Field Nats News No 320

Understanding Our Natural World Est. 1880

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

Office Hours: Monday and Tuesday 10 am - 4 pm.

July 2021

From the President

Since we have been in lockdown, we have been using Zoom for many June meetings. Depending upon the applicable, regulatory COVIDSafe requirements for the coming weeks this may continue. Fieldtrips and excursions will be dealt with according to the regulations in place at the time and the decision of the leader. Make sure you register for all activities. Fortunately, we have managed to run some excellent excursions over the past few months and spend some enjoyable time in the bush at a few of our favourite locations. Hopefully, we will be able to do so again in coming weeks.

The due date for FNN 321 will be the first Tuesday in July, **the 6th July.** Please use my home email joan.broadberry@gmail.com

The June FSG meeting was held via Zoom and was a stimulating presentation by Bhagya Herath, PhD Candidate, La Trobe University. The subject was, "Complexity of visual and vocal communication in the Eastern Dwarf Tree Frog (*Litoria fallax*) among genetic, ecological and social constraints".

Hypholoma australe

On Sunday May 16th there was an excellent, well-attended Fungal Foray at Kinglake National Park. It was a freezing day but it did not rain until late in the afternoon. The litter was moist, damp and positively bristling with fungi. There were so many to see and record that by 11.30 am the enthusiasts had barely left the carpark. There was something interesting wherever you looked and it was hard to avoid walking on fungi. The many species of delicate fruiting bodies (sporocarps) were present in a multitude of forms and glorious colours. Unfortunately, I can only imagine the wonderful fungal displays we may be missing at the moment. Quite a few visitors to the park stopped to see what we were up to and learned a little about fungi.

Aleura aurantia, a cup fungus in the leaf litter.

When I arrived home from the excursion, I noticed some small green caterpillars launching themselves with some haste on silken threads from a bottle-brush shrub in the driveway. They dropped and disappeared quickly into the lilies below, belying the fact that it was very cold at the time. Closer examination of the shrub's foliage revealed three tiny ichneumonid wasps patrolling the foliage. I watched for some time but saw no more of the fleeing caterpillars so I don't know whether they jumped before or after being attacked. The wasps were actively investi-

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gating the leaves until nightfall. The expression, “the quick and the dead” seemed most appropriate in this instance.

QR codes

QR codes have become an essential requirement for signing in to meetings, venues, community activities and shopping centres. They are mandatory in many instances. In order to use our meeting room to full capacity we are required to have 100% login via our FNCV QR code. The Service Victoria app is free and easily downloaded to compatible devices. (Refer FNN 315). As per usual we will continue to assist with QR logins when we return to meetings in the hall. Birdwatchers should note that visiting the birdwatching site at Werribee Treatment Plant now requires a QR code registration at the access points (“-all visitors must register their visit using the QR codes”).

Maxwell Campbell
(All photos: M. Campbell)

Mycena interrupta

Tiny springtails feeding on the gills of *Mycena sp*.

Mycena sp on a rotting branch.

Mycena sp in a rotting, hollow log.

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, or in order to comply with lawful restrictions excursions may be cancelled at short notice.

July

Sunday 4th – Fungi Group Foray: ***Wanderslore Sanctuary.*** Park behind the general store at 2180 Warburton Highway, Launching Place and meet there at 10.15 am (note earlier time). We will go as a group up to the Sanctuary. Melway Map 287 J6 https://goo.gl/maps/HchxvJ3gyN2T6bjS6 Prior registration essential.
Contact Carol Page: cpage356@gmail.com; 0438 446 973

Monday 5th - Fungi Group Meeting: I***t is not difficult to make a Phylogenetic Tree***. Speaker: Jurrie Hubregtse is a retired engineer who has spent most of his working career conducting research into semiconductor and photonic devices. He has created the excellent Fungi in Australia, an FNCV e-book, which is freely downloadable from our website. It contains 380 species and over 2000 photographs of fungi, plus references for further study. There are some Bioinformatics Notes relevant to the talk which can be downloaded from the bottom of the Fungi In Australia web page. http://www.fncv.org.au/fungi-in-australia/ Prior bookings essential.
Contact Carol Page: cpage356@gmail.com 0438 446 973.

Tuesday 6th - Fauna Survey Group Meeting: ***Making maps from your data***.
Speaker: Michael McBain, Master of geographic information and remote sensing.
Contact Robin Drury: 0417 195 148; robindrury6@gmail.com
Prior registration essential

Monday 12th - Marine Research Group. **No Meeting:** ***Winter Break.***

Thursday 15th – Botany Group Meeting: ***Why Proteaceae roots do not need fungi.*** Speaker: Ken Griffiths. Contact Ken Griffiths: botany@fncv.org.au
Prior registration essential.

