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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



Buds of Mealy Stringybark *Eucalyptus cephalocarpa*, photographed by Ken Harris during the Club's excursion to Holey Plains State Park in March 2022.

Upcoming events

September general meeting: Friday 16 September – Coastal birds of Bayside – Tania Ireton.

September excursion: Saturday 17 September – Mt Worth State Park

Botany Group: Saturday 24 September – Orchids, Won Wron SF.

Bird Group: Tuesday 4 October – Glen Nayook/Rokeby. Meet 9am at Community Hall, Herman St Rokeby.

Club Spring Camp: 7-11 October – Bacchus Marsh

Bird Group: Thursday 20 October – EA Wetlands survey. Meet 9am Morwell Bridge.

October general meeting: Friday 28 October – Insectivorous Bats – Lindy Lumsden

October excursion: Saturday 29 October – Morwell NP

Shorebird identification and ecology

The speaker for our February meeting was Dr Marta Ferenczi who is the Migratory Shorebird Officer for Birdlife Australia. She was awarded a PhD for her investigation into the ecological and environmental factors influencing avian influenza in waterbirds. She has spent her life studying and monitoring shorebirds, so we could not have engaged a more authoritative person to speak on the topic.

Her talk was enjoyable, informative and comprehensive. She began by attempting to categorise what a shorebird actually is, and it turned out to be rather difficult due to the huge diversity within this group of birds; there are many misconceptions about them, including that they all live on the 'shore', they all live near water, they all have long bills or long legs and that they're all grey or brown.



Red-necked Avocet (Photo: David Stickney)

There are 37 species that are referred to as shorebirds or 'waders', some being residents and some migrants. We are only recently beginning to understand just how extraordinary the migratory species actually are. The first question we needed to answer was 'Where do they go?' and it turns out that most of them fly all the way to the Arctic. To get there they use a number of routes called 'flyways'. Our flyway is called the East Asian-Australian flyway (EAAF) and there are multiple routes within this flyway. The Australian shorebirds breed in Siberia, North China and Alaska and there are a number of stopover sites on the way including the Yellow Sea. This stopover, which is surrounded by China, North Korea and South Korea, has been the subject of some controversy recently – the South Korean government has developed part of the birds' feeding grounds and reduced the size of the stopover, despite habitat loss being recognised as a major contributing factor to the decline of a number of migratory species.



Bar-tailed Godwit (Photo: David Stickney)

Using new technology, such as attaching satellite transmitters and geolocator devices to some of the birds, we have recorded some quite extraordinary observations regarding migration. One of the most amazing has been the Bar-tailed Godwit flying from Siberia to Australia non-stop over nine days. The distance was 11,900 km, and a round trip would be 25,000 km because they don't always use the same route. The birds can live for more than 30 years, so in a lifetime they would fly 680,000 km, which is equivalent to flying to the moon and back!

The next question is 'Why do they do this, and how have the birds evolved to fly this great distance?' This has been difficult to answer, but the food supply in the Arctic is abundant during the brief summer while it is scarce during our Australian winter. The birds have a very short time to arrive, display, mate, lay, incubate a brood, defend their chicks and leave. Yet another extraordinary fact is that the parents will stay with the chicks for only three weeks and then start their migration back to Australia, leaving the chicks behind. The chicks must leave within six weeks or freeze, and it is a mystery how they manage to fly unaided to their wintering grounds in Australia. The adults arrive in Australia in September and the juveniles arrive from November onwards.

This epic journey can only be achieved by the physiology of the birds changing before migration; they will increase their heart size and their body mass by 70-80% prior to migration. To put this in perspective, if I weighed 80 kg, I would have to increase my weight to 140 kg – not a very good idea!

The birds have an incredible diversity of food in what is a very simple habitat: worms, molluscs and crustaceans (including a huge variety of shrimps, copepods and amphipods). The different bird species tend not to overlap their feeding because their food source is determined by their bill and leg morphology.



Grey Plover (Photo: David Stickney)

As mentioned previously, there has been a dramatic decline in Australian species due to a number of threats including disturbance and habitat destruction. I was alarmed at the extent of the declines with an annual decline of 8% for Curlew Sandpipers, 6% for Eastern Curlews, and so on with all the migratory waders. These waders were common a few years ago, but are now quite scarce.



