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FROM THE
 PRESIDENT
**Patrick
 Flanagan**

ACTIVITIES ON HOLD – AGAIN!

After a brief respite during which we fitted in a walk at Ironbark Gorge and weeding on the O'Donohues heath, we have had to suspend activities again. The recent increase in Covid-19 cases in Victoria has meant Parks have had to re-impose restrictions on volunteering in the Park that has put a stop to our planned activities, such as our, now twice-postponed, visit to Jamiesons Track, weeding in the Park, face-to-face committee meetings and our camera monitoring program.

However, as individuals, we have been out and about in the park and the early signs indicate a spectacular season for wildflowers and orchids on the Anglesea Heath and the Eastern Otways. In the article below, Margaret reports on the recent observation of a single, endangered Winter Sun Orchid. Slaty Helmet orchids are widespread and discoverable by the observant searcher. The various early greenhoods are present in good numbers, and while Mosquito orchids have mostly finished flowering the other orchid in the *Acanthus* genus, the Mayfly Orchid is beginning to emerge in good numbers. If you are able to get out and about, let us know about your recent finds!

FOUND AND LOST – AN EXCITING DISCOVERY WITH A SAD ENDING



You never know what you will stumble across when walking in the Anglesea heathlands within the Great Otway National Park, and this was indeed the case when Alison and Phil Watson discovered an unusual plant standing erect about 15cm high in a cleared area amongst other vegetation. The plant was bearing three flowers – unfortunately one had finished flowering and the other two buds still needed time to develop. However, there was enough apparent for us to identify the plant as the Winter Sun Orchid *Thelymitra hiemalis*. It is a very rare orchid listed as endangered under the Vic. Flora & Fauna Guarantee Act 1988 – Threatened List Nov. 2019.

The name Winter Sun Orchid is almost an oxymoron. This winter-flowering species does not need sun to convince it to open, with the flowers opening partially even in cold wet weather, but never seeming to open widely. It can be identified by the winter flowering period and the spotted blue and green flowers with fairly long, narrow, often twisted petals and sepals. It was indeed a great find as very few of these orchids have been found in the area.

We have single records only for September 2004, and again in 2011 and 2012. Sadly, our excitement was short-lived. It appears a bird may have nipped off the undeveloped flower buds leaving them at the base of the orchid for us to find. We were certainly disappointed. It may flower again next year and we will be on the look-out with a cage ready to place over the plant should it emerge. **Margaret MacDonald.**



At left from top: An exciting find, the Winter Sun Orchid showing the almost-finished flower and two buds. The nipped-off buds at the base of the orchid. Above, centre and below: The Winter Sun Orchids found in 2004, 2011 and 2012.





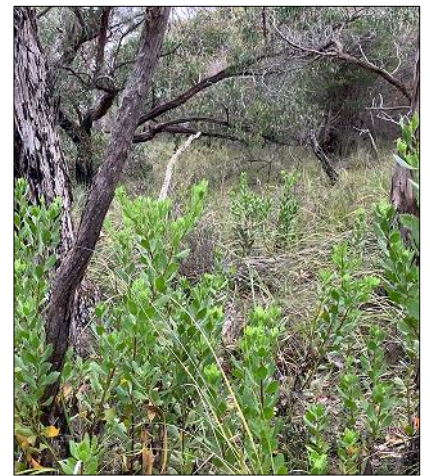
Above: A dedicated band of weeders tackled Bluebell Creeper and Boneseed in two recent forays. Right: Chopped - the Boneseed infestation on the O'Donohue heathlands.

TWO IS BETTER THAN ONE

We managed to better our autumn program by completing two sessions before our weeding program came to a sudden halt once again due to the COVID-19 stage 3 restrictions. Both sessions were limited to 10 participants and it seemed so wrong to turn helpers away.

Our first session tackled the very invasive Bluebell Creeper along the Surf Coast Walk within the Great Otway National Park at Urquhart Bluff. This is a particularly difficult weed to eradicate as it tangles and intertwines with the indigenous vegetation. It is a native to Western Australia, and a very beautiful plant, but is not welcome in our area where it certainly thrives.

