



Understanding
Our Natural World

Field Nats News No.287

Newsletter of the Field Naturalists Club of Victoria Inc.

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

July 2018

From the President

There were many interesting presentations to attend this past month and the Club is travelling very well. Pacific Gulls, fungal survey, intertidal invertebrates, insect pollinators, King Island, microdissection tools, meteorites and Nickel deposits and finally, plastics, comprised the fare for May.

The Juniors' Group meeting had a wonderful presentation on plastics in our environment and the nature of plastic by Lydia Low, Senior Education Officer at PrimeSCI. She discussed the impact of plastic in our environment and suggested ways to reduce the amount of plastic that enters the environment each year. She also talked about the chemical nature of plastics and the safety of different kinds of polymers. The attendees were asked to take samples of various kinds of plastic waste and place them in the appropriate plastic recycling symbol grouping. They also had an opportunity to make some plastic from raw materials provided. Lydia emphasised that the state of the Earth's environment itself will depend on the children today and the decisions they will make as adults in the future. They will be the ones to implement the necessary changes to improve the future. It's their education today that will empower them to make informed decisions. The choices that all of us make today can impact on the environment. The presentation was very positive and those present enjoyed the session enormously.

What is the scale of the plastic problem? Over 350 million metric tons of plastic are produced each year and it has been estimated that over 9 billion tons have been made since it first appeared in 1907 with the creation of Bakelite (phenol-formaldehyde resin). Most plastic has been produced between 1950 and the present during which time plastics have pervaded every aspect of our lives. The increase has been dramatic, ranging from 1.5 million metric tons produced in 1950 to approximately 400 million metric tons per annum in 2017. At the current rate we may produce nearly 2000 million metric tons of plastic per annum by 2050. The world's potential collective production of plastic drink bottles alone is circa 20,000 per second. Less than 10% of plastic is recycled and 80% enters the environment in one way or another. Most ends up as land fill and up to 13 million metric tons ends up in the oceans every year. Circa 11% is incinerated annually adding to CO2 levels. About 30% of the plastic ever produced is still in use.



Wood-duck at Jells Park with one leg almost severed by fishing line.

Photo: M. Campbell

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(Con. page 3)

The deadline for FNN 288 will be **10 am on Tuesday 3rd July**. FNN will go to the printers on the 10th with collation on Tuesday 17th July

Gary Presland will be editing FNN 288

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This newsletter is printed on recycled paper.



CALENDAR OF EVENTS

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

July 2018

Sunday 1st – Fungi Group Foray: Wanderslore Sanctuary 2180 Warburton Highway, Launching Place (Mel Ed 45 Page 287 J6) Park down below near the Rail Trail and meet there at 10.15 am. **Note early time.** We will go as a group up to the Sanctuary Contact: Carol Page 9857 6388; cpage356@gmail.com USE ONLY ON DAY OF FORAY; 0438 446 973

Sunday 1st – Juniors' Group Excursion: Bellbird Dell Reserve, Vermont. Meet at 1pm to explore this bushland park. Leader: Anne Makhijani. Registration required. Contact: Patricia Amaya juniors@fncv.org.au

Monday 2nd – Fungi Group Meeting: The making of "Fungi in Australia". Speaker: Jurrie Hubregtse is a retired engineer & researcher who has been interested in fungi for about 15 years. His presentation will reveal why he produced the e-book *Fungi in Australia* and his unique approach to its production. Contact: Carol Page 9857 6388; cpage356@gmail.com

Tuesday 3rd - Fauna Survey Group Meeting: Movements and habitat use of brologas in south-west Victoria
Speaker: Inka Veltheim, PhD candidate Federation University & University of Melbourne.
Contact: Robin Drury 0417 195 148; robindrury6@gmail.com

Monday 9th - Marine Research Group. No Meeting: Winter Break

Saturday 14th - Fauna Survey Group Activity: Maintenance Day at the FNCV Hall 10 am.
Contact: Robin Drury 0417 195 148; robindrury6@gmail.com

Sunday 15th – Fungi Group Foray: Noojee – Toorong Falls circuit. Meet at 10.30 am at Toorong Falls car park Toorong Falls Road. From Melbourne, head east along the Princes Freeway turning left at the Drouin exit towards Noojee, or take the Warburton Hwy to Yarra Junction, turning onto the Yarra Junction-Noojee Road for a more scenic trip through the ranges. From the Noojee township, head east for around 3km then left onto the Toorong Falls Road which terminates at the Reserve. (Mel Ed 45 Page X928 B5 or Vic Roads Ed 8 Page 81 B7). Contact: Carol Page: 9857 6388; cpage356@gmail.com
USE ONLY ON DAY OF FORAY; 0438 446 973

Tuesday 17th - Collate FNN 288. Starting about 10 am. All welcome. Contact the FNCV office.