Eastern Curlew (Photo: David Stickney)

The second part of Marta's presentation was on bird identification, which she demonstrated using seven families (plovers, snipe, godwits, curlews, large and small sandpipers and shanks). This was very comprehensive and included 78 photographs that were all acknowledged in the final slides. Identifying shorebirds can be very challenging as there are so many similar species with small differences, and many of them also have several plumages including breeding, non-breeding and juvenile. When the feathers are worn, this can also add confusion. Most of the time the basic features such as colour, size and shape are sufficient to identify the species, but sometimes you will get the odd one where you

need to look more closely at the individual markings. Other indications include behaviour such as posture, how they search for their food, calls, and the location and habitat where the birds are observed.

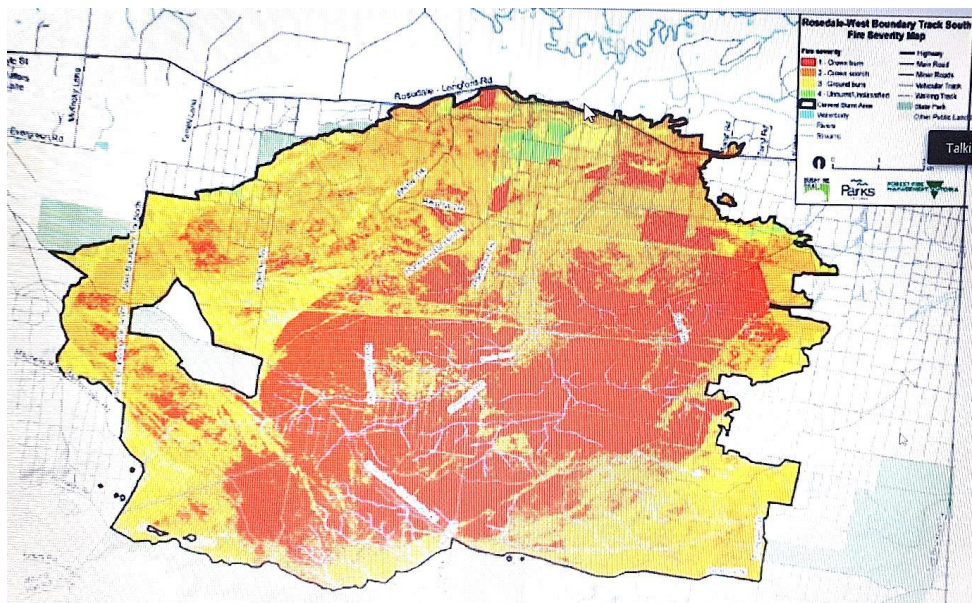
We thank Marta for her clear, logical, and very well-prepared presentation, which made this sometimes challenging group of birds more comprehensible.

David Stickney

Post-fire monitoring at Holey Plains

Our guest speakers on Friday 18th March 2022 were Mary Thorpe and Jess Fraser from Parks Victoria. Mary is a research officer working on post-fire monitoring projects across Victoria, and Jess is a ranger based at Sale.

Jess commenced the presentation with an overview of the bushfire that occurred at Holey Plains State Park between the 4th and 13th January 2019, which started on an adjacent private property. We saw on a map that a staggering 83% of the park (12,182 ha) was burnt, and that 88% of this burned hot enough to scorch or burn the crown of the trees.



Map of the area burnt, with red indicating full crown burn, orange crown scorch, yellow ground burn, and green unburnt.

(Source: Parks Victoria)

Jess explained that, after the fire, there was a Bushfire Rapid Risk Assessment Team (BRRAT) of specialists in geology, flora and fauna that undertook intensive fieldwork over five days to support insurance claims and determine what on-ground works were required.

Funding was obtained from a Native Vegetation Improvement Program to assist the recovery of the Wellington Mint-bush *Prostanthera galbraithiae*, which is widespread in the park but known only from here and Dutson Downs and hence classified as Vulnerable under Victoria's *Flora & Fauna Guarantee (FFG) Act 1988*. It is considered a fire-dependent species, as it begins to senesce after 10-15 years in the absence of fire, however too frequent burns are detrimental. Prior to the burn, there were three fenced plots containing the Mint-bush; initially after it, the plants disappeared, but since then they have recovered well. Seven additional fenced areas have been installed, some incorporating skirt fencing to prevent wombats burrowing underneath. Other threats include competition with *Kunzea*, construction of roads and firebreaks, and the use of herbicides. Sale & District Field Naturalists Club is assisting Parks Victoria with monitoring of the Mint-bush population.