The June session concentrated on a thicket of Boneseed, a plant from South Africa, that had emerged following the recent burn on the O'Donohue heathlands. Removing Boneseed is an enjoyable and rewarding experience. If the soil is damp and the bushes not too large they pull easily, and they are also quite easy to cut with loppers. We intended to return on August 11 but this has been put on hold until later in the year, if restrictions are lifted. **Margaret MacDonald.**



Above: The socially-distanced Working for Victoria crew are (from left) Alex, Blake, Dan (Crew Leader) Aiden, Owen and Maddie. Right: Yellow dots in the distance – the crew scaling Urquhart Bluff in search of invasive weeds.

‘WORKING FOR VICTORIA’ HELPS OUT

The Friends' weeding efforts have received a recent boost from a keen, young, fit, agile and strong, team who are part of a State Government initiative called 'Working for Victoria'. The crew of six, has been available for environmental work on the Bellarine Peninsula and the Surf Coast to give recent graduates from environmental programs valuable practical experience. We have used the crew for 5-days of weeding to help clear Boneseed and Blue-bell Creeper from Urquhart's beach carpark to Sunnymeade beach, along the Surf Coast Walk and in the, sometimes very steep, gullies and hillsides between the walking track and the coastline.

difficult, or even impossible for us to get out unassisted. They have also benefitted by obtaining valuable experience in on-ground environmental repair, while enjoying the special environment of that very scenic part of the coast. We have educated them in the orchids and other wildflowers along the track and they have been wowed by the sight of Southern Right Whales breaching offshore from Sunnymeade, while sitting on the clifftop eating their lunch.

There is still more to do, but we have broken the back of the weed work. We are hopeful that they can return for some extra days to mop up and finish the valuable work they have made great inroads into. Because other groups apart from the Friends have also recognised the value of the work the crew can do, there is great call on their time and we, at this stage, can only hope they can fit us into their increasingly busy schedule. For their part, they are keen to return and finish off the work they have done so far and I've noticed they have established a sense of ownership of the area they are working in and want to complete the task they began. **Patrick Flanagan.**





FRIENDS' ACTIVITIES SINCE OUR LAST NEWSLETTER



ANNUAL KOALA COUNT – June 20

There was a possibility that the annual koala count would be cancelled due to the Covid pandemic. However, we were able to proceed but with a limit of 20 people observing social distancing, etc and 17 people made their way to Kennett River picnic ground at Grey River Road for morning tea. The count began at the start of the Great Otway National Park. As in previous years, we made our way slowly, looking on both sides of the road for koalas. In the two kilometres to the turning point, 23 koalas had been found by the group. After lunch, spent on the ridge overlooking Grey River settlement and the ocean, we walked back along the powerline section.

The tally of 33 was the second lowest number of koalas we have found in all the counts conducted over 22 years - in 2018 we had a total of 31. The reason for this is unclear, there could be a number of factors. We did notice however that along the powerline ridge, the eucalypts on the western side were very heavily foliated. It was almost impossible to see any koalas through the dense clusters of leaves. The trees have certainly recovered over the past couple of years. We were fortunate the day turned out fine and mostly sunny in contradiction of the forecast for showers and storms, and conditions were ideal for a walk in the forest. Other wildlife included a small group of kangaroos and a pair of Wedge-tailed Eagles circling above the group. It was a very pleasant day, and I'm sure everyone enjoyed the experience. We were especially pleased to have the company of five small children. They were enthusiastic



and proved to be good koala spotters. We also welcomed new Friends Tiffanie and Michael. **Kaye Traynor.**

IRONBARK GORGE WALK - July 18

Due to restricted numbers it was a small group that set out on the Ironbark Gorge Walk on a chilly morning. In the Distillery Creek carpark, we marvelled at the thick carpets of blossom that the rowdy cockatoos had dropped. Along the track it wasn't long before we noticed the Mosquito Orchids with their heart shaped leaves. A few Tall Greenhoods were in bud. The Spreading Wattle was starting to flower. We enjoyed the views across the gorge and realized we had been steadily climbing.

Birds were difficult to see but we recognized the 'Egypt' call of the Crescent Honeyeater. There were lots of Eastern Spinebills flitting in and out of the trees, and no doubt enjoying the flowering Correa, which Geoff Carr is in the process of renaming as a separate species. At the bridge we stopped for morning tea and enjoyed the still pools below us. Going back along the shadier side of the gully we noted the numerous ferns, mosses and lichen, and also various fungi. We finished the morning with lunch around the picnic table.