Wednesday 18th - Terrestrial Invertebrates Group Meeting: Photos taken by participants at recent TIG excursions. This will be an opportunity to identify invertebrates and to critically discuss methods to improve macro-photographic outcomes. Contact: Max Campbell 0409 143 538; 9544 0181AH; mcam7307@bigpond.net.au

Thursday 19th – Botany Group Meeting: The Emerald Link. Speaker: Ed Hill from GECO (Goongerah Environment Centre Office). Contact: Ken Griffiths botany@fncv.org.au

Monday 23rd— FNCV Council Meeting: 7.30 sharp. Agenda items and apologies to Wendy, 9877 9860; admin@fncv.org

Tuesday 24th – Day Group Meeting: Puffins and islands of the North Atlantic. Speaker: Joan Broadberry. Meet for coffee and a chat at 10.30, speaker at 11 am. Contact: Joan Broadberry 9846 1218

Wednesday 25th – Geology Group Meeting: Imported Geological Material in Natural Areas: Impacts and Management
Speaker: Dr Jeff Yugovic, Botanist, Senior Consultant Ecologist, Biosis. Contact: Ruth Hoskin 9878 5911; 0425 729 424

Friday 27th – Juniors' Group Meeting: 7.30 pm. Marine Life. Speaker: John Eichler.
Contact: Patricia Amaya juniors@fncv.org.au

Sunday 29th – Fungi Group Foray: Blackwood, Jack Cann Reserve. Meet at 10.30 am in Garden of St Erth Carpark, Simmons Reef Road (Mel Ed 45 Page X909 E11). Contact: Carol Page 9857 6388; cpage356@gmail.com
USE ONLY ON DAY OF FORAY; 0438 446 973



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 Welcome

Warmest greetings to the following new members who were welcomed at our last Council meeting. Christopher Carra, Rebecca Carra, Nicola Carra, Julia Carra, Dianne Carra, Rosemay Breyley, Phoenix Wolfe, Daisy Ford, Sam Ford, Banjo Ford, Krista Patterson-Major, Joe Hinchliffe, Ema Corro, William Phillips, Dylan Marlow and Cathy Hainslin

(Continued from page 1) **From the President**

Plastics produce toxins as they slowly break down and may also accumulate and concentrate toxins from the environment. Birds, fish and turtles mistakenly eat plastic with tragic consequences. Some breakdown products are hormone analogues and behave like oestrogen, impacting the reproductive behaviour of animals exposed to them. As they breakdown into microplastic particles (<5 mm) they are ingested by marine animals and accumulate through the food chain. Many food fish tested today are found to contain microplastics and the associated toxins. The microplastics in cosmetics and toothpaste also end up in the environment along with the microfibers from synthetic clothing. Plastics really have pervaded our lives.

Plastics also cause many direct, physical problems in the environment including entanglement and ingestion. Some plastic products take a long time to break down and may persist for very long periods. The unfortunate Wood Duck in the photograph page 1 like many other animals, has been entangled in discarded nylon fishing line with disastrous consequences. The common practice of releasing hundreds of balloons into the air for celebrations needs to be discouraged because the balloons may also cause many problems in the environment once they settle back to Earth. They may be ingested by marine animals and the elastic rings may end up on young animals and cause constriction injuries as they grow .

Maxwell Campbell

Additional reading:

<https://www.statista.com/statistics/282732/global-production-of-plastics-since-1950/>

Geyer, Jambeck, Law (2017). Production, use, and fate of all plastics ever made, *Sci. Adv.* 2017;3.

<https://committee.iso.org/files/live/sites/tc61/files/The%20Plastic%20Industry%20Berlin%20Aug%202016%20-%20Copy.pdf>

<https://www.gizmodo.com.au/2017/07/the-staggering-amount-of-plastic-weve-produced-and-what-weve-done-with-it/><https://www.cnn.com/2017/07/19/the-world-has-made-more-than-9-billion-tons-of-plastic-says-new-study.html>