Saturday 17th – Fauna Survey Group: ***Equipment day***, 10 am – 3 pm in the FNCV Hall. Join members of the FSG to help repair and label equipment. Drop in for an hour or stay for the day. BYO lunch. Prior registration essential.
Contact Ray Gibson: 0417 861 651; rgibson@melbpc.org.au

Sunday 18th – Fungi Group Foray: ***Blackwood, Jack Cann Reserve*** Meet at 10.30am in Garden of St Erth Carpark, 189 Simmons Reef Road, Blackwood. Melway Map X909 E11 https://goo.gl/maps/iMedgwxzsaduqCR3A
https://www.ffm.vic.gov.au/__data/assets/pdf_file/0020/21476/FS0112_-_Whipstick_Loop_Walk.pdf
Prior registration essential. Contact Carol Page: cpage356@gmail.com; 0438 446 973

Wednesday 21st - Terrestrial Invertebrates Group Meeting: Contact Max Campbell for details: 0409 866 389; 9544 0181 AH; mcam7307@bigpond.net.au Prior registration essential.

Sunday 25th – Juniors Group: Excursion: ***Whale Watching***. Leader: David Donelly
Advance registration required. Contact: Dr Patricia Amaya: juniors@fncv.org.au

Sunday 25th – Geology Group Excursion: ***Studley Park turbidite beds: issues for continent crust accretion and for basalt flows***. Leader: Ken Griffiths. Contact Ken Griffiths: geology@fncv.org.au
Prior registration essential.

Monday 26th—FNCV Council meeting (via Zoom). Apologies and agenda items to Wendy Gare: admin@fncv.org.au Max will email the link.

Tuesday 27th – Day Group 10.30 am (*speaker at 11 am*). Meeting: ***Leaf Beetles (Chrysomelidae) of Australia***. Speaker: Martin Lagerwey, an entomologist and a curator with iNaturalist, specialises in the beautiful and diverse family of Leaf Beetles. Contact Joan Broadberry: joan.broadberry@gmail.com
Prior registration essential.

Wednesday 28h – Geology Group Meeting: ***Stardust Memories: 50 years of the Murchison Meteorite.*** Speaker: Dr Dermot Henry, Head of Sciences, Museums Victoria.
Contact Ken Griffiths: geology@fncv.org.au Prior registration essential.

The calendar has been prepared on the tentative assumption that, in July, meetings will be held at the FNCV Hall, 1 Gardenia St. Blackburn at 8 pm unless otherwise advised.

As the Covid 19 situation is fluid, this may change at any time. Activities may be cancelled or meetings switched to Zoom. There is a numbers cap in the hall. You are therefore asked to register for *both* meetings and excursions as soon as you can, preferably supplying a phone number and email, so that you can be reached at short notice. Please let the SIG contact know if your plans alter.

Members are reminded that they must abide by the current rules as regards wearing a mask. However, it is recommended that masks are worn at all FNCV meetings.

You will be required to sign in with the Victorian Government QR app (logo above). It is simple. Just bring your phone. Assistance is available to everyone. Try to arrive a few minutes early.

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

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Friday 30th – Juniors Group *No Meeting.*

Saturday 31st - Juniors Group Afternoon Excursion: *Replas - Australia's leading mixed recycled plastic manufacturer* who aims to provide a solution for plastic waste by delivering quality, cost effective, sustainable products. Small charge and places limited. **Booking in advance essential.** Contact: Dr Patricia Amaya juniors@fncv.org.au

Members' news, photos & observations

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

Welcome
Welcome

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

Suzanne Parker, Sabine Perrone, Anna Burley, Val Stajsic, Luca Marcoux-McCaffrey, Chris Clarke, Kathryn Dallimore, Maureen Webb, Jahn Asirvadem and Steve Asirvadem.

Facebook followers:
19 055

booshop@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 Editor

My thanks to our wonderful SIG organisers for the great response to my appeal for more reports of FNCV meetings and activities. One of the most important functions of FNN has always been to record and share with our readers the activities of our busy club. It is very gratifying to see this happening.

I have some apologies to make. Due to the size of this newsletter, (at one stage I was working with18 pages), I have had to make some difficult decisions and hold over a few members' contributions. I assure you they will appear in FNN 321. Also, because of the challenges of working in lockdown, the printed newsletter will be sent out a week late.

Keep active and safe, best wishes. **Joan**

Vale Brendan Murphy 1927-2021

Brendan Herbert Murphy was born on 16th March 1927 and died at the age of 94 on 19th April 2021. He was the last surviving member of his immediate family as his nine brothers and sisters had all predeceased him.

Not much is known about his background as he was a private person who kept very much to himself. We know that he joined the Field Naturalists Club on the 12th of December 1994, when he was 67 and developed a great love for the organisation. He remained an active member right up to the time of his death, regularly attending the Day Group meetings and being present at the last Christmas party held by the FNCV in 2019 before COVID 19.

