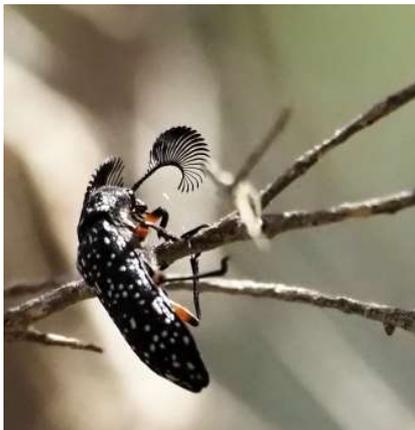


FEATHER-HORNED BEETLES

By Angela Kirsner, photos Sue Brabender

Sue Brabender, our spotter and snapper of so many local birds and bugs, found these splendid spotted beetles flying around the boardwalk in early March. Most aptly named Feather-horned Beetles (*Rhipicera (Agathorhapis) femorata* Kirby), it is their over-size, fan-like antennae, much larger in males than females, that distinguish them.



Despite their distinctive appearance, the beetles are only 15-25 mm long.

They are part of the family *Rhipiceridae*, Cedar Beetles, also known as Cicada Parasite Beetles. In North America, larval *Rhipiceridae* are ectoparasites on cicadas (that is, they live *on* rather than *in* the body of the host). And while there has been little research on the six known species of *Rhipiceridae* in Australia, it is thought that the larvae of our Feather-horned Beetles, *R. femorata*, are probably also parasitic on larval cicadas.

If you are lucky, the adult beetles can be seen emerging from the ground. It's captured on a delightful video clip at vimeo.com/262134600, taken by a talented citizen scientist in

the Albury-Wodonga region, Karen Retra (for her article and more fascinating insect blogging, see karenretra.com/home/rhipicera).

Observations suggest they emerge *en masse*, complete their mating and vanish again all within ten days or so. This has been recorded as happening in spring in north-eastern NSW, but both Sue's and Karen Retra's observations were in March, and we also have March photos of them



Photos by Sue Brabender

from some years ago in the Balcombe reserves.

The males' elaborate antennae are, it seems, used to detect the scent of females, probably via a pheromone they release when ready to mate.

It seems also that males considerably outnumber females. Retra observed that 'At least some females mate with more than one male. Indeed, some attracted a throng of males.' Then they rested! 'After the busy flying (and mating) period, by early to mid-afternoon, the beetles would take shelter and cease flying.'

They are found across south-eastern and south-west Australia.

TRACKING OUR EELS

Bruce Ferres reports

As reported in the *The Creek* in February, the EstuaryWatch team is assisting in a new study of Short-Finned Eels by scientists at the Arthur Rylah Institute (ARI).

Eel species are threatened worldwide, almost fished out, but Australia has the greatest number remaining. The researchers hope to find out more about eel movements, predators, and breeding habits, to help find ways to protect the species.

They plan to fit mature eels with electronic transmitters, to track their epic migration north to spawn and die. Individual eels have previously been tagged at the start of their journey, then caught nearly 4,000 km away in the Coral Sea, but little is known about the journey itself.

Interestingly, while eels from east of Melbourne are known to migrate generally up the east coast of Australia, the ARI researchers have found that eels from Warrnambool tend to go round the south and east of Tasmania. It's faster and easier for them to join these deep, warm currents that then head north, and the increased depth also allows them to dodge some of their predators.

Waiting for the new moon

Eels are thought to start their migration in mid-autumn, around new moon, when the nights are dark.

Continued next page

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Tracking our Eels *continued*

The researchers hope to capture and tag around six adult eels before they set out from Balcombe Creek, as well as some eels in other waterways.

Our part in the study has been to report on the condition of the estuary mouth in the lead-up to the proposed capture dates.

Preparing for the journey

The first step in an eel's migration is to move downstream and spend some months adapting to the more saline estuary water. They feed voraciously, as they will live off their fat on their journey. Then they stop eating, their digestive organs shrivel, their eyes enlarge so they can see deep below the ocean's surface, and their bellies turn silvery.