<https://www.darrinqualman.com/global-plastics-production/>

<https://www.sciencedaily.com/releases/2017/07/170719140939.htm>

<http://www.worldwatch.org/global-plastic-production-rises-recycling-lags-0>

Stick Insects. Order: Phasmatodea, Family: Phasmatidae

Whilst walking in the Mullum Mullum Valley with a friend recently, looking for fungi we saw a small movement in the understorey. In a matter of seconds the tiny insect had disappeared. But not before I had whipped out my camera and taken a quick photo. I remarked to my friend that I thought it was a Phasmid. Australia has approximately 150 species and as the common name implies they blend into their surrounds looking like part of the vegetation. They have long slender bodies and are the masters of camouflage. The one we found was about 12mm long, pale fawn with a long spiky tail and an elongated head. Phasmids are plant feeders and to get away from us it performed an enormous leap horizontally across the vegetation. We were both amazed that such a small insect could gain such momentum. Like most people I have discovered the large green Phasmids in my garden, swaying their bodies, like sticks in the breeze. I wondered if the one we found was a nymph or was it's pale colour camouflage in the straw-coloured vegetation its main protection?

Some species of Phasmids measure up to 30 centimetres long. Males are usually smaller than females. The larger species are eaten by birds, small mammals and reptiles. In some species the males have wings large enough to function, but 'our' Phasmid leapt, in human terms, the height of a 12-storey building! I searched in about a dozen of my books on insects and found nothing that looked quite like the one we found. "Australian Insects" by John Child in the Periwinkle series came close. It goes to show, you may start out looking for fungi but it pays to be on the lookout for anything that moves.

Cecily Falkingham

Vale Bob Rowlands

Bob (Robert J) Rowlands joined the FNCV on 9th September 1996, with his wife Jane (d. 17th July 2008). Together they were active in the Botany and Microscopy SIGs, and took part in many excursions.

Bob contributed reports of the Microscopy Group's Nature Photography Section. He was also a regular at Day Group meetings, and gave a number of talks to the group about his many interesting travel experiences.

Our deepest condolences go to Bob's family.

Fungi Group Reports

FNCV FUNGI GROUP *with SEANA* FORAY AT DOM DOM SADDLE 29 April 2018

After very low rainfall in February, March and April, this was the driest foray we have ever experienced in this area, which is usually bristling with fungi at this time of year. However, the dozen or so enthusiasts from the FNCV Fungi Group and SEANA were pleasantly surprised to discover that a few fungi were present – and some, such as the Root-ing Shank *Oudemansiella gigaspora*, were fairly fresh in appearance.

Areas examined were the car park and picnic area, and the gully at the bottom of the hill. Near the car park, a pile of horse dung at the base of a tree was home to a species of *Coprinopsis*, while an investigation of nearby eucalypts and forest litter revealed *Clitocybula* ‘streaky yellow’, *Conocybe filaris*, several *Lycoperdon* fruit-bodies, and a small grey-brown *Entoloma* with a convex pileus and a small papillate umbo. Introduced fungi that grow with (are mycorrhizal with) conifers included *Inocybe sindonia* and some rather dried up *Hebeloma testaceum*.

In the grassed area we found a good specimen of *Macrolepiota clelandii*, and also a group of *Rhodocybe* sp. growing near a large Blackwood *Acacia melanoxylon* at the edge of the forest. Further into the gully, growing on fallen dead wood, were *Bisporella sulfurina*, *Phlebia subceracea*, and

two *Crepidotus* species (one orange all over and the other creamy white, with light orange lamellae that had a darker orange edge). Fragile *Psathyrella* and *Lepiota* species were scattered on the ground.

Four collections, comprising *Inocybe sindonia*, *Rhodocybe* sp. and the two *Crepidotus* species, were made for the National Herbarium, Royal Botanic Gardens Victoria.

Thank you to all the foray participants for making the day both enjoyable and productive, and special thanks to Carol Page, who organised this event and compiled the species list.

Virgil Hubregtse



Rhodocybe ‘beige’

Photo: Jurrie Hubregtse

Crepidotus ‘orange’. Photo: Jurrie Hubregtse



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

Thanks to the editorial and layout team who put together FNN 287

Joan Broadberry
Wendy Gare



**FNCV FUNGI GROUP FORAY
ADA TREE RAINFOREST WALK
22/04/2018**

**Vegetation: Rainforest Gully and
Wet Sclerophyll Forest**

Despite very dry weather during February, March and April, this area was damp enough for a wide variety of fungi to put in an appearance, albeit in small numbers.