Alison Watson.



Above: Mosquito Orchids catch everyone's attention. Below from left: A 'wall' of small ferns, mosses and lichens; our local Correa and one of the many types of fungi observed.





Above: Neil Anderton, Victorian Herbarium and Margaret MacDonald collecting the seedpods.

SAVING CALADENIA MARITIMA FROM EXTINCTION

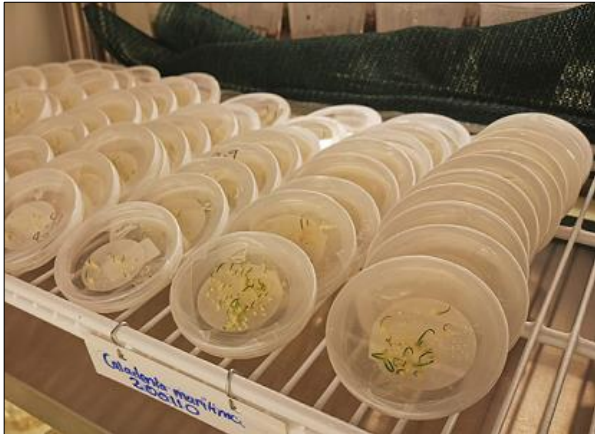
Following our story regarding *Caladenia maritima* Angahook Fingers in our November 2019 Newsletter, we would like to continue the story of the effort to save from extinction this highly endangered orchid that grows only at Anglesea within the Great Otway National Park. After the initial collection of the relevant fungus and the cross pollination of 40 specimens when the orchids were flowering in September 2019, the 10 surviving fertilised seed pods were collected on November 9.

The seed pods were taken to the Royal Botanic Gardens Cranbourne, where efforts were made to cultivate *Caladenia maritima* in their sterile conditions. Some of the seed and fungus has been stored in the RBG seed bank as a guarantee to conserve the species, while the remainder has been grown symbiotically with the mycorrhizal fungus. The results have been outstanding, with higher than expected germination – over 300 seedlings have appeared.

Once these orchids have developed it is anticipated that some of them will be introduced into possibly two new sites in the Anglesea heathlands where hopefully *Caladenia carnea* Pink Fingers cannot cause hybridisation problems as has occurred in our initial site where we had so many orchid hybrids in 2019. The remainder will be maintained at Cranbourne for future study of pollination and to ensure the orchid does not become extinct in the future.

The Friends would like to congratulate all the people who have contributed to the success of the project to this stage and to thank them for the efforts in conserving our special orchid which is endemic to Anglesea. We will continue to be involved in this exciting project.

Margaret MacDonald.



Above: *Caladenia maritima* grown from the collected seed.
Below: Royal Botanic Gardens volunteers.



Above: One of the 10 surviving seedpods collected in November last year.



Above: The endangered orchid, *Caladenia maritima*.

Below: a hybrid orchid resulting from *Caladenia maritima* and *Caladenia carnea*, Pink Fingers.





"FRIENDLY" NEWS

Hi Friends,

This is a snippet from a longer blog I wrote about a 'bioblitz' challenge I participated in with some other keen naturalists in early August, basically, we made as many observations of biodiversity as possible and uploaded to iNaturalist. If you would like to read the whole thing it can be found here: <https://greatsouthernbiobl.wixsite.com/website/post/the-mid-winter-extreme-weather-sore-back-bioblitz-pete-s-highlight-of-2020>

After weeks of blue-sky days and mild conditions that have inspired some really early flowering amongst the heathland and early mating and nesting behaviour in the birds in my backyard, the weather showed the full force of a coastal winter. Each day around a 10-degree maximum, with driving rain and southerly blasting winds.

Despite these limitations, things started off pretty well, my teammates exploding off the mark with an impressive number and variety of



Above: *Araneus senicaudatus* and below, *Eriophora biapicata*, two species of Orb-weaving Spiders.



observations, I managed to go out in the evening and take pictures of spiders I had never noticed in the backyard before. The next night I went out to Moggs Creek and recorded Grey-headed Flying Foxes, Yellow-Bellied Gliders, all the while walking on a pretty pathway of flower blossoms due to the prolific flowering of the Red Ironbarks and the destructive practices of Sulphur-crested Cockatoos and the flying foxes.