Conservation of the Dwarf Kerrawang is also a focus for Parks Victoria. This plant is Endangered under the federal *Environment Protection & Biodiversity Conservation Act 1999* and Threatened under the *FFG Act*. It grows in moist areas, particularly around several swamps in the park. Due to the water in the swamps receding during dry conditions, the *Kunzea* has been encroaching into the Kerrawang's habitat, and the areas have also become a target for hoon drivers.

The BRRAT report identified specific actions to assist in the recovery of Holey Plains, including native vegetation surveys, weed mapping and control, fox control, and monitoring of fauna using remote-sensing cameras. Mapping of weeds has unsurprisingly revealed that the highest density occurs along tracks. Camera-monitoring of foxes in April-June 2020 detected Long-nosed Bandicoots at two locations, including one in the most severely burnt area, and no cats have been detected. The Department of Environment, Land, Water and Planning



One of hundreds of re-emerging Wellington Mint-bush plants in the fenced plots in March 2020 (Photo: Ken Harris)

(DELWP) has also assisted by grading tracks to improve drainage and reduce erosion.

Mary highlighted that Holey Plains contains 530 flora species, which is one fifth of the total found in Victoria, making it one of the most floristically diverse parks in the state; it has four times more species per unit area than Wilsons Promontory. Eight of the nine Ecological Vegetation Classes (EVCs) present are threatened, as are 19 flora species and 18 fauna species.

In response to the BRRAT report, Mary has developed a longer-term project to gather information on which species recorded historically are still persisting, and whether the fire severity or frequency has influenced species composition (for example, in some areas, Banksias appear to have disappeared, while groundcover plants are growing back strongly). Cameras will be set for 2-3 weeks at a time, with lures to attract small mammals, both at sites where Phoebe Burns used cameras pre-fire to survey for the New Holland Mouse, and at additional sites selected to take into account the different EVCs and burn severity. Phoebe also collected data on White-footed Dunnart and Eastern Pygmy-possum, which have been identified by the BRRAT as at-risk species due to the fire resulting in a loss of regular food sources for higher-order predators, so her data will provide a useful baseline. Habitat structure assessments will be undertaken at the same locations, using a simplified version of Treloar's (2012) methodology. Parks Victoria's aspirations are for the cameras to be deployed at approximately 74 sites across the park, in autumn and spring each year, for 3-5 years.

Parks Victoria will be looking for volunteers to assist its project staff with the fieldwork. Once the project commences, activities will be advertised on Park Connect where anyone can register to volunteer, providing they have a Working with Children Check. Based on my personal experience undertaking similar work, I'd suggest participants would also need a moderate level of fitness to enable them to complete tasks such as walking through the bush across uneven terrain, carrying equipment and hammering in star pickets.

Members of our Club expressed their willingness to assist in providing historical plant and bird lists, undertake bird and moth surveys and identify animals on the cameras, however Mary explained that the scope of this project was quite specific to small mammals and threatened plants, at specific locations, and looking at specific variables. She clarified that she would be manually analysing all of the remote-camera photographs herself, as artificial intelligence programs are currently either too expensive or don't have the capability to identify rarer species. She acknowledged Ken Harris's significant moth findings during his surveys at the park, however noted that unfortunately insects were not included in their assessments as it is difficult to obtain interest and funding for research and conservation of insects.

She said there may be the opportunity to undertake more projects in future, including citizen science projects.

When questioned on why this project had taken so long since the fire to get off the ground, Mary agreed it would have been ideal to start earlier, however this sort of work is reliant on assessments, development of project proposals, and then obtaining funding to implement them. Jess explained that there was also a lot of work required to make the area safe for the public to access, both at this location and in other bushfire-affected areas.

Tamara Leitch

Excursion to Holey Plains State Park 19.03.2022

Our March outing followed on from the previous night's talk with a visit to Holey Plains State Park, looking particularly at the recovery from the devastating fires three years earlier.