I first came in contact with Brendan, when at a meeting of the FNCV Council, a letter was tabled expressing his wish to honour our late Vice President Dr Noel Schleiger's contribution to the FNCV with a scholarship of $5000. Brendan, along with many others, was inspired by Noel's deep knowledge of geology and his tireless work in educating others through talks, articles, excursions and publications.

Noel, a lecturer, was a great supporter of science education over his career and was much involved in the "Science in Schools" program. After discussion by the Council and consultation with Brendan, it was settled that the funds would be donated to the Science Talent Search (STS) competition over a five year period, at $1000 per annum.

While Brendan tended to keep in the background in his involvement in club activities, he showed his devotion to the organisation by his financial generosity. Not only did he give the funds to the Science Talent Search but he was also an annual contributor to the Australian Natural History Medallion, and gave regular donations to the office for the purchases of office supplies. Wishing to extend his support of the STS, after five years, when his $1000 per annum contribution in the name of Noel Schleiger came to an end, he contributed a further $5000 in the name of the FNCV.

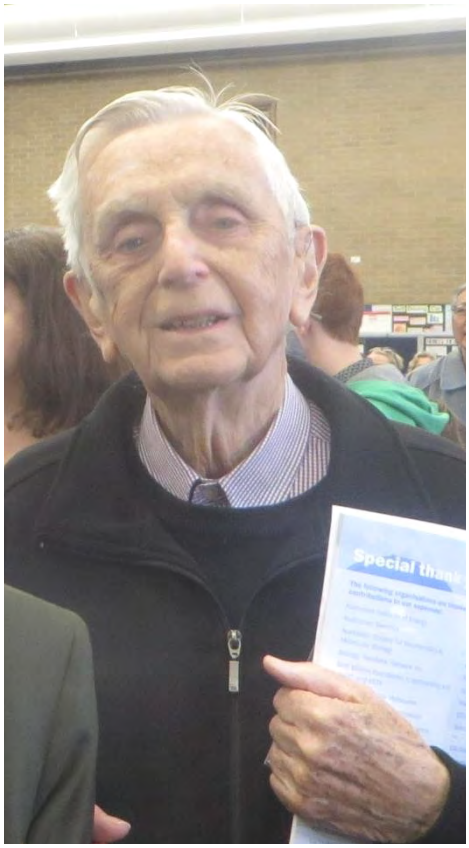
Probably many of you have not heard of the Science Talent Search but it is one of the really worth while things the FNCV has been involved with in the last 10 years and it would not have happened without Brendan. STC is an annual, science based competition open to Victoria's .primary and secondary students and organised by the Science Teachers Association. Thousands of students enter the quest every year with contributions taking many forms.

This is a quote from a letter I wrote to Brendan about the STS.

"I agree with you that this is a most effective way of fostering an interest in young people in science and the environment. As I have said previously I was absolutely blown away when in 2014 I visited the expo at Latrobe University, by the enthusiasm of the students, the quality of their projects and the sheer number of entries. You also have had similar feedback in the thank you letters that we have forwarded to you from some of the young bursary winners".

I will close with a small anecdote about Brendan which relates to the 2010 FNCV Christmas party get-together. On the night a raffle was held to raise money towards the cost of installing solar panels on the roof of the Hall. The First Prize was a Toshiba laptop computer, with software. The draw was made and Brendan Murphy was the winner. As he had no use for a laptop computer, he generously donated it back to the Club to be re-raffled.

Barbara Burns – FNCV treasurer and friend of Brendan



Brendan on his visit to the Science Talent Search display of entries, held at Latrobe University in 2016.
Photo: Barbara Burns

Extracts from SIG reports given at the last FNCV Council Meeting

Botany Group: Meeting Thursday 20th May -

Dr Melanie Birtchnell spoke on *Communities in Conservation: exploring the case study of the Helmeted Honeyeater*. She explained the history of the decline in Helmeted Honeyeater numbers since the Kooweerup Swamp was drained for farming in the late 19th century. In 1989, public support for conservation developed locally at Yellingbo and a Reserve was declared along two creek lines. Volunteers have run many activities, including an indigenous plant nursery. A lowland habitat of the Leadbeaters Possum was discovered. The Friends of Yellingbo web sites are recommended. There were many questions and much discussion afterwards. The attendance was nine.

Ken Griffiths

Fauna Survey Group: Meeting: Tuesday 4th May.

David De Angelis reported sightings of Bibron's Toadlet at several localities in northern Victoria, but there hadn't been any egg laying yet, likely due to the dry ground conditions.

The talk for the night was 'Crocs and kookaburras, dolphins and goannas' presented by Dr Colin McHenry from the University of Newcastle. 'What does skull shape and function tell us about convergent evolution?'.

Biologists have long recognised the link between an organism's shape and its ecology, such as in Darwin's finches, or in subtle difference in Melphagidae honeyeaters as identified by Keast. Colin described his PhD study where he assembled fossil fragments from a pile of rocks into a skull of a *Kronosaurus queenslandicus,* a giant marine reptile with an elongated jaw. It most resembles the jaw of some long snouted living crocodiles like the Orinoco Crocodile whose ecology is not well known.