Heading out in rainy and cold windy conditions for a second night was an interesting choice, but that was the only time the tide would be low and allowed me to access the richness of the

intertidal shore. I visited one of my favourite areas, the Eagle-Rock Marine Sanctuary in Aireys Inlet. Needless to say, I was the only one around after dark, but there was no shortage of animals and rockpool critters still to be found. I was able to get some of the best photos I have ever taken of crabs and seastars, including the huge Eleven-armed Seastar eating my favourite crab species, a Seaweed Decorator!

Some of the stats from our bioblitz - the 5 of us managed to see 122 species of birds, just 9 species of mammals, 32 spiders, 173 insect species, a massive 236 species of molluscs (sea snails), and a staggering 753 species of plants.

If you would like to make observations and contribute to a large bioblitz coming up in September, hopefully when the weather warms, the flowers are out and the animals have emerged, please join us for the Great Southern Bioblitz (GSB) September 25-28. To learn how to use iNaturalist to document your nature observations, there are free webinars coming up.

GSB Team - 29 August, 3.30pm: <https://www.eventbrite.com.au/e/using-inaturalist-for-the-great-southern-bioblitz-tickets-116405296375>
Cranbourne Gardens - 3 September 7pm: <https://www.eventbrite.com.au/e/inaturalist-training-tickets-116375404969>

'Possum' Pete Crowcroft, Peter.c@gorcc.com.au

Below: Eleven-armed Seastar *Coscinasterias muricata*, eating a Seaweed Decorator Crab *Notomithrax ursus* at Aireys Inlet.



Above: Spotlight on a carpet of blossoms at Moggs Creek.



Above: Purple Mottled Shore Crab *Cyclograpsus granulatus*.





Above: Powerful Owl. Greg Sharkey, Wikimedia Commons.

SWIFFT SEMINAR FOCUS ON POWERFUL OWL

The focus of the July SWIFFT seminar was on Urban Ecology, and the talks covered topics such as linking landscapes and community through wildlife gardening, empowering the next generation in Landcare in Greater Sydney, and embedding ecology and biodiversity in urban parks. Nick Bradsworth's presentation on 'The Decline in apex predators - Spatial ecology of Powerful Owl' was fascinating and informative. He is undertaking research into Powerful Owls *Ninox strenua* in the Yarra Ranges area, studying their behaviour and movement through the urban landscape.

Nick discussed the loss of most of our apex predators. The Powerful Owl is Australia's biggest owl and is listed under the FFGA. As well as habitat loss and lack of suitable hollows, increased urbanisation has led to more being hit by cars. Their needs include an area with sufficient prey (they can take 250-300 possums per year), a roost site which is structurally diverse, and a large nest hollow for winter breeding. It is a challenge to find these birds which have an average 630 ha per pair (6.38 km) urban range and can travel 4.6 km a night. In forested environments the range can be 2-3000 ha per individual. Nick said that he spends more time looking at the ground initially for signs such as whitewash, distinctly barred feathers and regurgitated pellets to find the roost; the best time to go out was when there was no moon or wind.

He set up a net at dusk and attached GPS trackers to 20 individuals to record their movements. Three types of movement behaviour were recorded—prey handling where there was little movement, medium movement for foraging, and transitory

movement-long movement length. He found that riparian vegetation was important and links to areas with good tree cover. The roost can be either mid storey or canopy. The trees used were interesting in that pines, and deciduous oaks and willows were often used as roosts though not in winter! A roost needs to be dense, such as Cherry Ballart. Some individuals use only two tree species, others up to eight. The height of hollows about ground varied up to 30 metres, about two metres deep and half a metre round.

Citizen science is important for adding to the information collected. Any sightings of Powerful Owls should be reported to Birdlife Australia who collect the bird data, and care should be taken not to disturb breeding birds. Nick's talk encouraged me to think about Powerful Owls in our area. Years ago they were seen at Distillery Creek. From the Geelong Field Naturalists Club *Bird Report 2013-2016* and more recently in our area, they have been recorded in Gherang, Bellbrae and Ironbark Basin where a breeding pair was seen in December 2015-January 2016. For more insight into the work being done with Powerful Owls listen to the ABC Off Track 'Owl with Attitude' podcast on-line. SWIFFT seminar notes are all available at swiff.net.au. **Alison Watson.**

ANGAIR VIRTUAL SHOW

ANGAIR is working on putting their Annual Wildflower show online, and the Friends are exploring to contribute to this effort. Initial thoughts are that we will update the animation created from our camera monitoring activities, that we present usually at the Show, and the pages of the Friends' Yearbook and both will be put up online as part of the virtual show. For more information about the virtual show and the Friends contribution go to the ANGAIR website (angair.org.au) closer to the show date 19-20 September.