Attendance was disappointing, with only myself, Rose Mildenhall and Mitch Smith, but we were delighted to be joined by Mary Thorpe, one of our speakers at last night's meeting. A lot of time was spent discussing with Mary how the LVFNC could contribute to the monitoring of the post fire recovery of the park with particular emphasis on botanical surveys. We also discussed the possibility of ongoing moth and other insect surveys; we already have results from six such surveys from four different sites, all before the fires.

Our visit started at Harrier Swamp. Driving to the swamp, it was interesting to see the degree of recovery apparent. A great many *Banksia serrata* have recovered well and were fully leafed. There were patches where all had been killed, but nearly everywhere there were Banksias, there were new seedlings mostly already 1 to 2 metres tall. These were particularly common in areas where the trees had been killed. Overall they were in great profusion! Dare I suggest that, during the course of the day, we saw literally millions of new *B. serrata*.

The main eucalypt in Holey Plains is the Narrow-leafed Peppermint *Eucalyptus radiata*. The picture for these was similar to the Banksias - many trees were fully foliated, although some had been killed, but new seedlings were also apparent, though not in the same profusion as the Banksias.

Another plant recovering well from the fire is the Sweet Wattle *Acacia suaveolens*. We did not notice mature shrubs, but new plants, often already well over a metre tall, were conspicuous all along the track.

At Harrier Swamp we spotted a group of ants, *Dolichoderus doriae*, at eye level in a *Eucalyptus radiata*.



Dolichoderus doriae (Photo: Ken Harris)

We walked a little way along the track that goes around the swamp and were pleased to see a number of different young shrubs growing well, including *Bossiaea cinerea* and *Monotica scoparia* (coming into flower). One of us spotted a snake basking among the plants and leaf litter. I took a picture, but couldn't see its head nor its side and belly, so identification was difficult. I touched it with my walking stick and it shot out, gliding smoothly but quickly across the track. This gave a momentary view showing that it had a reddish colouring on its lower flanks and belly, but I couldn't say whether it was a Red-bellied Black Snake or a Copperhead. It has since been confirmed on iNaturalist as a Red-bellied Black Snake. Mitch also spotted a Pied Lacewing *Porismus strigatus*, a lacewing not known from the area, but given one was also found in Morwell National Park the next day, it means they are on the wing at the moment and Mitch's identification is probably right. It was around for a time but I was unable to get a good look at it.

We then moved to one of the areas fenced to protect the Wellington Mintbush *Prostanthera galbraithiae*. On our way we saw several Sunshine Wattle *Acacia terminalis* shrubs already in flower (it is the earliest Acacia to flower in our area). As we neared that site we saw large numbers of Austral Grass-trees *Xanthorrhoea australis*. Few had been killed by the fire and quite a number had clearly had recent flower spikes, although only a few from this year. The Mintbushes have come back well; when

we visited soon after the fires, there was no sign of them – the earth was almost bare. Large numbers of healthy plants to a metre tall are now inside the fence and even several plants outside the fence. There were also a lot of plants of Woolly Xanthosia *Xanthosia pilosa*, and a *Banksia marginata* inside the fence was in flower.

We then drove to the Merrimans Creek Picnic Area, where we ate our lunch. This is one of the few areas of the park that were missed by the fire and it was good to see a lot of healthy natural vegetation. Silver Wattle *Acacia dealbata* and *Melaleuca ericifolia* both grow beside the creek. Sweet Bursaria *Bursaria spinosa* was also plentiful. In the grass around the picnic area I looked for bird-orchid leaves (at least two species have been seen there previously). I found a few plants newly emerging, but showing flower buds between the pair of leaves, so at this time of year it seems likely that they are the Autumn Bird-orchid *Chiloglottis reflexa*. I also found Kidney-weed *Dichondra repens* and Slender Bottle-daisy *Lagenophora sublyrata* (a new name for me – I still knew it as *L. gracilis*).

After lunch Mary left us, but the rest of us made one last visit to Holey Hill. On the way there, halfway along the Holey Hill Track we found a eucalypt in full flower. At first I assumed it to be *Eucalyptus radiata*, but it was pointed out to me that its buds were in groups of 7 (*radiata* has 7-20 buds per cluster) and it lacked the peppermint scent when the leaves were crushed. I spent a lot of time trying to identify it and was surprised when (on iNaturalist) it was identified as the Mealy Stringybark *Eucalyptus cephalocarpa*.



