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General meetings

Held at 7:30 pm on the
fourth Friday of each month
at the Newborough Uniting
Church, Old Sale Road
Newborough VIC 3825



A bull ant *Myrmecia forficata* photographed by Matt Campbell during the Club's excursion to Morwell National Park in March 2018.

Upcoming events

September general meeting: Friday 21 September

Fascination of Orchid Pollination – Mitch Smith

Excursion: Saturday 22 September – Traralgon South FFR. Meet 10am at the reserve carpark on Callignee South Rd.

Botany Group: Saturday 29 September – Buttongrass Walk, Bunyip SP. Meet 10am at the start of the walk or carpool from Yarragon Railway Station 9am.

ANN Get-together: 29 Sept - 8 Oct – Grampians & Surf Coast region.

Bird Group: Tuesday 2 October – Moe-Yallourn Rail Trail. Meet 9.30am at end of Sullivans Track, off John Field Drive, Newborough.

October general meeting: Friday 26 October

Sweet Pittosporum ecology & regeneration dynamics – Ben O'Leary

Excursion: Saturday 27 October – Crinigan Bushland Reserve. Details TBC.

Botany Group: Saturday 3 November – Grasses at Corinella. Details TBC.

Bird Group: Tuesday 13 November – Sale. Meet 9.30am at Lake Guthridge toilet block on McIntosh Drive.

Launch of Brataualung Forest Park

A fine Saturday 14th July saw the launch of the new Forest Park intended to incorporate the 'Cores and Links' in the Strzelecki Ranges as land parcels are progressively handed back into public ownership between now and 2028.

Around 50 invited guests attended the celebration onsite, including six members of our Club. Gunai Kurnai elder Dr Aunty Doris Paton welcomed those present to Country and then announced the name of the new park as Brataualung Forest Park, which was greeted with acclamation. In so doing, she explained the connection of the Brataualung people with the region in which the park is located. The Minister for Energy, Environment and Climate Change, the Hon Lily D'Ambrosio, then launched the park and in her speech fittingly recognised the long-running efforts of many people and organisations in achieving its creation. The Minister, Dr Paton, Susie Zent (Friends of the Gippsland Bush) and Simon Gatt (HVP) then joined in unveiling the sign displaying the new park's name.



Philip Rayment

Ants are Everywhere

At our March meeting, Peter Muller gave a presentation on ants. Peter originally studied agriculture, but spent most of his career in natural land management, including working for Parks Victoria, before finally working in environmental education at Ballarat University. Since retiring, he has devoted some of his time to studying ants.

He is particularly interested in the common ground-dwelling species and sees them as an important indicator of the health of any environment. He has made a particular study of marginal habitats such as small reserves and roadside vegetation and feels that the ants inhabiting these areas are an



Myrmecia pyriformis (Photo: Peter Muller)

indication of how good the habitat is. He has made a study of ant nests and is trying to establish rules for identifying an ant species from the structure of its nest.

Ants have been around for nearly 100 million years, when they apparently separated from the wasps, sharing a common ancestor. They are social insects, often living in quite large colonies.

Peter showed us a number of ant species, mostly ground-dwelling, and showed us their nest mounds as well.

First, we saw the sugar ant *Camponotus consobrinus*, which is especially common, occurring

in urban, rural and native bush areas. They have a distinctive nest, like a miniature volcano with quite a large opening at the top, and often several nests occur close together.

Another species of sugar ant, *Camponotus aeneopilosus*, is a tree-dwelling ant.

The meat ants are in the large genus *Iridomyrmex*, some species of which are common. Their nests are large gravel-covered mounds and may have thousands of ants in each colony. Adjacent colonies can form long 'ant highways' of 50 metres or more.

The pony ants *Rhytidoponera metallica* are smaller than *Iridomyrmex* but have similar nests, although the entrance is much smaller.

Finally, we were shown several of the bull ant genus *Myrmecia*. These colonial ants are among the largest Australian ants and have very painful stings. There are 30 or more Australian species, including about 12 species in Victoria. The larger species are generally known as bull ants and the smaller fast-moving species are known as jack jumpers.