Next to the car park, a dead branch was home to a few patches of *Trichoderma victoriense* (formerly *Hypocrea victoriense*). Once on the track to the Ada Tree we soon found a good specimen of *Austropaxillus infundibuliformis* with its funnel-shaped pileus and decurrent lamellae, and a couple of Common Prettymouths *Calostoma fuscum*, which we have seen here in previous years. Their caps had fallen off, revealing their reddish star-shaped ‘mouths’. A small amount of the Peppery Coral *Artomyces austropiperatus* was growing on a log beside the track, while a lone Ghost Fungus *Omphalotus nidiformis* fruit-body grew low down on a eucalypt trunk. Fallen twigs hosted a few yellow discs of *Bisporella citrina* and *B. sulfurina*.

On the ground under some ferns we found a group of *Phellodon* fruit-bodies which, like several species in this genus, was brown in colour with a paler margin. We are hoping to hear more about this one later on, as it was collected for research purposes.

There were six species of *Mycena* that we could identify: *M. cystidiosa*, with accompanying thread-like criniform stipes, on forest litter; tiny *M. lazulina* on a dead tree fern rachis; and four species growing on wood – *M. mulawaestris* looking a little paler than usual but retaining a glutinous appearance despite the dry conditions, the diagnostic brown margins on its white lamellae clearly visible; yellow-stiped, viscid *M. epipterygia*; a single beautiful blue *M. interrupta*; and the pretty pink *M. kurramulla* with its red-edged lamellae. A seventh *Mycena* species, growing gregariously on a mossy log in deep shade, was collected for the National Herbarium, Royal Botanic Gardens Victoria. Its pileus was darkish brown, convex, translucent striate, and speckled with tiny white flecks.



Omphalotus nidiformis

Photo: Jurrie Hubregtse

Two good specimens of *Grifola colensoi* on the inside of a hollow tree trunk, and a solitary *Beenakia dacostae* on dry woody debris under a log, attracted much attention because we don’t see either of these fungi very often. Other fungi growing on wood included *Postia lactea*, *Postia caesia* and Black Tacks *Lanzia laneripes*.

Thank you to all ten participants for making our first foray of the year both enjoyable and satisfying; and special thanks to Torbjorn von Strokirch for compiling the species list.

Virgil Hubregtse



Left: *Artomyces austropiperatus*
Above: *Mycena mulawaestris*

Photos: Jurrie Hubregtse



Putting Victoria's fungal biodiversity on the map

A presentation by
Dr Sapphire McMullan-Fisher
Fungimap Mycologist

In this presentation, Sapphire began with an overview of fungi and slime moulds, then explained how to identify fungi, at least to genus level, so that together we can contribute more information to the mapping of Victoria's fungal biodiversity.

Slime moulds, often called Myxomycetes, are part of Kingdom Protocista. They feed on bacteria and sometimes fungi, and there are two kinds: acellular (1000 known species) and cellular (about 70 identified species).

The true fungi, or Eumycota, can be divided into three categories according to how they feed: (1) Recyclers and rotters; (2) Mycorrhizal and endophytic fungi; and (3) Pathogens.

Identification techniques

Basic identification techniques include recognising morphogroups (i.e. fungi with similar macroscopic characteristics), and using field guides, reference books and websites such as Mycobank, MycoKey, Atlas of Living Australia, and NZ Fungi. For the latter, see: <https://www.landcareresearch.co.nz/resources/identification/fungi>

However, it is important to keep in mind that material from other countries must be used with care, because ~72% of our fungi are endemic to Australasia. Funkey, an interactive key to 185 genera of agarics (gilled fungi) in Australia, is a very use-

ful tool for identifying fungi to genus level. Once the genus is identified, a literature search may provide more detailed information.

But what if you still can't identify them? Sapphire encouraged us to join Fungimap Australia to record recognisable fungi such as those found in *Fungi Down Under*, by Pat and Ed Grey. The iNaturalist project lets us use apps on our phones or our computers to record our observations.

Useful websites include: <https://fungimap.org.au>
<https://www.inaturalist.org/pages/getting+started>
<https://www.inaturalist.org/projects/fungimap-australia>

"Lost" fungi

Some fungi are not often seen, and may be rare and in need of conservation. Sapphire gave us a list of 37 of these and encouraged us to look out for them every time we visit suitable habitats. BioCollect, a sophisticated but simple tool developed by the Atlas of Living Australia in collaboration with other organisations, is actively involved in obtaining data on the less common fungi of Victoria, and is free for public use. See: <https://biocollect.ala.org.au/> Sapphire emphasised that recording absence or zero data when these fungi are not found is important, to show when and where people have looked. See: <https://fungimap.org.au/current-projects/>

Tea-tree Fingers *Hypocreopsis amplexens* is one of the rare fungi that we need to watch out for. In July 2017 it was found on dead branches of a *Kunzea* species, probably *K. leptospermoides*. At this stage little is known about what triggers fruitbodies to form, how long they live, or when they produce spores. This species should not be collected because removing it from the environment could push it towards extinction.