Now known as 'silver eels', they are ready to head out of the estuary and into the sea.

Eel capture!

To catch the eels, the researchers are using Fyke nets – fish traps with wide wings that guide the eels towards the entrance of a cylindrical net bag. The nets are set at dusk, to remain in place for several hours.

'We've been mostly targeting the broad shallow area downstream of the bridge,' said researcher Dave



Dawson, 'but we also had a few nets upstream of the bridge.'

Wayne Koster, who is leading the study, was at Balcombe Estuary with his team around new moon in mid-March. And in this first round of netting, the team caught and tagged three eels in Balcombe Estuary.

They had been hunting for eels in a number of waterways over many nights, but Balcombe Estuary was the only place they had succeeded.

Will there be more?

The researchers were back in Mt Martha in the week after Easter, hoping to tag another three eels. Liz was there to watch the nets go in,

but we have yet to hear the results.

With the berm partially open since late March, many eels may have begun their migration. The researchers hope, however, that many more may still be transforming into silver eels, a change that must be completed before they set off.

Above and below: Dave Dawson, of ARI, inspecting eels captured in Fyke nets set in the estuary basin. These photos were taken early in 2020, in preparation for the start of the study, which had to be postponed due to COVID.

Photos by Andy Geschke.

Left: Justin, from ARI, feeding a Fyke net into the estuary on 6th April Photo Liz Barracough



ESTUARYWATCH

Bruce Ferres reports

The estuary mouth was closed by a substantial berm for most of February, and with unusually low rainfall, estuary water levels changed little.

March brought increased rainfall and some strong long-shore winds, making the mouth more dynamic. It opened on March 25th and remained open into April, so water levels in the estuary basin have ebbed and flowed with the tides. This set up near perfect conditions for eels preparing to migrate.

Estuarine water quality

In February, in the upper reaches of the estuary the top layer of water was fresh, with a salt wedge at about 1m, but water in the estuary basin was consistently salty. pH readings were more acidic than usual; we are monitoring this. Other parameters through February and March were largely within normal limits, with a couple of exceptions:

- Dissolved oxygen readings at the lowest levels were very low in February, with a smell of sulphur dioxide when fine bottom sediments were disturbed. In



After a wide berm had been in place for several weeks, keeping the estuary waters perched above sea level, the estuary mouth on April 4, providing excellent conditions for eel migration. Photo Bruce Ferres

March, at Augusta St footbridge dissolved oxygen was also well below normal, maybe indicating an unusually high level of aerobic decomposition. Again, we are monitoring it.

- On a positive note, in March the water at the rotunda jetty was clearer than usual, probably because with the entrance consistently open, a constant in-flow and out-flow of fresh seawater has flushed out the basin.

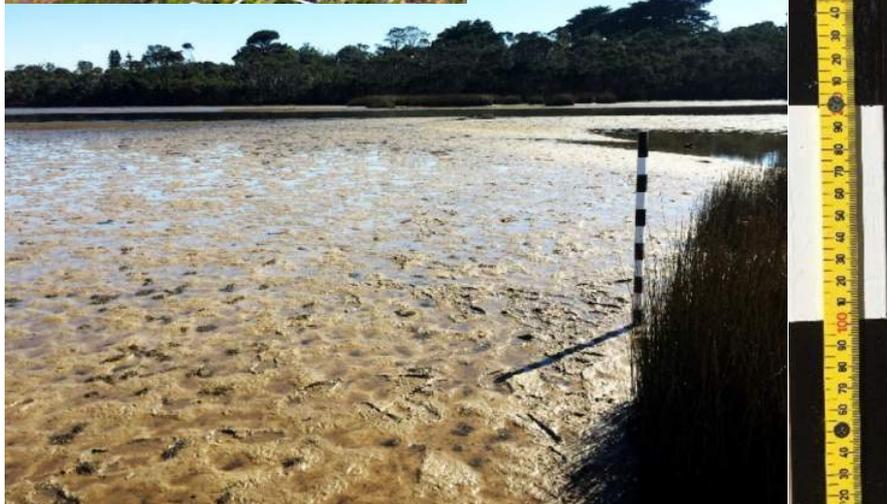
Measuring our sediment

In responding to the draft MPS Long-Term Sediment Minimisation Plan, we again made the case for installation of sediment pins to

Left: A drone image kindly provided by Warlimont & Nutt shows clearly and alarmingly the Henley Avenue outfall and sediment deposition.