Bio-mechanical computer simulations can tell us more about skull shape and function. If sabre tooth cats hunted like modern lions, which bite and hang on to their prey, they would have broken their jaw. Sabre-tooth cat structure suggests they pinned down their prey then used a stabbing motion.

Long snouted animals have the strongest convergence of mechanics and form. Fluid mechanics means long snouts need to be thinner for aquatic creatures to reduce drag. Although a large animal, Kronosaurus has forward moving specialization for relatively small prey.

Survey: Rushworth Forest, 15th, 16th May.

Five members checked 87 nestboxes in the State forest section of Rushworth Forest, where we recorded 26 Sugar Gliders and two Brush-tailed Phascogales. We camped at our favourite site, Three Jims dam where we saw an Eastern Stone Gecko, a Boulenger's Skink, a Garden Skink and some Bibron's Toadlets. A more detailed report will appear in FNN 321

Ray Gibson

Geology Group: 28th April - Dr Oskar Lindenmayer, Collection Manager, Mineralogy and Petrology, Melbourne Museum, spoke about the museum's collections of some of Victoria's pioneering geologists in the 19th and early 20th Centuries. A project where volunteers developed a database from hand written rock and mineral records was interesting. About 15 attended.

Ken Griffiths

Juniors Group: On the 2nd May we had one of the most beautiful and informative excursions we have attended with the Juniors. Thirteen people attended in total from five families .The excursion leaders were Sue Bendel and Mel (ecologist and in charge of investigating the Helmeted Honeyeater). My deepest gratitude and utmost respect to Sue Bendel for her great support to the Juniors. Thanks to her we had this wonderful excursion.

We visited Yellingbo, the home of the Helmeted Honeyeater and Leadbeater's Possum and we learnt a lot about them, starting from when they were discovered and all about fragile ecosystems. We learned that there are only 240 Helmeted Honeyeaters in the wild, but that is up compared with more recent figures. We were very lucky on the day and were able to spot a few Helmeted Honeyeaters, including a few young ones and their parents feeding them. As you can imagine this is a visit that will stay in our memories for ever.

The weather could not have been better, about 20ºC and no rain. Once again, a big thank you from all of us who attended to Sue Bendel for this amazing excursion.

Dr. Patricia Amaya

Fungi Group Meeting, *3rd May 2021*

At our first meeting for 2021 (and the first since March 2020) we were treated to two presentations, the first being about the effects of fire on fungi, and the second about the aims and activities of MYCOmmunity, including some information about the portable MinION DNA sequencer which will be published next month in FNN 321.

Impacts of Fire on Fungi

A presentation by Dr Sapphire McMullan-Fisher, Ecologist, Fungi for Land

Sapphire explained much about the vital role fungi play in ecosystems, particularly in fire-ravaged landscapes, while acknowledging that there is still a great deal to be understood. The ecosystem is extremely complex, with fungi, plants and animals all interacting in various ways.

The main part of a fungus is not the fungal fruiting body we see, but the mycelium, which consists of a network of microscopic thread-like structures called hyphae. Fungal mycelium holds the soil together and, in burnt areas, is of utmost importance in preventing or minimising erosion. Several different types of fungi can co-exist in the one area; in fact most plants need many different fungi to keep them healthy.

A fire-ravaged landscape.
Photo: S. McMullan-Fisher

Mycorrhizal fungi and the Wood Wide Web

Mycorrhizal fungi and plants trade resources. Fungal hyphae wrap around plant roots and may even enter them, protecting the roots and providing water and nutrients to the plant. In return the plant provides sugars to the fungi. Radioactive tracing has shown that trees provide sugars, via their mycorrhizal fungi, to surrounding plants, including grasses. Amazingly, fungi also provide a communications network, known as the Wood Wide Web, to link individual plants. If plants are attacked by insects they emit chemical signals to warn other plants, but they also send signals via mycorrhizal fungal mycelium!

Effects of fire on fungi

Not surprisingly, the effects of fire on the numerous fungal components of ecosystems are very complex but are less well understood than the effects on their vascular plant counterparts. Negative impacts are likely to occur when habitat and substrates are lost or severely modified: fire can cause loss of fungal food (e.g. logs, standing dead trees), as well as general drying out of the landscape.