Thank you, Sapphire, for an interesting evening. Clearly, there is much work to be done!

Virgil Hubregtse

Below: Various types of fungi. Photos: Ian Bell



FNCV FUNGI GROUP FORAY
 **Mortimer Nature Walk,**
BUNYIP STATE PARK
 6th May 2018

Although some much-needed rain fell only a short time before this foray, the 10 enthusiasts who participated were pleased to find quite a few fungi, though not nearly as many as we have seen in previous years. About half the species we saw were growing on wood. One of the most conspicuous of these was *Armillaria luteobubalina*, in clumps on tree trunks, stumps and buried wood. This fungus parasitises living trees, eventually killing them, then living on the resulting dead wood. Other wood-rotting 'regulars' included *Fomitopsis lilacinogilva*, with distinctive lilac pores; *Chlorociboria aeruginascens*, producing blue-green stains in the wood it inhabits; and the perennial *Ganoderma australe*, on which the fresh white pored surface stains dark brown when marked or bruised, hence its other name 'Artists Conk'. The introduced fungal 'weed' *Favolaschia calocera* is spreading rapidly, with clusters of its bright orange fruit-bodies growing on fallen wood in many places along the track.

Two species with tiny fruit-bodies that grow on dead tree fern rachises, *Lachnum* aff. *varians* and *Mycena lazulina*, were well worth examining with a hand lens to see their exquisite details.

Mycorrhizal fungi included the beautiful blue-capped *Cortinarius rotundisporus*, the bright red-capped *Russula persanguinea*, *Lactarius eucalypti* (which exudes a milky substance when cut or broken) and the yellowish earth-ball *Scleroderma cepa*, all of which grow with eucalypts.



Lepiota 'pale blue'

Photo: J. Hubregtse

Cordyceps takaomontana, parasitic on larvae of lepidopteran insects, was also present, as was *Hymenotremidiella eucalypti*, which grows on dead leaves of Blackwood *Acacia melanoxylon*.

Most of the species recorded were ones we had seen many times at this location, but there were two notable exceptions, both growing on the ground amongst forest litter. The first was a *Lepiota* with a scaly pileus that was up to 28 mm in diameter, pale blue with a dark blue centre, and paler at the margin. The hollow stipe was up to 62 x 4 mm, pale blue but lighter towards the base, with a fragile pale blue annulus about 20 mm from the apex. The only other time we had seen this fungus here was in May 2009. The second exception was a fairly large agaric, possibly a *Cortinarius*, with a dark reddish brown leathery pileus 72 mm in diameter, brown lamellae and a tough, solid 98 x 15 mm stipe that was patterned with brown fibrils. Both these fungi were collected for the National Herbarium of Victoria.

Also on the ground was *Melanophyllum haematospermum*, with scarcely any veil remnants hanging from its pileus, but examination with a mirror

(Continued on page 8)



Cortinarius 'tall brown'

Photo: Jurrie Hubregtse

(Continued from page 7)

revealed its reddish lamellae. Interestingly, its spore print, when fresh, is green, turning brown as it dries.

Thank you to all ten participants for helping to find the fungi, and special thanks to Torbjorn von Strokirch for compiling the species list.

Virgil Hubregtse



Armillaria leutobubalina

Photo: Jurrie Hubregtse

Advertising in the Field Nats News

VERY REASONABLE RATES

Contact Wendy in the Field Nats
Office
admin@fncv.org.au
9877 9860
(Mon –Tues 9.30–4)

Many thanks to those
who helped collate and
label FNN 286 and send
out the June–September
Calendar of Events

Andy Brentnall
Cecily Falkingham
Sheina Nicholls
Barbara Burns
Ruth Ault
Joan Broadberry

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.

From the Office

Dear Members

The previously advertised dates for this year's **Biodiversity Symposium** have been put back one week to **25th & 26th August**. The theme will be *Introducing the FNCV*. There will be a speaker from each Special Interest Group, including the Juniors, and we will also feature our history and major achievements, such as the creation of various National Parks.

If you would like to know more about any aspect of your Club, or you would like to introduce your friends to all that we have to offer, make sure you attend, and spread the word. We plan on having speakers on Saturday and a picnic and guided walk at nearby gardens on Sunday.

