

FLORA SURVEY FLAGS DRAMATIC GAINS

The report of the 2019 flora survey of the Balcombe Estuary Reserves has been released and in the words of past president Graham Hubbard, 'It is the most momentous report we have had on the Reserves'.

Our first flora survey was released in 2002, *Flora Survey, Mapping and Management Guidelines for Balcombe Estuary Reserve*, by Rohan Cuming and Gidja Walker.

Since that time, we know we've made major improvements to the bushland, but this report provides unequivocal proof. It notes the massive changes achieved since 2002, with at least 10 hectares of the reserves significantly improved, and

no area has gone backwards.

Compare the 2002 and 2019 maps (below) for a dramatic demonstration of these gains. As the weediest areas have shrunk in size, there have been huge increases in the areas of higher quality bushland.

The report maps the quality and extent of bushland vegetation across each of the 16 management zones of the reserves along Balcombe Creek (not including Hopetoun Creek, an area we have also transformed), and it provides detailed notes and recommendations for ongoing management, both overall and for each of these management zones.

A working management tool

The maps show the whole reserves gridded into 20m x 20m blocks,

every one of which has been assessed and colour coded by percentage of native vegetation.

Furthermore, the maps are a working tool. Created in Google Maps, with overlays showing significant flora, and a range of habitat and management observations and recommendations (including significant weeds), they are all available on line so they can be accessed, referred to and added to in the field.

Significant flora

The survey identified two species of State significance, plus 28 of Regional significance, and 32 considered of High Local significance. Over 150 indigenous species were identified, and the researchers consider that all local species growing in the reserves are significant due to the depletion of remnant coastal and estuarine vegetation along eastern Port Phillip Bay, and the pressures from competing land-use interests and urban development.

The two State-listed species are Dune Wood-sorrel *Oxalis rubens* and Coast Twin-leaf *Zygophyllum billardierei* (see photo next page). Dune Wood-sorrel occurs in scattered patches on mostly sandy soils, and was possibly overlooked in the previous survey as it is difficult to identify the *Oxalis* genera to species level. A single plant of Coast Twin-leaf was found growing in the adjoining foreshore reserve a few years ago, and plants propagated from this are now thriving in the Estuary reserves.

We still have 150 or more species of weeds to challenge us, including some new ones, but interestingly,



Vegetation quality in the Balcombe Estuary Reserves in 2002 (above) & 2019 (below)



there is little mention of Boneseed and Polygala, which were the bane of our lives for many years.



A thriving patch of Coast Teatree Photo Angela Kirsner

Coast Teatree

Most interesting is an about-face on the role of Coast Teatree. We have known it as an invasive tree, to be removed, as recommended in the 2002 report. This report argues that the research now shows it should be supported as it provides over-storey support for many other species.

A tribute

The report concludes: 'The extent of the change achieved ... is a tribute to the ongoing, intensive and dedicated efforts of BERG Mt Martha, bushland contractors Naturelinks, and the Mornington Peninsula Shire's Natural Systems Team'.

Read the full report on the BERG MM website, www.berg.org.au under What we do/Flora & Fauna Surveys.

ESTUARYWATCH

Bruce Ferrer reports

COVID-19 restrictions have continued to restrict Estuary-Watch, already compromised by the time taken to repair our multi-meter. We were able to measure turbidity and pH in May (turbidity levels were high in the mid reaches of the estuary), but we await Melbourne Water approval for a full return to EstuaryWatch activities.



Mooring washed up near the estuary entrance after storms in late April. Photo Bruce Ferrer

We've seen a remarkably dynamic and changeable estuary over autumn. The year to date has been far wetter than usual, with rainfall already exceeding the total for all of 2019 in many parts of Victoria. With several storm events and some wild weather, we've seen the estuary open and close, flood and drain, repeatedly.

Pesticide Detectives

The April newsletter reported that the BERG MM EstuaryWatch team took part in the Pesticide Detectives national citizen science program at RMIT University, which is looking for pesticide residues in Australian waterways.