Pyrophilous fungi

Some fungi are known as 'pyrophilous' (fire-loving), while others are sensitive to fire. Pyrophilous species respond quickly to fire, producing a post-fire flush of fruitbodies, both saprobic (e.g. *Pyronema omphalodes* and *Anthracobia muelleri*) and mycorrhizal (e.g. *Geopyxis carbonaria* and *Peziza tenacella*). There are also the remarkable 'stone-makers', a small but distinctive group of fungi that need fire to stimulate fruiting (e.g. *Neolentinus dactyloides, Laccocephalum mylittae, L. tumulosum, L. sclerotinium*). But frequent fires can be detrimental to some of these fungi: *Laccocephalum tumulosum*, for instance, *needs to decompose large dead trees, logs and roots* ***typically found in long unburnt forests. The removal of large amounts of wood from forests can result in the reduction or even loss of wood-dependent fungi.***

Peziza tenacella Photo: R.Robinson

Nothocastoreum cretaceum
Photo: S. McMullan-Fisher

Post fire Truffles

Ground-dwelling marsupials eat truffles, leaving digs, the outer shells, and scats. Post fire truffles, for example *Nothocastoreum cretaceum* and *Mesophellia* spp., provide food for mycophagous marsupials (e.g. bettongs, potoroos, bilbies, bandicoots, woylies and quendas). Since their scats are full of spores, these animals spread the diversity of fungi they eat. The forest, truffles and marsupials work together in the ecosystem, but when a link is broken, (e.g. marsupials disappearing as a result of predation by cats and foxes), the ecosystem can no longer function properly.

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Patchy burns allow some trees and their fungal partners to survive. Spot burning is O.K., but it is not a good idea to burn areas that are in drought and already under stress.

Fire sensitive fungi

Many fungi are not pyrophilous, but sensitive to fire. These comprise litter specialist fungi – the decomposers – which include endophytic fungi (particularly ascomycetes) and are the recyclers of ecosystems. Without fungi, bacteria, protozoans and invertebrates, most nutrients could not be released into the environment and would remain locked up in dead matter**.**

Hypocreopsis amplectens, which grows on fallen branches of senescing shrubs such as *Leptospermum, Kunzea,* and *Monotoca*, is an example of a fungus that requires long unburnt woodland for its survival.

Fungi that grow in riparian zones, rainforests or other wet habitats are also sensitive to fire. Specific suites of fungi and lichens are dependent on rainforests, with many mycorrhizal fungi favouring particular hosts such as *Nothofagus*. Rainforest fungi may already have restricted distributions because of the reduced area of this vegetation type.

Other roles of fungi

Fungi are used in the production of beer, wine, bread, cheese, chocolate and antibiotic medicines. They are food for invertebrate and vertebrate animals. Those that decompose wood can help to form tree hollows, which are then used as homes by invertebrates and vertebrates. In short, fungi are the ties that bind the ecosystem together.

Neolentinus dactyloides Photo: R. Robinson

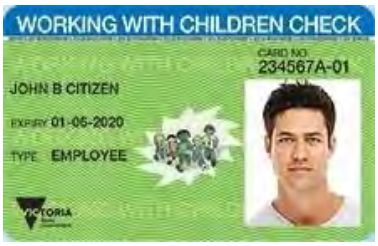
Thank you, Sapphire, for a very enjoyable and informative evening.

Virgil Hubregtse

Recommended reading: McMullan-Fisher SJM, May TW, Robinson RM, Bell TL, Lebel T, Catcheside P, York A (2011) Fungi and fire in Australian ecosystems: a review of current knowledge, management implications and future directions. *Australian Journal of Botany* **59**, ***70-90.***

Read D (1997) Mycorrhizal fungi: The ties that bind. *Nature* **388,** 517-518.

Public service announcement: New Working with Children Check requirements.



Key Points

- **30 June 2021** onwards every volunteer on Parks Victoria managed land will need a Working with Children Check. Even if the volunteering is for one day only.
- Your Working with Children Check must list Parks Victoria as an organisation.
- You must upload Your Working with Children Check details to ParkConnect.
- You will need to register with ParkConnect.

Working with Children Check

As part of Parks Victoria's commitment to maintaining a child safe environment, and to ensure it aligns with the Child Safe Standards a Working with Children Check is now compulsory for all volunteers over the age of 18. The Child Safe Standards were developed in response to the Betrayal of Trust report from the Parliamentary Inquiry into the Handling of Child Abuse by Religious and Other Non-Government Organisations. The application of the Standards in this context means that everyone who volunteers on the Parks Victoria estate must hold a current Working with Children Check by 30 June 2021!

The activities that the FNCV undertakes on Parks Victoria managed land are considered by Parks Victoria to be volunteer-

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ing. The new rule applies to individuals and volunteers within groups, and it applies to everyone who volunteers regularly and even if the volunteering only occurs on a one-off occasion. Importantly the rules **apply even if you do not have direct contact or engagement with children during the activities!**

What this means for FNCV is that everyone who wishes to participate in club activities on Park Victoria estate (National Parks, Flora and Fauna Reserves, Game Reserves, etc) will need to get a Volunteer Working with Children Check. They will also need to lodge their Working with Children Check number with Parks Victoria via the ParkConnect system. To make it as easy as possible on trip organisers could you please get your Working with Children Check and ParkConnect account as soon as practicable. This will hopefully ensure that everyone can continue to participate, and we have the numbers to make our events worthwhile.