Finally, for meetings in the hall, we're once again running short of biscuits. If you could bring a packet or two of something yummy, it would be greatly appreciated.

Wendy Gare
Administration Officer



Extracts from SIG reports given at the last FNCV Council Meeting

Botany Group: Pollination was the topic presented by Max Campbell to the Botany group on Thurs 17th May. We were treated to a comprehensive outline of the evolution of flowering plants, the role of pollination in species diversity, and the adaptations of plants to attract pollinators. Many different and fascinating examples of insect pollination were explained, with outstanding photos. About 16 attended.

Sue Bendel



Fauna Survey Group:

Meeting: Tuesday 1st May. The speaker for the night was Bruce Robertson, ornithologist and PhD candidate, who has been studying Pacific Gulls for over 40 years. The Pacific Gull is an Australian endemic with a population of about 7000-9000. Breeding occurs on offshore islands and examples of the development of adult plumage over 3 or more years were shown. Differences from the Kelp Gull, a recent immigrant, were explained, as were differences between the eastern and western subspecies of the Pacific Gull.

Survey: Rushworth nestbox checking, 18-20th May. The seven members present camped at Whroo this time, instead of the usual Three Jims Dam, and found the facilities convenient. There was a noticeably high number of Brush-tailed Phascogales in nestboxes this time. Good spotlighting for possums and gliders was had in Yellow Box, Red Gum woodland on a roadside verge west of Graytown.

Ray Gibson



Geology Group: The Geology SIG were shown a great example of geological detective work at their 23rd May meeting. Prof Reid Keays, from the Monash University Faculty of Earth, Atmosphere and Environment talked re the massive Sudbury Nickel/Copper/Gold deposit and its formation. He examined the controversial evidence for the time, that it was caused by a massive meteorite that slammed into the ancient Canadian Shield 851 million years ago melting the surrounding 10,000 metres of rock. The major ore deposits were found around the edge of and in dykes leading out from the impact crater. Prof Keays then discussed that this was an unusual deposit of ore - why is such a large ore body found in this situation? By examining the surrounding Canadian Shield geology and rocks of similar ages, world-wide, he concluded that this site was originally very rich in these minerals, and the strike was indeed 'lucky' as it landed on an area which already had high levels of these valuable minerals.



Pollution methods for containing the toxic acid rain resulting from the smelting of the ores were forcibly introduced in the '60's and were also discussed. A very interesting talk well attended by 25 interested people.

Ruth Hoskin

Juniors' Group April 27th—meeting:

We were lucky to have Dr Greg Holland, talking to us about Climate change. The meeting had 16 people amongst them two new families that joined on that night. The families were highly appreciative of this talk. Moreover Greg invited the Juniors to visit his property in Mornington peninsula, an invitation I happily accepted on behalf of the group. We will have an excursion in February next year to his farm.



May 20th—excursion:

Our excursion was to Dandenong Valley Wetlands, with Kelly Bayton and James Frazer from Waterwatch as leaders. The children were very enthusiastic about the frog census and some families were lucky enough to see a

Photo: P. Ayama



Photo: P. Ayama



Black-shouldered Kite hovering. Sixteen people attended with three non-members families cancelling at the last minute due to concerns about rain. It did in fact rain three times which was great for the frogs we were able to listen to their calls. The rain was not a problem at all for the excursion. Kelly and James could not accept FNCV mugs as it is the policy of Melbourne Water employees not to accept presents of any kind.

May 25th—meeting: Lydia Low from Primescience came to talk about plastics and the environment. We had 26 people attending. On that night one family became a member. We had four non-member families attending the meeting. We all enjoyed Lydia's talk and the children were very happy with the activity Lydia had for them. Special thanks to Max Campbell and Sue Dempsey for their presence in the meeting.

Patricia Ayama



Marine Research Group:

Our field work finished in April and our May meeting was a roundup of the places we visited, the animals we saw and the activity of our members over the latest season. Speakers were Carol Bathie and Janet Pett who spoke on their ascidian research; John Eichler spoke about the new things he saw; Carol Page spoke on the people who attended and the transformation when Naturalists converge and Leon Altoff showed a selection of images of the animals seen. The night was well attended.

Terrestrial Invertebrates Group:

The 16th of May meeting was a workshop on making small instruments for microscopic manipulation. Attendees made mounted needles, perforated spatulas and wire loops, and discussed other instruments including micro scalpels and micro scissors. Eight people attended.