Myrmecia nigriceps, *M. pyriformis*, *M. forficata*, *M. simillima*, *M. brevinoda*, *M. nigriscapa* and *M. fulvipes* are all bull ants, three of which are known locally. *M. pilosula* is the best known jack jumper and is common in our area. Most species live underground and build a large mound. The entrance is often not easily seen. It is, in particular, these bull ant mounds that Peter is trying to classify as a means of identifying the species.

We thank Peter for a very informative talk.

Ken Harris



Myrmecia pyriformis nest mound (Photo: Peter Muller).

Ants in Morwell National Park 24.03.2018

Peter Muller attended the Club's March meeting and gave a talk on his special subject, ants. Peter's main interest is the genus *Myrmecia*, which most of us know as bull ants or jumping jacks. The following day, Peter met us at the Kerry Road carpark at Morwell NP.

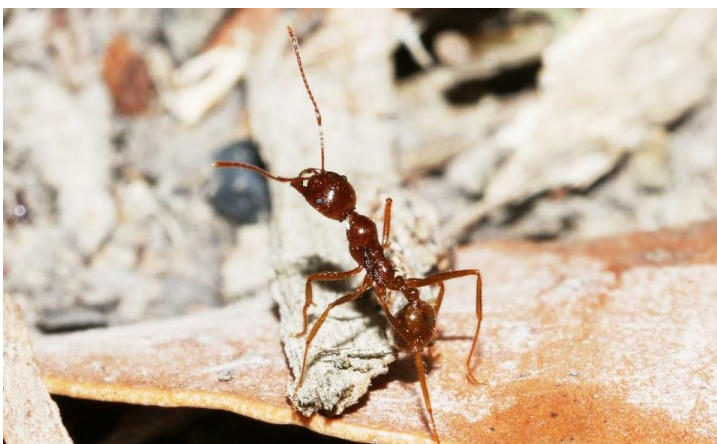
Fourteen of us showed up despite the threat of rain. Peter gave us a few more words and allowed for some more questions from the group. Whilst this was going on, the first drops fell. We were also held up further when I found a bull ant trying to join us for the talk. It turned out to be *Myrmecia simillima*, a species only just added to the park's fauna list. They've been in the park all along, however nobody had been able to distinguish them from *M. forficata*, which also occurs there. Peter had pointed out the difference to Ken during the week. To add some further confusion, Ken is now checking specimens under the microscope to make sure that *M. forficata* is not *M. brevinoda*! Whilst everyone was looking at that specimen, I noticed that someone had stood on another bull ant. This one happened to be *M. forficata*. So we had both species occurring at the same location.

After everyone got a good look at the two specimens, we started moving off. Comments were made that progress was even slower than that of botanists as we started finding more ants immediately. By the time we hit the junction to head down towards the Stringybark area, we'd found 3 of the park's 4 known *Myrmecia* species, the latest being *M. pilosula*, the one we all know as a jumping jack. By this time, everyone had put on their raincoats as the rain, although still light, became a little steadier.



Myrmecia pilosula (Photo: Matt Campbell)

Progress continued with the odd bird and plant attracting the attention of some attendees, however ants were the reason we were there and the search continued. Upon reaching the bottom of Stringybark Track, we found more species. A couple were too small for us to photograph properly (one was around 1 mm long!), especially as the drops were getting heavier. However, we could confirm that we also now had *Aphaenogaster longiceps*, commonly known as 'funnel ants' due to the funnel-like appearance of their nests, and a species from the *Anonychomyrma* genus. This was to be the last we saw of the smaller species as little streams started appearing down the middle of the track.



Aphaenogaster longiceps (Photo: Matt Campbell)

We soldiered on to as far as where Stringybark Track splits. At this point, some of the group returned to the carpark due to the teeming rain. The rest of us continued on, Peter commenting that we were a 'dedicated bunch'. By now, the odd winged termite was starting to appear.

The hope was to reach the top of Stringybark Ridge and come back down the West Boundary but we decided at the next junction to cut over to the other side of Stringybark and head back. We were still finding the odd *Myrmecia*, but many were now taking shelter under leaves or in the bark of the trees. The termites however were now out in their 1000s!

We all gathered back at the carpark where we thanked Peter for his time and knowledge. He then thanked us, and said the forest in Morwell NP is quite different to that of his home territory and he'd learnt a lot by heading out with such a keen group.

Matt Campbell

David Stickney in the Galapagos Islands

Our April guest speaker and Club president, David Stickney, gave a very informative talk about his recent trip to the Galapagos Islands, particularly focusing on the many birds he saw and photographed.