ParkConnect

With the new requirements on Working with Children Checks signing up to an activity via ParkConnect will become the mandatory norm for all Parks Victoria volunteer activities.

ParkConnect is Parks Victoria's online volunteer management system. It is a self-service system for volunteers and volunteer organisations such as the FNCV to lodge their activities with Parks Victoria. Some of you may already be familiar with signing up to activities on ParkConnect if you are participant or with the process of creating an activity if you are a trip leader.

Parks Victoria uses ParkConnect to manage its 350 different volunteering groups, its more than 20,000 volunteers and their widely diverse volunteering activities. For example, when a trip leader creates an activity (trips, surveys, walks, etc) in ParkConnect it gets lodged for review and approval with the local Area Chief Ranger.

Your Next Steps

The key steps are outlined below.

Apply for a Working with Children Check (no charge for Volunteers):
https://www.workingwithchildren.vic.gov.au/individuals/applicants/how-to-apply

Nominate the FNCV as well as Parks Victoria as an organisation that you volunteer with. The information to be used for Parks Victoria is as follows:

Parks Victoria
Level 10, 535 Bourke Street
Melbourne VIC 3000
131 963

In the next section that asks for occupation fields and type, please use the exact information below to complete your application: Occupational fields = 44, 46, 48, 50, 52 Occupational type = Volunteer

If you have an existing check then you must update it to include Parks Victoria and the FNCV.

Register yourself with ParkConnect: https://www.parkconnect.vic.gov.au/secure-volunteer-home/

After successfully gaining a Working with Children Check and registering for ParkConnect you must upload an image of it to your ParksConnect account.

For more information visit: https://www.parks.vic.gov.au/get-into-nature/volunteering

Future

The new Parks Victoria Volunteering Manual is setting the terms for the FNCV's relationship with Parks Victoria. It is likely that more actions will be required of us as we work through the implications of the new Manual. This will particularly be the case for trip leaders. You can find the manual on this page: https://www.parks.vic.gov.au/get-into-nature/volunteering

Regards, Andrej Hohmann
(Occasional FSG trip leader)

The requirement for a children's check will affect most, if not all FNCV SIG groups, as well as volunteer work in other organisations. Help with the process is always available through the office.

Microscopy Group

Hands on Practical Activity Night
April 2021

Weeping Fig Thrips *Gynaikothrips uzeli*

With an impressive array of live micro-invertebrates and dried botany, marine, geological, freshwater invertebrates etc., members were fully engaged in the wonders of the microscopic world. Using our range of hand-made dissecting tools from a previous tool workshop, with several members that were new to microscopy, we examined the following:

Weeping Fig Thrips *Gynaikothrips uzeli*, eggs, larvae and adult, all within the same curled and tightly sealed ficus leaf, getting on with their little lives despite our interference to their previously cosy homes.

Pig-face Cottony Scale *Pulvinariela mesembryanthemi*, we gently opened up their very well insulated, silky, strong and sticky homes, exposing beautiful oval, shiny green eggs. Using a curved dissecting tool, their blankets were pulled back over them. We will wait and watch to see their next development stage.

Pig-face Cottony Scale *Pulvinariela mesembryanthemi*

A graveyard of aphid carcasses with exit holes chewed through their abdomens by the juveniles of a tiny parasitic wasp. The wasp hones in on its prey by sensing the distress signals of plants under attack from the aphids. The secretions emitted act as a mayday call to the wasps. As an extra draw card the aphids also secrete a sweet sugar-rich sticky liquid called honeydew as they feed on plant sap. When their mouthpart penetrates the phloem, the sugary, high pressure liquid is forced out of the anus of the aphid.

Scores of White Springtails, bouncing and running non-stop around their petri dishes, all constantly on an important mission. Shrugging off their white exuviae anywhere and everywhere - reminding me of teenagers bedrooms. I have yet to catch either in the act of doing it though!

Soil mite *Diapterobates notatus*, with its golden and translucent body. One of my favourites from the worm farm. Their domed, spiked bodies clearly displaying their interesting internal organs.

We also saw other live specimens with different development stages observable.

Participants enjoyed the process of carefully lining up their phone's camera to an eyepiece and taking wonderful photos without expensive specialist cameras. We did this by shaping a small thick donut from blue-tac and placing it on the outer rim of the eyepiece without its hood. This holds the phone in place over the eyepiece. It does take a little practice and patience to line up the camera, but is certainly worth the trouble. An interesting and engaging experience for all.