When we start working with microscopes it is usually because we need to examine very small things. To prepare small things so that they can be studied we need to be able to manipulate them effectively and easily so will need specialised tools to do so. Some micromanipulation tools can be purchased, often at great expense, or can often be designed for purpose and made by the user from readily available materials at a modest cost.

Instruments frequently used include:

- Fine forceps. These are best purchased from surgical or scientific suppliers. They need to be of high quality stainless steel and precisely engineered.
- Fine iris scissors. These also need to be purchased as above and must be carefully looked after.
- Fine dissecting needles. Mounted needles can be purchased but are easily made from pins, needles, tungsten wire & dowel.
- Loops. Loops are used for transferring minute quantities of liquid from a specimen to a slide for preparation or for picking up small organisms from fluids. They can be made from nichrome wire of varying gauges and in appropriate diameters.
- Perforated spatulas. Perforated spatulas are used to lift small specimens such as leaf litter organisms from fluids to place them onto slides or into staining dishes for preparation.
- Micro scalpels. For micro dissection, ordinary blades are usually too large and difficult to manipulate so there is often a need to make very small cutting blades. Razor blades can be fractured to produce very sharp micro blades which can be mounted on dowel handles or held in pin vices.
- Fine soft brushes. There is no need to make these since fine 000 paint brushes can be readily purchased from art suppliers. Natural hair is preferable since it will not dissolve or become sticky when in contact with solvents or heat.
- Micro fine pipettes. Glass Pasteur pipettes can be heated over a gas flame and stretched to produce a fine micro tube that can assist the handling and transfer of minute organisms in fluid.

Those attending the session were able to produce loops, spatulas and mounted needles. A short manual on how to produce these instruments will be appearing in future editions of the FNN.

Max Campbell

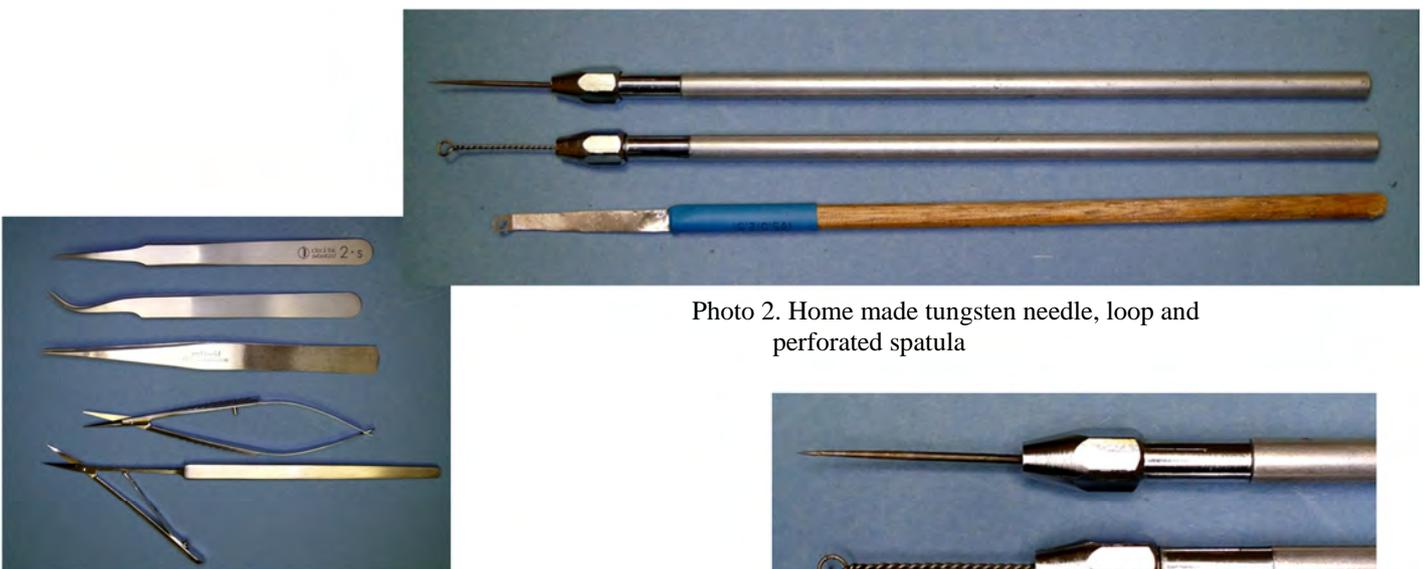


Photo 1. Commercially produced fine forceps and iris scissors.