The Galapagos is a group of islands, located 1000 km from the coast of Ecuador, that has never been connected to the mainland. It lies on the northern edge of the Nazca plate, which is moving eastwards at a rate of 2 cm per year and contributing to the build-up of the Andes, and it also sits on a stationary hot spot – a massive batholith of magma – resulting in the formation of the volcanic islands. The oldest islands are in the east with San Cristobel, the oldest, at 2.4 million years and the youngest, Fernandina in the west, at 0.5 million years. Fernandina is still an active volcano. This partly explains why there are so many different vegetation zones.

The Galapagos is the place where the theory of evolution, by a process of natural selection or adaptive radiation, was formulated by Darwin in 1835. Evolution is proceeding there at an extraordinary speed, which is surprising because living conditions are very tough – the heat is intense because the islands are positioned on the equator, there is little fresh water and the land is largely covered with bare volcanic rock.

There are more unique species in the Galapagos than anywhere else on earth, and there are a number of reasons for this. There are only two ways that animals and plants can get there: by sea or by air. The islands lie at the confluence of three major ocean currents: the Humboldt current



The Red-footed Booby is the only booby in the Galapagos to nest in trees (Photo: David Stickney)

that brings cool nutrient-rich waters up from Antarctica, the Niño Flow bringing warm tropical water from the north, and the Equatorial undercurrent, which is a cool, saline, submarine current flowing eastwards across the central Pacific. Other factors include the isolation of the group from South America, and the distance of each island from the others.

Conservation of the Galapagos is a huge priority for the Ecuadorian government, mainly because tourism provides such high revenue. The area is supported by the second highest conservation effort in the world after the Great Barrier Reef.

The following table shows the number of species recorded on the islands, and the high numbers of endemic species.

	Number of Species	Comments
Mammals	32	25 cetaceans
Birds	152	61 resident species; 28 endemic species, 16 endemic subspecies; 7 species critically endangered
Reptiles	28	19 endemic species
Insects	1700	300 species of moths
Snails	69	All endemic
Plants	600	250 endemic species

There are 14 species of Darwin's Finches in the Galapagos that can be categorised into three groups: ground finches, tree finches and warbler finches. Bill shape is a key distinguishing feature with large, medium and small bills existing within the different groups, and these have developed to suit different food niches. David showed photos of most of these species, and the bill size of the large-billed species was amazingly large. It was interesting that males in many cases were black whereas females were brown-striped.



Large Ground Finch female eating a seed for which the large bill has evolved (Photo: David Stickney)



Small Ground Finch male. This species feeds on the ectoparasites of tortoises and iguanas, which raise their legs to allow the birds access to their undersides (Photo: David Stickney)

One theory is that it was the mockingbirds that Darwin based his theory of natural selection on, rather than the finches. Presumably mockingbirds arrived from America and they have evolved into four separate endemic species on the islands.

David showed wonderful photos of most of the birds on the islands, which was a testament to his single-minded pursuit of birdwatching and photography, and the type of trip he was part of, which catered especially for birdwatchers.

The boobies are probably the most iconic of the Galapagos birds, and we were treated to photos of all three species: Nazca, Blue-footed and Red-footed. David had captured the elaborate clown-like courtship display of the Blue-footed Booby showing stomping, feet-lifting and sky-pointing.

After all the birds, David showed photos of the iconic tortoises, iguanas, sea lions and lava lizards. The tortoises evolved into 16 different species (some people still regard them as subspecies) and Lonesome George was the last of the Pinta Island tortoises, dying in 2012, six weeks after David Attenborough had filmed a story about him.

Marine Iguanas are the only sea-foraging lizards in the world. The species has a remarkable story of evolution. It arrived from South America, possibly on a log, and when it arrived there was not much to eat because it was a rainforest species. The only food available was algae, to which it adapted. Then it had to develop salt glands to help it extract the salt, which it does by spitting.

Some plant photos, mainly of the many types of cactus, and a stunning sunset completed David's excellent presentation.

Wendy Savage



A portrait of a very handsome Marine Iguana
(Photo: David Stickney)

Moonlit Sanctuary Wildlife Conservation Park 21.04.2018

The plan for the day was to meet at the Sanctuary in Pearcedale at 1 p.m. for lunch, some perhaps arriving earlier and 16 staying on for the evening lantern-lit tour.