Below L-R: Friends caught on candid camera at our June and July activities. At the Koala Count - Phil the photographer snapped; the Friends hang out the shingle; 'hey look, there's one up there!'; Graeme in the old tree during the Ironbark Gorge Walk.

BANDICOOT BANDIT

While we are waiting for approval to place cameras in the Park again, Marg Lacey borrowed some to put in her garden in Aireys Inlet to find out what was eating the vegetables in her new wicking bed and making conical holes in the garden. Along with Black Rats and Common Brush-tailed Possums, the cameras captured this Long-nosed Bandicoot.

This sighting adds to other reports by local residents, including member Deborah Penrose, of bandicoots in the interface between the cliff top at Aireys and the fringing gardens.





WHAT AUSTRALIAN BIRDS CAN TEACH US ABOUT CHOOSING A PARTNER ...

Author Gisela Kaplan, University of New England, article published in *The Conversation*.



Love, sex and mate choice are topics that never go out of fashion among humans or, surprisingly, among some Australian birds. For these species, choosing the right partner is a driver of evolution and affects the survival and success of a bird and its offspring. There is no better place than Australia to observe and study strategies for bird mate choice. Modern parrots and songbirds are Gondwanan creations; they first evolved in Australia and only much later populated the rest of the world.

Single mothers and seasonal flings

For years, research has concentrated on studying birds in which sexual selection may be as simple as males courting females. Males might display extra bright feathers or patterns, perform a special song or dance or, like the bowerbird, build a sophisticated display mound. In these species, females choose the best mate on the market. But the males do not stick around after mating to raise their brood. These reproductive strategies apply only to a tiny proportion of birds worldwide. Then there are 'lovers for a season' accounting for another small percentage of songbirds. Males and females raise a brood together for one season, then go separate ways.

Birds that stick together

But what about the other birds – those that raise offspring in pairs. More than 90% of birds worldwide fall into this 'joint parenting' category - and in Australia, many of them stay together for a long time. Indeed, Australia is a hotspot for these cooperative and long-term affairs. This staggering figure has no equal in the animal kingdom. So how do long-bonding Australian birds choose partners, and what's their secret to success?

Lifelong attachment

In native birds that form long-lasting bonds, including butcherbirds, drongos and cockatoos, differences between the sexes are small or non-existent – that is, they are "monomorphic". Males and females may look alike in size and plumage, or may both sing, build nests and provide equally for offspring. So, how do they choose each other, if not by colour, song, dance or plumage difference? There's some research to suggest their choices are based on personality. They may, for example, be gentle, tolerant, submissive, aggressive, confident, curious, fearful or sociable. But it seems similarities or familiarity, rather than opposites, attract. There is practical and scientific proof to support this approach. In breeding contexts, seemingly incompatible birds may be forced together. In such cases, they are unlikely to reproduce and may not even interact with each other. For example, research on Gouldian finches has shown that in mismatched pairs, stress hormone levels were elevated over several weeks, which delayed egg laying. Conversely, well-matched zebra finch pairs have been shown to have greater reproductive success.

More than just sex

Bird bonds are not always or initially about reproduction. Most cockatoos take five to seven years to mature sexually. Magpies, apostlebirds and white winged choughs can't seriously think about reproducing until they are five or six years old. In the interim, they form friendships. Some become childhood sweethearts long before they get 'married' and reproduce. Socially monogamous birds, such as most Australian cockatoos and parrots, pay meticulous attention to each other. They reaffirm bonds by preening, roosting and flying together in search of food and water. Even not-so-cuddly native songbirds such as magpies or corvids have long term partnerships and fly, feed and roost closely together.