Photo 2. Home made tungsten needle, loop and perforated spatula

Close up from photo 2



Day Group

KING ISLAND

Speaker: Nicky Zanen

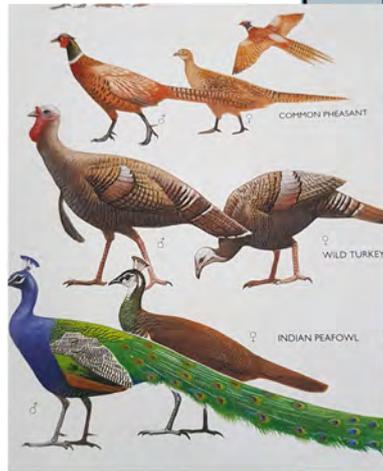
In January 2018, Nicky Zanen joined a five day trip to King Island organised by the Australian Plant Society (APS) as a pre-trip before its Tasmanian Conference. King Island is located to the west of Bass Strait about an hours' flight from Melbourne. It is approximately 64km long and 26km wide, with a population of about 1600. King Island was named after Philip Gidley King who arrived in Australia as an officer with the first fleet and later became the third governor of the colony of New South Wales. The capital of King Island is Currie. The APS group stayed at the small hamlet of Grassy on the east coast.

Since European settlement, much of King Island has been cleared for farmland. Only relatively small areas of natural vegetation remain. The island is part of Tasmania and its nature reserves are controlled by Tasmanian Parks and Wildlife service. It has a magnificent coastline with no foxes or rabbits, populations of Short-tailed Shearwaters, Little Penguins, Bennetts Wallabies, Tasmanian Pademelons, echidnas and platypus. As well as native species, King Island's birdlife includes numbers of the introduced, but free ranging, turkeys, peacocks and pheasants. The once extensive colonies of Elephant Seals have been wiped out through hunting.

The APS group were taken on a 4WD day trip, visiting many points of interest, including Cape Wickham and Disappointment Bay at the northern tip; Lavinia State Reserve, Sea Elephant Conservation Area and Naracoopa on the east coast; Black Point and Colliers Swamp south of Grassy and Point Stokes and Seal Rocks State Reserve in the south.

Some of the things we learned about King Island were:

- There are over 70 shipwrecks in the surrounding waters.
- Bull kelp washed ashore on King Island beaches is harvested and dried. It is sold on for use in products such as toothpaste and icecream. *Photo right.*
- The Currie Historical Museum holds fascinating memorabilia
- Scheelite was once mined at Grassy and a port developed to service the mine. The mine closed in 1990.
- Stokes Point is the most southerly tip of the island and Wickham Point the most northerly.
- The remains of a calcified forest over 7000 years old was at the end of Seal Rocks Road. An ancient forest was preserved when it was covered by lime-laden sand. (Photo top right)



Images: Nicky Zanen



- The Cape Wickham lighthouse, measuring 48 metres (157 feet) is the tallest in Australia.
- The island is noted for its production of cheese, lobsters, kelp and beef.
- Sealers wall, a dry stone wall is thought to have been built by sealers in the 19th century to corner their prey. (Photo centre right)
- *Acaena novae-zelandiae rosaceae* is a foodplant of the critically endangered Orange-bellied Parrot. (Photo below right)

Although Nicky's visit to King Island was in January, she was able to photograph quite a few native plants in flower and her presentation included a number of images of King Island's vegetation.

Lying in the teeth of the roaring forties, the coastal plants of King Island need to be tough. Plants shown included: *Correa backhouseana*; *Carpobrotus rossii*, (Pig face); *Tetragonia tetragonoides*; *Leucophyta brownii*; *Calytrix tetragona*; *Leucopogon parviflorus*; *Ozothamnus turbinatus*; *Austrofestuca littoralis*, (Coastal fescue); *Banksia marginata*; *Scavola Hookeri* (Creeping Fan Flower); *Leptospermum scoparium ssp. scoparium*; *Poa Labillardierei*; *Dianella Tasmanica*; *Melaleuca squarrosa* (Scented Paperbark); *Allocasuarina zephyrea*; *Mazus pumilio* (Swamp mazus); *Pomaderris apetela*; *Solanum laciniatum* (Kangaroo Apple); *Lepidosperma cincavum* (Sword Sedge);

Nicky's introduction to King Island's natural and cultural features left her audience with a strong desire to explore it for themselves. Once again I would like to thank her for giving us her time and remind everyone that the Australian Plant Society, Foothills Group, holds a regular meeting in the FNCV hall at 10.30 am on the second Tuesday of the month. Visitors are most welcome.

Joan Broadberry



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