Below: The new sediment measuring pin in place; and a close-up of the pin, dubbed 'the Ferres Pin' by the BERG MM Committee!

Photos Bruce Ferres



monitor sediment deposition.

Rather than wait for bureaucratic wheels to turn, I have built a prototype and, with Shire approval, it has been set into the Henley Ave outfall plume (see photos). We will check it each month when the water levels allow access. The larger 10cm black and white gradations will also allow kayakers and others to read the water depth.

Advance College visit

A group of young adults from Advance College, Rosebud visited Balcombe Estuary on 4th March for environmental studies activities organised by Jacqui Salter (MPS Community Environmental Officer).

Advance College provides courses that aim to engage young adults who have struggled within traditional educational settings.

We spoke to the group about EstuaryWatch, and demonstrated our water sampling. One of the visitors then donned the EstuaryWatch waders and helped carry the multimeter probe into deeper water (see photo). They all enjoyed the very hands-on experience.





DNA SLEUTHING THE CREEK – THE RESULTS

Bruce Ferres reports

Last November Sue Milton and I provided Melbourne Water's 'eDNA' project with a sample of Balcombe Creek water, taken at the Uralla Road footbridge. The project is using cutting-edge technology to identify the DNA traces in the waterway of the creatures that live there or pass through – known as 'environment DNA' (eDNA).

Our site was one of 70 waterway sampling locations chosen from over 250 applications.

The results are now in, provided by Josh Griffiths, of EnviroDNA, the technology partner in the project.

Across all sites

The project identified the DNA of 40 bird species, 29 mammals, 26 fish, 5 reptiles and 5 frog species. Josh declared this an excellent result that demonstrated that Melbourne's waterways show a high level of



biodiversity compared with other urbanised environments.

And Balcombe Creek?

Our creek was rated very good for biodiversity and the ratio of native to introduced species. Most pleasingly, Dwarf Galaxias was found to be present. This small native fish, as noted in Mal Legg's 2019 Fauna Survey report, is endangered and of national significance. It was only detected at one other site in this eDNA project, so very rare indeed!

Pygmy Perch and Short-Finned Eel, recorded in Mal's report, were also detected. Interestingly, the Congolli, sometimes known as Freshwater Flathead or Tupong, and

fairly common in the upper reaches of estuaries, was detected via eDNA but was not found by Mal in his survey.