The Sanctuary had its beginning in 1998 when Michael Johnson fulfilled a long-held dream, buying a 25 acre former farm and setting about restoring the natural habitat. It is now part of the Zoos Victoria network and participates in endangered species programs for Regent Honeyeaters, Orange-bellied Parrots and Tasmanian Devils.

Education is a priority with keeper presentations every half hour. We were kept busy taking in several of these in between wandering around the other exhibits and wetlands. The following are some assorted jottings I found interesting:

Wombats can live for 30 years, travel up to 40 km per hour and excavate burrows to 2 metres. They are capable of crushing the skulls of predators pursuing them down a burrow by standing on their hind legs and ramming the predator's head between their rear bony plate and the roof of the burrow.

Spot-tailed Quolls were found in the Grampians two years ago, after being thought absent for 140 years.

Alpine Dingoes are actually a species of wolf, having permanently erect ears and living in family packs of up to 12, with 1 dominant breeding pair and the whole pack rearing the young.

Laughing Kookaburras are the second largest kingfishers in the world. They live in family groups, for up to 15 years in the wild and 20 years in captivity.

Barn Owls have facial disc feathers and ears that are asymmetrical, assisting in locating prey. They are the most widespread of the owls. A close-up look revealed the most glorious, almost luminous, spotted plumage.

Tawny Frogmouths have weak feet and beaks so they swallow their prey whole.

Wedge-tailed Eagles can lift prey that is 50% of their body weight, and soar up to 2 km above ground for 90 minutes at a time.

Eastern Grey Kangaroos can cover 9 metres in a single bound.

Tammar Wallaby milk contains a protein compound AGG01 that has been shown to be 100 times more effective than penicillin, killing 99% of bacteria and fungi in experiments.

Snakes in Australia include 140 land species, only 12 of which are considered deadly. However, the rarely encountered sea snakes – 32 species – are all to be avoided. A Coastal Carpet Python was held out for patting and felt almost like velvet. They have poor eyesight but notice movement, with the bony structure of the internal ear helping to gauge distance, direction and size of prey. They have jaw bones that move independently, heat-sensing pits along the lower jaw and a forked tongue that connects with the Jacobson's Organ to detect smells, enabling them to track their prey. At the Sanctuary they are fed two rats per month. They can shed their skin up to six times per year.

Koalas sleep for 20 hours per day, are most active from 1-4 a.m. and feed on 10-15 species of eucalypts, changing seasonally. Anatomically they are well adapted for long hours sitting, having a cartilage-plate rump with few nerve endings. They have poor eyesight but a good sense of smell. They start breeding at 4 years, females only being receptive for 1 month, during which time they make small vocalisations, then undergo a 33 day pregnancy, followed by 6 months with young in the pouch and about a year before they leave. Breeding does not occur every year. The loud noises one sometimes hears in the bush are the territorial males. The keeper considered holding the koalas an extremely stressful experience for them, suggesting an alternative of patting them where they are able to move away as they wish. If you think you want to be a koala keeper...every day they count all the poo, each koala producing about 200 scats in 24 hours!

After a nice meal in Pearcedale, we returned for the evening tour. This commenced with an introduction to a Forest Python, with a few of us taking the opportunity to have it draped around our necks; it was surprisingly heavy, with lovely minute sensations of its muscles to be felt as it moved.



Feathertail Glider at Moonlit Sanctuary (Photo: Ken Harris)

Outside we enjoyed hearing the Bush Stone-curlews and Barking Owls calling. Then we entered into an enclosure with Yellow-bellied Gliders, and tiny Feathertail and Squirrel Gliders, which we delighted in feeding nectar to, and they were just as enthusiastic about receiving.

Finally, on our way back to the entrance, various macropods – Red-necked, Tammar and Swamp Wallabies, Red-bellied Pademelons and Eastern Grey Kangaroos gathered around for more petting and feeding opportunities. It was a treat experiencing them holding one's hand ever

so gently while they ate up all the goodies.

Thus ended a delightful visit – an interesting place to take overseas visitors, not as expansive as Healesville Sanctuary but with more interactive opportunities, I think.