Thynnid wasp and mate (Photo: Mitch Smith)

Reaching Holey Hill, we found a number of small plants that had survived the fire, but were disappointed to find that the nature walk appears to be closed. We certainly were unable to locate the start of the track. Among the plants we found in flower were the Yellow Rush-lily *Tricoryne elatior* and the Cranberry Heath *Astroloma humifusum*. Mitch spotted and photographed a very interesting wasp. Mitch says:

“We watched a male Thynnid wasp (Tentative ID: *Lophocheilus sp.*) home in on and couple with a female that had positioned herself on a seedling Black Wattle. It took some time to grasp

and fly off with her and we saw another female close by, which in my observations often causes confusion and puts the male in two minds and seem clumsy”.

Mitch also photographed three different bees and one other Thynnid wasp that was similar to, but not the same as, a male *Diamma bicolor*. *D. bicolor* is familiar to many of us, the flightless female being often called a bluebottle or blue ant (though much larger than any true ant). She is a bright, metallic blue with orange-red legs and is around 2.5 cm long. The male is smaller, winged, and much less likely to be noticed.



Thynnid wasp similar to *Diamma bicolor* (Photo: Mitch Smith)

The presence of these various bees and wasps is a healthy sign so soon after such a devastating fire.

Ken Harris

All photographs Ken took during the excursion can be viewed here:

https://www.inaturalist.org/observations?on=2022-03-19&place_id=any&subview=table&user_id=kenharris&verifiable=any

The Fawn Vegetable Caterpillar *Cordyceps hawkesii*

This species of fungus appears above the ground as a stubby club with a creamy-brown head and stem. The spores are ingested by the larvae of Swift Moths *Oxycaenus sp.* which live underground but surface at night to feed on plants or litter. The body of the moth larvae becomes filled entirely with the mycelium of the fungus, but still retains its outer shape (Reference: *Fungi Down Under* by Pat & Ed Grey).

These specimens were photographed by Alix Williams at Wirilda Environment Park on 4th June 2022 during a Fungi excursion that Eileen Laidlaw led for the Friends of Tyers Park. Alix found more there on 25th June.



During their July 30th excursion to Morwell National Park to look at mosses and liverworts, the Botany Group were very excited to welcome back Wendy Savage after months of absence due to ill health (Photo: Joelle Champert)

REPORT ON BUSINESS MEETING 22.08.2022

Finance

Operating Account: \$2,954.70 Term Deposit: \$22,184.89 (matures 17 Jan 2023)

Business Arising, Correspondence & General Business

- Gippsland FM Radio – Ken was scheduled to speak on Morwell National Park, however his internet connection kept dropping out, so Jay and Joelle were interviewed about the Bird Group. Ken's segment will be repeated 18 Oct at 12.30pm. Next scheduled date would be 22 Dec; Phil will ask if we can skip this and return in 2023
- Planning for SEANA Spring Camp 2023. Preference one: 20-22 Oct 2023. Yarram Country Club is the likely venue. Dave Akers from Friends of Tarra Bulga NP has agreed to speak.
- Planning meeting to be held in November at Moe Library.
- Christmas Party to be held at Jay and Joelle's home.

Conservation Matters

- Hazelwood Mine rehabilitation – Irene submitted objections to filling the mine with water, and also sent report about the Yallourn Energy wetlands. David to follow up.
- Tyers Road bridge replacement – Flooding has stopped work at the moment. Platforms are being put into the river, concrete pylons are being driven in.
- Mirboo North Immediate Protection Area – Final report on the future of this area has been tabled in parliament and is now with the relevant Minister; she has six months to respond.
- We voted to accept an invitation from lobby group Regional Victorians Opposed to Duck Shooting to have our Club added to the list of signatories on a letter to politicians.
- Logging has currently stopped in the Boola Boola State Forest while court case centring on Greater Glider presence is underway.
- If you find relatively intact dead Ringtail or Brushtail possums, including roadkill, please collect them, label as per <https://www.facebook.com/nick.carter.94043> and pop into the freezer, then contact Deakin University Powerful Owl Research Team (Nick Carter nbca@deakin.edu.au). There is a study underway to test the bodies for rodent poisons. They will arrange collection.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalists 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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