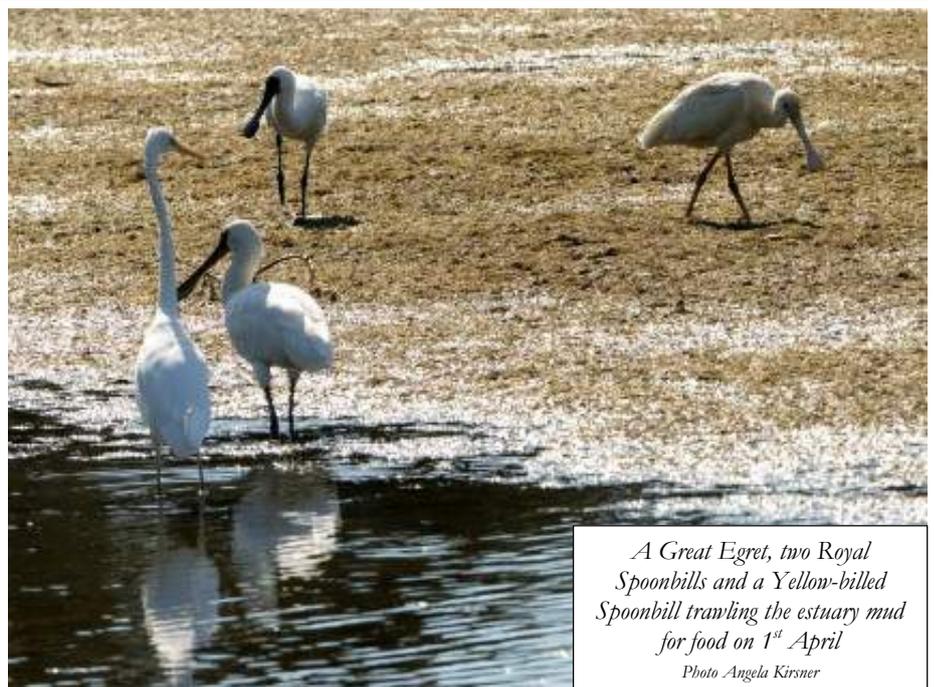
Several very unlikely results (eg saltwater fish DNA found well upstream) were probably the result of pelicans or cormorants carrying their catch inland and dropping remains into the waterway. And the chicken DNA detected was put down to the remains of a picnic!

All very interesting. But to put together a complete profile of any site would require regular testing and much more analysis. It would be wonderful if we could achieve this for Balcombe Creek.

BIRDS ON THE ESTUARY

In February Bruce Ferres reported a single Black Swan swimming along the estuary and on another day, three flying over. Through much of March, a single Eastern Great Egret has been fishing in the shallows along the estuary shoreline, while Cormorants and Coots have been enjoying the more consistent water levels in the estuary.

Then, in late March, the estuary mouth opened and the water level dropped, giving the waders more scope. The Egret was there, fishing, and a White-faced Heron. And Spoonbills. We often see one, sometimes two, but it's rare to see three spoonbills together on the estuary. There they were, on 1st April – and no, they were not an April Fool's Day trick!



A Great Egret, two Royal Spoonbills and a Yellow-billed Spoonbill trawling the estuary mud for food on 1st April
Photo Angela Kirsner

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CLEANING UP MT MARTHA SUNDAY 7TH MARCH

BERG Mt Martha organised the local Clean Up Australia effort this year. A healthy turn-out of fifty adults and eleven under-16s combed the estuary margins, along the creek, the length of the beach and behind the beach boxes, the village, lots of local streets, and around Mt Martha Primary School.

But it was the Mt Martha Yacht Club kayakers who stole the limelight! The colourful fleet scoured the estuary and creek banks for rubbish, especially fishing lines.

Did COVID make us cleaner?

We collected less litter this year, a result also reported by other local groups. Was COVID responsible? Maybe the 2022 Clean Up will tell.



*Right: The Kayaking Garbos!
Photo Suzanne Ryan*

FIELD NEWS

Field Officer Liz Barraclough reports

Weeding and learning on Fridays

The Friday group has been back at work since late February and have achieved lots.

The bird hide and surrounds are weeded and the track cleared. Downstream from Ferrero Ovals, the annual weed *Atriplex prostrata* (which rejoices in the common name of Fat Hen) has largely gone from along the boardwalk, with more weeding of *Atriplex*, Panic Veldt Grass and Winter Cherry near Uralla Road Bridge.

The Friday Group is a stimulating place to be. All are keen to learn new skills and work on a variety of sites, plant communities and weeds, so Tamara Keyte, of Naturelinks, is joining us every second week to teach and extend us.

In March, for example, under Tamara's leadership we assessed a site on Hopetoun Creek, identified weed species, discussed their impact on the indigenous vegetation (mostly Swamp Paperbark) and habitat, then targeted the most threatening, especially those flowering or in seed – notably Moth Vine, Drain Sedge, Forget-me-nots, Nasturtium, Deadly Nightshade, and our old friend *Atriplex*. Tamara then followed up with an information link and a video she'd recorded on Moth Vine. We are most grateful to the Shire for supporting her stimulating involvement.