Our results are now in. The researchers found no pesticides in the sediment sample we sent from near the rotunda jetty.

The researchers report that, while COVID-19 has led to some delays in testing, they have results for 79 sites across Australia (with more to come). In summary, pesticides were detected at 8 out of the 79 sites: 1 in SA, Queensland, ACT and Tasmania, and 2 each in Victoria and WA. Four of the 8 sites were urban.

The pesticides detected were Diuron (a broad spectrum herbicide and algicide), Iprodione (a fungicide) and Bifenthrin (an insecticide).

Sedimentation

Most frustratingly, Melbourne Water has rejected the Shire's application for \$150,000 from the Healthy Waterways Program to match the community grant of \$150,000 already set aside by the Shire for sedimentation mitigation works. This would have provided the funds to construct an

improved Gross Pollutant Trap (GPT) at the bottom of Henley Ave.

In the wake of this decision, we provided a media release to local and state newspapers and a range of media channels, and *Mornington News*, on 19th May, ran an article damning Melbourne Water's indifference and warning of 'an environmental disaster ... if sediment continues to fill the estuary'.

Following this article, Melbourne Water has agreed to meet with BERG MM and the Shire to discuss the issue. We will keep you posted.

Significant rainfall continues to cause further erosion and increased sediment into the estuary basin. For example, on 9th May the rapid rate and volume of flow from the drain that carries Hopetoun Creek under Ferrero Ovals dumped higher than usual sediment loads into the Balcombe Creek.



On 10th May, flooding saw the Rotunda Jetty underwater (above), but a trickle of water edged northward, way along the beach behind a low berm until, almost at North Beach Carpark, it found its way to the sea (below). The washed up mooring is on the left Photos Angela Kirsner



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And last summer, MMYC ran two major regattas, with visitors coming from around Victoria and interstate.

And in lockdown?

Online groups are keeping members in touch, we've run online training sessions, even online sailing races and regattas. Try sailing from the comfort (and dry!) of home at Virtual Regatta www.virtualregatta.com/en/ - we recommend the inshore game and sailing school.

Want to know more?

Pop into the club next summer and say hi. We love to share sailing and our special spot on the beach - especially with the wonderful volunteers from BERG Mt Martha.

Or contact

Michelle de Blaquiére, Rear Commodore, on 0438 290039

RIP LITTLE PENGUIN

Angela Kirsner reports

On Thursday 21st May, with waves washing up the estuary, I found a dead Little Penguin on the sand just below the bridge. Another, I am told, was found a few months ago on south beach.

At the Dolphin Research Institute, Leanne Nguyen is researching Little Penguins, and she believes this little guy is probably from Phillip Island. The closest colonies, she said, are at Phillip Island and St Kilda, and the St Kilda penguins typically feed closer to home.

Gourmet travellers

At this (non-breeding) time of year most of the Phillip Island penguins will make long-distance trips of several days to Port Phillip Bay for the plentiful prey it offers. This abundance helps them to acquire enough body mass and condition to begin breeding (typically July-March) and to increase breeding success.

In the Bay, they feed on small fish, cephalopods and crustaceans. Clupeids (a family of soft-finned

fish) such as anchovies and pilchards are their prey of choice, and anchovies are their main food as they are available year round in the Bay. The St Kilda penguins prey predominantly on small anchovies while those from Phillip Island have a more diverse diet and eat larger anchovies.

How did it die?

Ideally, I should have collected the small penguin body and sent it to the DRI for autopsy – but I had my hands full with a busy two-year-old, and by next day it had gone! However, causes of deaths in Victorian penguins include trauma from predation, parasites, starvation (not likely in this case unless it also ingested marine debris), entanglement in fishing line or plastic, and chronic lead poisoning after eating part of a lead fishing sinker.