All in the mind

Bird species that pair up for life, and devote the most time to raising offspring, are generally also the most intelligent (when measured by brain mass relative to body weight). Such species tend to live for a long time as well – sometimes four times longer than birds of similar weight range in the northern hemisphere. So why is this? The brain chews up lots of energy and needs the best nutrients. It also needs time to reach full growth. Parental care for a long period, as many Australian birds provide, is the best way to maximise brain development. It requires a strong bond between the parents, and a commitment to raising offspring over the long haul. Powerful hormones that regulate stress and induce positive emotions are well developed in both humans and birds. These include oxytocin (which plays a part in social recognition and sexual behaviour) and serotonin (which helps regulate and modulate mood, sleep, anxiety, sexuality, and appetite). The dopamine system also strongly influences the way pair bonds are formed and maintained. Birds even produce the hormone prolactin, once associated only with mammals. This plays a role in keeping parents sitting on their clutch of eggs, including male birds that share in the brooding. *Photos: Gisela Kaplan, Bobbie Marchant, Robyn Burgess.*



Hello everyone,

I hope that all the Friends members are well and are staying safe. As you are all aware, Regional Victoria has reverted to stage three restrictions due to the recent COVID-19 outbreaks. This means that the Great Otway National Park has been closed. Whilst, camping, picnics and people congregating is not allowed, local exercise is still permitted. For the Friends members that live locally, I hope that you are still enjoying the opportunity to go for a walk, surf, or bike ride in the park. Personally, I find it important to go out into nature during these



times, it helps with my mental health to appreciate nature. For the Friends who are in metropolitan Melbourne, I hope you are staying safe and I have included some photos from the park to help with the lockdown blues.

Firstly, a bit more on the current restrictions and what it means for the Great Otway National Park. All our campgrounds and picnic grounds are closed for activities that encourage congregation. This means that campgrounds along with BBQs and picnic facilities (i.e. tables) are closed. However, walking tracks and beach access points remain open for local exercise. Furthermore, toilets at trailhead locations will remain open, such as the picnic grounds at Distillery Creek, Moggs Creek and Sheoak. Sadly, another aspect of stage 3 restriction is that Parks Victoria have postponed or cancelled all volunteer activities. I hope this doesn't discourage you from joining Friends of Eastern Otway activities. Once restrictions lift, I am sure the committee will have a full program planned. I also apologise for having to cancel our Jamieson Creek Walk for a second time, hopefully the third time is lucky.

A blast of cold

Like a lot of areas in Victoria, the Great Otway National Park experienced a blast of Antarctic weather, which resulted in some wonderful snowfalls. In Lorne snow covered much of the National Park higher on the range including Erskine Falls. Consensus from everyone who got out to enjoy the snow was that Mt Cowley was the best viewing spot. Snowfall is always a wonderful reminder of how diverse the Victorian landscape is, and how incredible our plants and animals are to live here.

From snow to fire

Some of the Friends may have noticed over the last few months that Parks Victoria and DELWP have been doing small scale burning in the open heath areas of the Otways. The last of the burns have now been wrapped up. Unlike our fuel reduction burns that happen every spring and autumn, the winter burning program is less focused on protecting townships, and more on trying to foster complexity in structure and age within the heathland plant communities. Some of the areas in the winter program have not burnt since the Ash Wednesday bushfires. It will certainly be interesting to see how our heath will respond to this type of burning. One aspect I have noticed is how much is growing back in these areas already and how much green is present after the fires. Hopefully, we can see a response in orchids in the coming years.

For those of you who are trapped inside, here is a nice picture of a Leopard Orchid I saw whilst weeding next to the Eumeralla Scout Camp.



Above: Winter burning to foster complexity in heathland species.
Below: Construction of the Salt Creek Walk begins.

Salt Creek Walk

The first stages of construction of the new Salt Creek Walk have started in the Anglesea Heath. With the help of the 'Working for Victoria' crew, Parks Victoria staff have been removing a lot of very old tree guards from old revegetation areas. Having walked some of the proposed track, I think any naturalist will enjoy it. There is a good collection of different plant ecological vegetation classes, and terrific potential for bird watching. It is also nice to see that the walking track will make good use of an old fire track and not create further disturbance.

Thank you to all the Friends and stay safe. Hopefully we will be out in the Great Otway National Park soon. **Matt Russell, Ranger, Lorne.**