Moth Vine (*Araujia sericifera*) Invasive and Poisonous



This fast-growing climber has hairy twining stems and large green fruit that split open to release lots of light seeds with long silky tufts of hairs. It smothers native vegetation, both leaves and seeds are poisonous to people and animals, and the latex sap can cause skin and eye irritation and breathing difficulties. It is long-lived and can climb 6-10 m. It has a dense cover of thick, arrow-shaped leaves, and small pale flowers in clusters from summer to autumn.

Sundays

Our first Sunday working bee for the year was on 14th March, when we tackled the bushland at the western end of Citation Oval, removing extensive patches of mature Boneseed, Pittosporum and Polygala, collecting rubbish and repairing the damage caused by illegal BMX tracks. We've applied for grant funding to work more in this area, one we have not previously tackled.

It is an important part of the biolink between the vegetation and habitat corridor of the Balcombe Estuary Reserves and the Briars bushland.

Naturelinks versus weeds

Naturelinks continues its invaluable work under our various grants. Along various sections of Hopetoun Creek, they have removed smothering *Dianella tasmanica* around high quality vegetation, disposed of some Cape Wattles and Sallow Wattles, bagged fruit from Moth Vine before it seeds and cut and painted the vines. They sprayed Blackberry and Rambling Dock, cut and painted briar roses, removed Pittosporums, bagged thistle seed heads, dealt with scramblers threatening tree ferns, and sprayed some dense patches of Forget-me-not. And more!

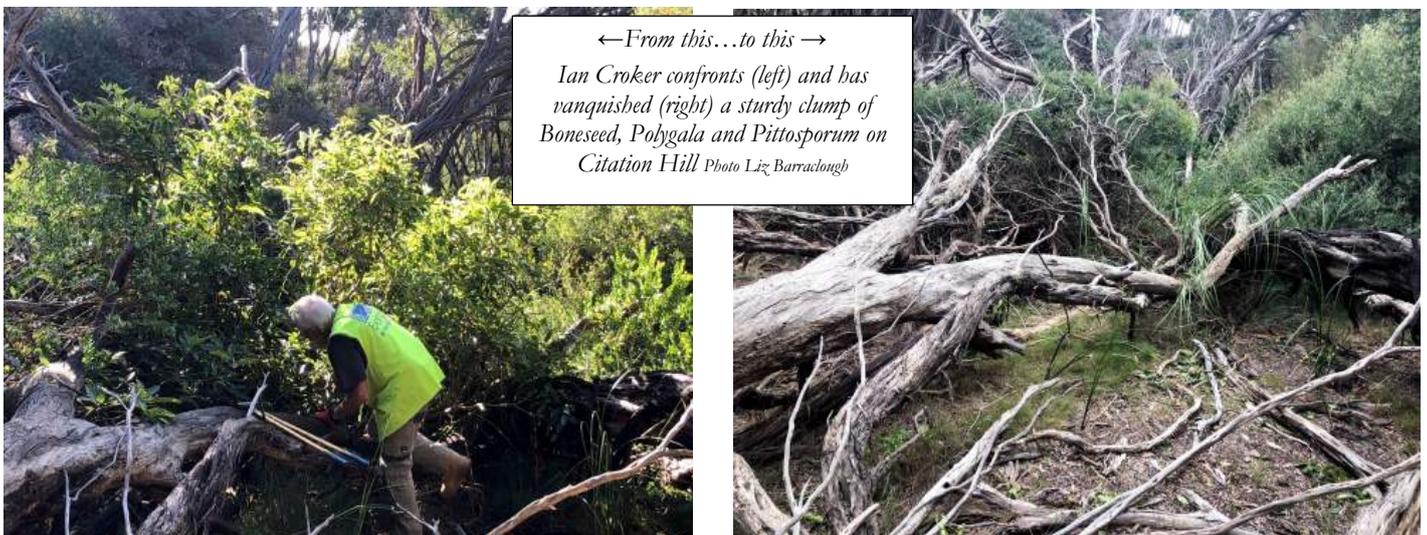
And in the revegetation area near Ferrero ovals, they dealt with various grasses by slashing off the flowerheads then spraying, or hand-weeding where necessary.