Julie Parker

Thank you to Alix

Twelve years ago Alix Williams became the Bird Group Coordinator and continued in this role until earlier this year. Alix has a genius for planning and organisation and the Bird Group benefited from her skills and energy in this area.

Birdwatching dates and places were known well in advance, and access to the EA wetlands was achieved. Alix especially encouraged Field Nats members to join the annual Bird Challenge Count.

We are very grateful to Alix for her enthusiasm and thoroughness, and thank her for her years of service.



WELCOME TO NEW MEMBERS

The Club welcomes Karla Rutherford from Nilma North. We wish you a long and happy association with us.

REPORT ON BUSINESS MEETING 20.08.2018

Finance

Cash Management Trading Account: \$1,777.79 Term Deposit: \$17,219.73

Business Arising, Correspondence & General Business

- Club Spring Camp 19-22 October 2018: Wendy has circulated the program. 17 people booked so far. Trailer won't be required. Dinner likely to be at Templestowe Pub one night, Warrandyte Pub the other.
- Dawson Railway Reserve signage: Meeting with Kylie Singleton (DELWP) scheduled for 22 August 2018.
- Disposal of obsolete speaker and microphone equipment: Possible interest shown by Jay Duncan for her choir, and Julie Parker for a group she knows.
- Talia Duell's request for monitoring projects that might be able to utilise a scent-detection dog and handler: David S will suggest they revisit the idea of Mirboo North forest in September.
- Moths of Morwell National Park book: This has now been printed and Ken will collect copies later this week. Booklet is free for LVFNC members and \$5 for others.
- Club 2019 program planning meeting: Thurs 11 October 2018 at 6pm, David Mules' home in Narracan. Bring a plate.
- Digitising plant lists: Wendy will contact Ken Smith to see how he is placed with regard to working on plant lists. Ken has been very unwell lately and only recently come home from hospital.
- Request from Baw Baw Shire for flora surveys of Uralla Reserve and Rokeby Flora Reserve: Wendy will discuss survey dates for Uralla with the Botany Group. Baw Baw have offered \$300 reimbursement for travel costs, so when completed, an invoice for travel expenses will need to be provided to them. The Botany Group will incorporate the Rokeby survey into their 2019 program.
- Victorian Nature Photographers group has requested interaction with us in May 2019 when they will be camping in the Moe area. They are particularly interested in looking at fungi. Rose will contact them to suggest Morwell National Park for one of their excursions, and suggest they contact Sapphire McMullan-Fisher for a fungi talk or other possible fungi speakers. We'll also offer David M or David S as a guest speaker for one of their nights, on the subject of local birds.
- South Gippsland Plant Group has requested information and advice on camping and excursions at Mt Baw Baw in Jan 2019. Wendy will contact them.

Conservation Matters

- Replacement of bridge on Traralgon-Tyers Rd: VCAT hearing was held last week, attended by Irene Proebsting with assistance from Jay Duncan. A decision will be handed down in Sept.
- Australian Paper Energy-from-Waste project: John Poppins advised he would like to circulate his submission more widely, to the media and other groups. It was resolved that the document John circulates can state that the Club supports and endorses his arguments. Rose will attach copy of John's submission to the August Club email.

Guest speaker for September

Mitch Smith

Mitch is an orchid enthusiast and photographer, and manages a native plant nursery. He has been photographing orchid pollinators for the last 7 years and co-authored a publication 'Orchid Pollinators of Victoria'. He will speak about the unique relationships and interactions that occur between different insect vectors and their respective orchids, many of which are rarely observed.



Guest speaker for October

Ben O'Leary

Ben is a PhD student studying the distribution, population characteristics, habitat requirements and means of spread of the native invader *Pittosporum undulatum*. He is creating a model to highlight areas most at risk of future invasion, and aims to understand the impact of the species on local communities.



Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, should not exceed 1,000 words, and may be edited for reasons of space and clarity. Photos should be sent as an attachment and be a maximum of 1 megabyte in size.

Responsibility for the accuracy of information and opinions expressed in this magazine rests with the author of the article.

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Deadline for articles to be considered for inclusion in the next issue (November/December): 2 November 2018

Latrobe Valley Field Naturalist Club Incorporation No. A0005323T
ISSN 1030-5084 ABN 86 752 280 972

The Naturalist is generously printed by the office of Russell Northe MLA, Member for Morwell