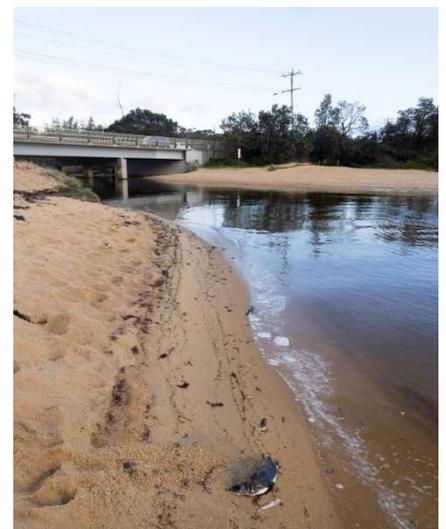
Penguin mortality rates are high in the first year of life after fledging, as the young penguins receive no parental care after leaving the nest, and have to learn how to forage on their own.

If you find a dead penguin...

Please let BERG MM or the Dolphin Research Institute know. And ideally, collect the body and send it to DRI for analysis.

It is, DRI tells us, not unusual to see penguins washed up. But it would be useful to keep records and build up a picture over the years.

If you find a penguin in distress, go to www.awarewildlife.org.au/penguins/ for information on what to do.



The body of the Little Penguin lying on the edge of the Estuary, 21st May Photo Angela Kirsner

FIELD NEWS

Field Officer Liz Barraclough reports

Working bees are back!

We're delighted that working bees are able to restart from June, albeit with a few restrictions. See back page for details. Sadly no shared morning teas yet, but they will be back in all their glory as soon as it's safe. (For *Notice to Volunteers on working bees during COVID*, click on 'What's On' at our website homepage, www.berg.org.au.)

Even over this isolation period, as restrictions have eased we have managed to plant over 400 tube stock, and Naturelinks has continued with their grant and Shire bushland management work.

(Tamara Keyte, of Naturelinks, paid us a compliment when she said she realised how much we all contribute through our working bees and how she missed the work and interaction with us.)

Closet Coast Group activity

Meanwhile, in the safety of home, Cate Clarke and Suzanne Ryan have been busy designing fence panels, and Ian Gould plus Chief Assistant Suzanne building them, to provide vegetation buffer fencing behind beach boxes between the village and the Yacht Club path. These portable, re-usable masterpieces, funded by a Port Phillip Bay Fund grant, will be installed as soon as possible.



Above: Hard at work on the fence frames.

Below: Ready for installation Photos Suzanne Ryan



Coastal vegetation survey

Having delivered the vegetation survey of the Estuary reserves, Gidja Walker is nearing the end of her survey of the coastal reserve. When

it's finished – we hope, by the end of June – we will have continuous flora mapping and management guidelines from the Nepean Highway down to and along the Mt Martha coast. The next step will be to seek funding for a fauna survey of the coastal reserve.

BMX bikes in the reserves

BMX bike tracks are being created by kids and youths with shovels across the Peninsula. While BMX riding is a great activity, and young people need places to make their tracks, we are very concerned about the major damage this is doing to bushland, including our reserves.



These BMX tracks near the Pistol Club have destroyed a lot of indigenous vegetation, including orchid patches. Photo Angela Kirsner

We are working with the Shire to find ways to address this difficult issue. If you have any suggestions or input, or would like to discuss the issue, either email us at info@berg.com.au or call Liz on 0408 388 430.

Bikes a danger on the boardwalk

We have received a number of complaints about the many bikes, particularly road and BMX bikes, along the boardwalk. The danger to walkers is very real. Already we know of people who have been knocked off the boardwalk.

The Shire has proposed signage, and we are working with them to make this as effective as possible.

Cats, rats and rabbits

As flagged in the last newsletter, our 2020 feral animal control program is now underway, under contractor Paul Bertuch. He is working from maps of known rabbit and cat activity, and warrens fumigated last year.

Please let us know of any sightings (including location and, if possible, a photo), to maximise effectiveness of the control measures.

ONE CAT, ONE YEAR, 110 NATIVE ANIMALS: LOCK UP YOUR PET, IT'S A KILLING MACHINE

This article is taken from a longer piece in The Conversation, May 14, 2020.