In April, they plan to start planting in damper areas.

Feral animal control

We are indebted to the Shire for their support in this area. They fund the rabbit and feral cat control program carried out by Paul Bertuch of Eco-Agri, and also funded the trial release of Calicivirus last year.

Paul Bertuch will continue with follow-up fumigation and warren destruction program in the next month.



←From this...to this →

Ian Croker confronts (left) and has vanquished (right) a sturdy clump of Boneseed, Polygala and Pittosporum on Citation Hill Photo Liz Barraclough



What would we do without the Barracloughs? Young Maggie has gloves at the ready, and Jules neatly disposed of a Pittosporum – ‘Cut level with the ground, Granny!’ Photos Liz Barraclough AKA Granny

OUR FILM DEBUT!

On-ground training for volunteers has been stalled by COVID. So what to do with the training funds provided under our Victorian Government Biodiversity On Ground Action grant?

Brief training videos are proving an excellent alternative. We’ve produced four videos to date: three on identification and control of specific woody weeds (Polygala, Flax-leaf Broom, Boneseed), and one on EstuaryWatch. They star Tamara Keyte, Liz Barraclough and Bruce Ferres, and have been filmed and produced by Eddie Fraker, of Southern Exposure Media.

We are keen to produce more, to complement our on-ground training. We plan to cover more weeds, indigenous plant identification, and planting techniques.

Below: Tamara Keyte talks about identification and control of Polygala, as Eddie Fraker films her. Photo Liz Barraclough



COASTAL NEWS

Suzanne Ryan reports

From late February, the Coastal Group has been working in the coastal woodland between Dominion Road and Balcombe Headland, supported by our fantastic bushland contractors Naturelinks.

We brush-cut and mulched those massive piles of Polygala created in January by the energetic PPWCMA Environmental Work Crew, and we continued their work, clearing weedy seedlings and larger Polygala and Boneseed.

Under our 2020-2023 Coastcare

grant, Naturelinks has brush-cut, drilled and filled or chain-sawed large Polygala, Boneseed and Pittosporum from South Beach car park to the Dowdle path, and they have started work on the brambles and Rambling Dock (see map below).

Now let the planting begin!

After Easter, planting started, focussing first on the coastal patches either side of the bridge. It was school holidays, and we were joined by three of our Mini BERGers, Ruby, James and Lewis (Vegan, Stras and Pork!).

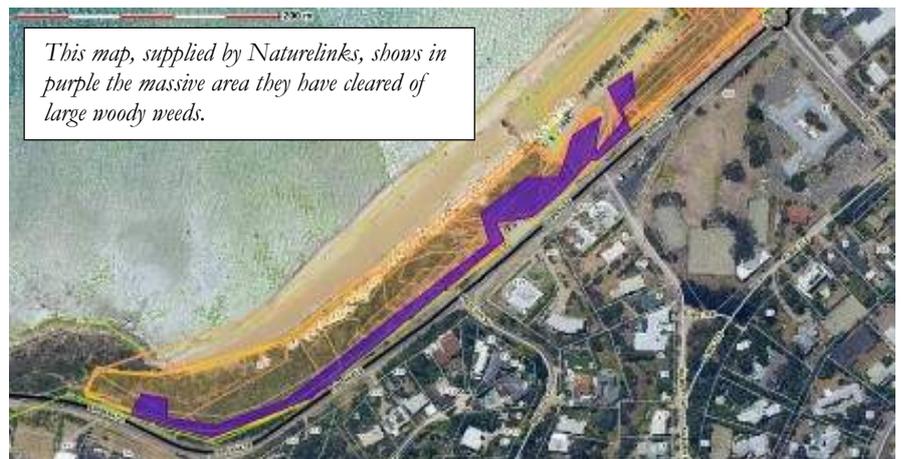
We planted and watered 219 plants (*Ficinia nodosa* Knobby Club Rush, *Distichlis distichophylla* Salt Grass, and *Carpobrotus rossii* Karkalla, the native Pig-face), and weeded out some Sea Spurge (see photo).