Philippa Burgess
Photos: P. Burgess

Cockroach egg case

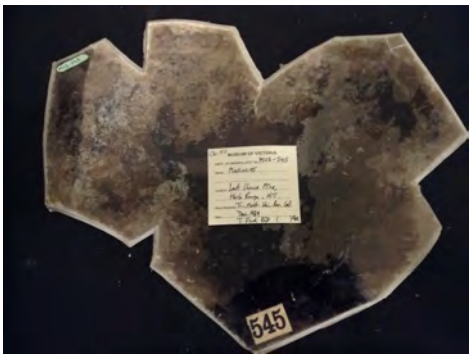
Geology Group

'Using Citizen Science to track the field trips and document the collections of some of Victoria's pioneering geologists in the 19th and early 20th Centuries'

Speaker: Oskar Lindenmayer, Collection Manager of Geosciences at Museums Victoria

On Wednesday 28th April the FNCV Geology Group held our first onsite meeting at the FNCV Hall since Covid-19 restrictions were put in place in early 2020. We had around 25 members attend a presentation by Oskar Lindenmayer, Collection Manager of Geosciences at Museums Victoria entitled '*Using Citizen Science to track the field trips and document the collections of some of Victoria's pioneering geologists in the 19th and early 20th Centuries*'. A summary of Oskar's presentation follows.

Early 19th and 20th century collecting and the Museums Victoria Geosciences Collection:
Three separate institutions held geological collections in Victoria during the 1850s including the National Museum of Victoria (now Museums Victoria), the Geological Survey of Victoria and the University of Melbourne which had a reference and teaching collection and a research collection.



From 1987–1989 these collections started to be merged into the Museums Victoria (MV) Collection and from 1989 – 1990 curatorial work was undertaken on the former University of Melbourne Collection, particularly with regards to labelling. When Melbourne Museum opened in 2000, the ex-UoM reference mineral collection and the former GSV economic geology collection were moved to the main collection store in the basement of the Royal Exhibition Building and the remainder of these collections were moved to long-term offsite storage. In 2018, the main MV Geosciences Collection was transferred again to its current home in a temperature and humidity controlled collection store in the Melbourne Museum building. The Museums Victoria Geosciences Collection currently houses ~2,800 species of minerals and as a fun fact, 6 of these species have been named from one site, Lake Boga in Victoria (technically this is across Lake Boga and Wycheproof quarries, although they have very similar geology/mineralogy).

Significant collectors of historic specimens include:
Alfred William (A. W.) Howitt (1830–1908): Anthropologist and geologist who lead the Victorian Relief Expedition that went out to establish the fate of the Burke and Wills expedition in 1861.

Ernest Willington (E. W.) Skeats (1875–1953): 2nd Chair of Geology at the University of Melbourne, teacher and scholar and collector of ~1,000 geological specimens from around Victoria and Kimberley of Western Australia.

Austin Burton (A. B.) Edwards (1909–1960): Mineralogist and Petrologist who collected ~1,300 specimens held in the in the ex-UoM research collection. Accompanied the British, Australian and New Zealand Expedition Antarctic Expedition.

Frank Leslie (F. L.) Stillwell (1888–1963): Australian Antarctic Expedition, highly significant collection from Broken Hill (which was the World's largest lead-zinc deposit) in the 1920s and Kalgoorlie and namesake of the Geological Society of Victoria's award for best student paper.

George Baker (1908–1975): Known for his research on australites and tektites, former Honorary Associate of Mineralogy at the National Museum of Victoria (now Museums Victoria) and inaugural recipient of the Royal Society of Victoria Medal for Excellence in Scientific Research (1959).

Edwin Sherbon (E. S.) Hills (1906–1986): Lecturer and later and Senior Lecturer and Associate Professor teaching palaeontology, stratigraphy, engineering geology, petrology, economic geology and physical geology at the University of Melbourne. He was appointed chair of Geology and Mineralogy in 1944.

Arthur Lennox (A. L.) Coulson: Specialised in economic geology, was educated at Melbourne University and spent much of his geology career working in India.

Frederick Alexander (F. A.) Singleton (1897–1947): Former Professor of Geology at the University of Melbourne, expert in fossil molluscs and namesake of the F. A. Singleton Earth Sciences Collection at the University of Melbourne.
James Finch: Collected a highly significant collection of micas from the Harts Range, Central Australia. (See photo for an example from his collection).

Collection digitisation project and citizen science:
In 2019 a 'digitisation project' was initiated, starting with 10,000 University of Melbourne specimens collected pre-1960s. This work aimed to database, barcode, photograph (specimen and associated label) and capture historical information (collection locality, date of collection, name of collector etc.) for these specimens. Some specimens had been kept associated with their labels and information better than others.

From May – November 2019 9,532 specimens were processed and 95% were able to be associated with a collector and general localities. A pilot test was carried out using the online platform 'DIGIVOL' (https://volunteer.ala.org.au/) engaged citizen scientists to transcribe labels and data for ~300 specimens. Then … the Covid-19 Pandemic hit.

Following the successful pilot project, the DIGIVOL transcribing project was able to continue online with ~157 volunteers transcribing ~1,000 specimen labels per week.

