul and every naturalist should spend some time out there as often as possible. Some things are different now, some things stay the same.

Differences - The members are younger than when I joined. There weren't so many TV shows on Nature so you went and discovered things for yourself. Most families didn't travel to the places that we went to then, so it was a big adventure going to places you had only heard of as being full of wildlife. You could handle and catch animals more easily then and there weren't the legal issues around keeping them either.

The Same – Searching and finding creatures, sharing knowledge and being with like- minded friends. Exploring places in the bush. Birthday Meetings and more.

1972 camp

For me, the joy of learning, the friendships and camaraderie, the sharing of knowledge and sheer wonder of the natural world will stay with and be a part of me forever.

Wendy Clarke

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