Learning on the job

Our bushland activity notifications are now going out with links to videos and information on plants and other information, giving volun-

teers a chance to do some ‘homework’ ahead of the activity day. We’ve had great feedback from our volunteers on this new initiative – we are all learning so much as we go!



This map, supplied by Naturelinks, shows in purple the massive area they have cleared of large woody weeds.

BERG Mt Martha welcomes new members

Catherine Bartolo & family, Peter Campbell, Bev Fasolo & family, Belinda Hengel & family, Rosalind King & family, Alex McDonald, Kirsty McMorrison, Amanda Phillips Whyte & family, Dr Helene Rees, Robin Sinclair & family, Ash Truscott & family.

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... to report problems needing the Shire's attention. All reports are automatically logged, and must be attended to within a short time.

We've had a number of problems dealt with very promptly using it.

Download it to your phone from the App Store, to report graffiti, dumped rubbish, vandalism, and so much more!

Join Naturelinks for their Autumn Nesting Box Monitoring in the reserves.

- ◆ Find out how they see inside the boxes without disturbing the occupants.
- ◆ See what wildlife is in residence.

When: Thursday 22nd April, 9.30 - 11.30am

RSVP: Liz Barraclough 0408 388 430 or fieldofficer@berg.org.au.

Plastic Bread Tags

Please note that Bendigo Bank Mt Martha no longer collects these.

Come along to our Bushland Activities	Other BERG MM Activities	Other Groups
<p>ALL COVID-DEPENDENT:</p> <ul style="list-style-type: none"> ❖ 2nd Sunday of the month: between 9am & noon. Details emailed a few days ahead, or call Liz Barraclough 0408 388 430. ❖ Coast Group: fortnightly on Wednesdays, between 9am & noon. Call Suzanne Ryan 0418 387 604 for details. Location emailed a few days ahead. ❖ Friday Group: weekly between 9.30am & noon. Call Liz Barraclough 0408 388 430. 	<ul style="list-style-type: none"> ❖ Waterwatch & EstuaryWatch testing: monthly, 1st Sunday. WW, meet 9.15am at Augusta St bridge; call Sue Milton 0407 350 175. EW, meet 9.00am at the Rotunda; call Bruce Ferres 0435 389 804. ❖ BERG Mt Martha Committee meets monthly at Mt Martha House (or via Zoom), 9.00am, usually the 2nd Saturday; next meetings 10th April, 8th May. 	<ul style="list-style-type: none"> ❖ BirdLife Mornington Peninsula bird-watching normally 2nd Wednesday and 3rd Sunday. Enquiries to Max Burrows 0429 947 893, mornington@birdlife.org.au or www.birdlife.org.au/locations/birdlife-mornington-peninsula. ❖ SPIFFA 1st Monday, 7.30 pm, at Seawinds Community Hub, 11A Allambi Ave, Rosebud West. See www.spiffa.org. ❖ Sunshine Reserve working bee 9.30am, last Sunday of month. Call Pia Spreen, 0437 299 847.
<p align="center">BERG MT MARTHA PATRON: TERRY DENTON</p> <p>COMMITTEE: PRESIDENT PETER MCMAHON • VICE PRESIDENT & ESTUARYWATCH BRUCE FERRES • SECRETARY DIANNE LEWIS • TREASURER & BUSINESS PARTNERS COORDINATOR JULIE ZAMMIT • FIELD OFFICER LIZ BARRACLOUGH • COAST GROUP SUZANNE RYAN • WATERWATCH SUE MILTON • NEWSLETTER ANGELA KIRSNER</p>		
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