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Where to now for the MV Collection citizen science project?
A select group of volunteers with a proven track record and experience in transcribing information from these geological labels are currently going back over data transcribed through DIGIVOL to verify it. Once this is complete, the next step will be to move onto digitising and transcribing data for specimens from the University of Melbourne Collection in the 1970s and 1980s then they will be moving onto ~30,000 specimens from the collections of the Geological Survey of Victoria (GSV). The ex-GSV Collection is not as well labelled and organised as the University of Melbourne Collections so it will be more challenging to work through.

Lisa Nink, ***PhD candidate, Flinders University***

Day Group

A field naturalist in Iceland

Speaker: Sally Bewsher

In June 2019, I, along with two friends, had a two-week visit to Iceland. We had booked most of our trip through 'Nordic Visitor' and found them to be very organised and helpful. Our itinerary included simple, but comfortable accommodation, breakfasts, a few other meals and a car. We toured the island in an anticlockwise direction, exploring and visiting lots of natural landmarks, isolated beaches, inland deserts, remote villages and harbours, bird cliffs and a variety of museums. Roads are generally good and many are sealed, but they are often windy and can be slow-going. The weather was mostly cool and pleasant during our stay and the long daylight hours were a bonus. The wind blew a lot though, so we kept well rugged up when walking and taking in the vistas. One day it briefly reached 18 degrees!

Located on a hotspot and the Mid-Atlantic Ridge (the spreading rift between the Eurasian and the North American tectonic plates), Iceland is volcanically active. The ridge runs roughly from southwest to northeast across the country and volcanic activity has resulted in spectacular scenery wherever you go. There are stratovolcanoes, waterfalls, precipitous cliffs, fast-flowing rivers, glaciated valleys, black gravel plains, lava flows, mud pots, fumaroles and lakes.

Reykjavik is the northern-most capital city in the world at approximately 64° north. The country's population is around 340,000 and growing, with approximately two thirds living in the capital. Iceland has an area of 103,00 km2 and about 11% of that is covered by glaciers and the Vatnajökull Icecap. Tourism developed rapidly after the eruption of Eyjafjallajökull in 2010 and represents a large part of the economy today, along with fishing. Geothermal energy is harnessed extensively and provides much of the country's heating, hot water and energy requirements. Apparently, it is even used to keep the footpaths in the capital clear of snow in winter! Iceland achieved independence from Denmark on 17th June 1944 and this day marks their national holiday.

A variety of independent museums are located in little towns, often run by the local community, as well as some larger ones in Reykjavik. Covering topics such as geology, fishing, whaling, wool, art, archaeological discoveries, music and farming, they provided us with a real insight into the history and earlier ways of life in Iceland. It was certainly a hard life.

Scenery and typical gravel beach

Krafla volcanic area.

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Arctic foxes are the only indigenous land mammal. Whales, dolphins and fish inhabit the country's seas. Introduced species include deer, reindeer, rabbits, farm animals and stocky Icelandic horses. Horse riding is a popular pastime. There were lots of small plants in flower, most low-growing, but a large proprortion have been introduced. North American Lupins were originally grown to help control erosion, a result of the high winds and sheep grazing, but they have now spread far and wide, covering slopes and inhibiting the growth of indigenous plants mosses, lichen and fungi.

On the south coast we visited the well-known Jökulsárlón Glacial Lagoon, where the Breiðamerkurjökull flows into the lake, before entering the sea. The lagoon has icebergs floating in it, some temporarily grounded, some streaked with moraine debris, others blue, and any of them provide a spot for birds or the occasional seal to rest. We went out in zodiacs, (two go together for safety), approaching the glacier itself, as well as touring around parts of the lake to observe the glacier's face, icebergs of all shapes and sizes, and some birdlife.

We saw a wonderful range of birds as we travelled. Seeing the bird cliffs was an absolute highlight, especially at Látrabjarg in the west. The cliffs are over 400m high and were crowded with breeding seabirds. These included Kittiwakes, Puffins, Razorbills, Guillemots and Fulmars, which were crammed onto every nook and cranny possible on the precipitous cliffs. The air rang with calls and

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Above and below: Atlantic Puffin *Fratercula arctica*

Jökulsárlón Glacial Lagoon and Breiðamerkurjökull

Horned Grebe *Podiceps auratus*

Above: Whooper Swans and chicks *Cygnus Cygnus*

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cries, and birds constantly flew off to feed or cruised past in the updraughts.

The current fissure eruption at Fagradalsfjall is located south of the airport and to the south west of Reykjavik. There are numerous YouTube clips online showing drone footage of the on-going eruption. A very interesting website is that of the Icelandic Weather Bureau, IMO. https://en.vedur.is/

Sally Bewsher
(All images.: S. Bewsher)

Editor: *Many thanks to Sally whose informative presentation, and lovely photos were thoroughly enjoyed by a travel-starved Day Group.*

Special thanks for compiling this report for FNN.

Dyrholaey

Gulfoss

Gysir

Pahoehoe lava

Thanks to the editorial and layout team who put together FNN 320

Joan Broadberry
Wendy Gare
Sally Bewsher