Across Australia, feral cats collectively kill more than three billion animals per year. Cats have played a leading role in most of Australia's 34 mammal extinctions since 1788, and are a big reason populations of at least 123 threatened native species are dropping.

But pet cats wreak havoc too. A new analysis compiling results of 66 studies shows that on average, each roaming pet cat kills 186 reptiles, birds and mammals per year, most of them native to Australia. That's 4,440 to 8,100 animals per square kilometre per year for the area inhabited by pet cats.

In Australia, 1.1 million pet cats are contained 24 hours a day by responsible pet owners. The remaining 2.7 million pet cats – 71% of all pet cats – can roam and hunt.

Just over one-quarter of Australian households (27%) have pet cats, of whom about half have two or more. Maybe *your* cat never brings home any kill – but studies using video tracking or scat analysis show that pet cats bring home only about 15% of their prey.

Collectively, roaming pet cats kill 390 million animals per year in Australia. Even a single cat can wreak havoc on a local population, as happened, for example, to a feather-tailed glider population in NSW, a skink population in Perth, a legless lizard population in Canberra.

Urban cats

While a feral cat in the bush kills some 748 reptiles, birds and mammals a year – four times the toll of a hunting pet cat – there is only one feral cat per 3-4 square kilometres. In cities and towns, you'll find 40 to 70 roaming pet cats per square kilometre. With this high urban density, their toll is very high. Per square kilometre per year, pet cats kill 30-50 times more animals than feral cats in the bush.

Most of us want to see native wildlife around towns and cities. Such a vision is compromised by this extraordinary level of predation. Furthermore, pet cats living near areas with nature hunt more, reducing the value of places that should be safe havens for wildlife.

The 186 animals each pet cat kills per year on average includes 110 native animals (40 reptiles, 38 birds and 32 mammals).

What can pet owners do?

Keeping your cat securely contained 24 hours a day is the only way to prevent it from killing wildlife.

Cats hunt whether or not they are hungry. Things like bells on collars may reduce the kill rate, but don't prevent hunting altogether and don't stop cats from disturbing wildlife. Where cats prowl and hunt, wildlife have to spend more time hiding or escaping, so have less time to feed themselves or their young, or rest.

In Mandurah, WA, the disturbance and hunting of just one pet cat and one stray cat caused the total breeding failure of a colony of more than 100 pairs of fairy terns.

Australia is in a good position to make change. Compared to many other countries, the Australian public are more aware of how cats threaten native wildlife and more supportive of actions to reduce those impacts. It won't be easy. But since over one million pet cats are already being contained, reducing the impacts from pet cats is clearly possible if we take responsibility for them.

KOALA WEBINAR

The Peninsula's declining Koala population is under serious threat. This is the challenge for the Mornington Peninsula Koala Conservation Project, whose planned Koala Forum took place via Zoom on 3rd May. Presenters were Dirk Jansen, of the KCP, and Dr Desley Whisson, Deakin University; and Liz Barraclough was there for BERG MM.

With habitat giving way to land clearing, the Peninsula's Koala numbers have fallen by up to 50% in the last 20 years. Sixty percent of the

Peninsula's habitat is on private land; much of the Green Wedge is too. So it is everyone's responsibility.

In short, we need to plant masses more trees. Trees cover only 20-29% of the Peninsula – Melbourne City Council does better than this! We need this to increase to at least 40%, and in large patches rather scattered small ones. Given the long distances Koalas travel (a Koala from Crib Point, for example, was found hit and killed by a car near Mt Martha), biolinks are vital and those we have need to be extended and connected.



Liz Barraclough snapped this Koala in a Bay Road, Mt Martha, garden – but 8 years ago.

Somers is a Peninsula 'hot-spot' for Koalas, and research in the area in 2016-17 tracked 20 of them for a year. Their home range averaged 9 hectares for males and 2 for females – much larger than in areas with good tree cover. They move often, spend only a or so day in each place, and one was tracked moving through 133 properties in a month. This means time spent on the ground, where dogs and cars are a real threat.

Koalas' preferred trees are Manna, Swamp and Peppermint Gums. New plantings need a minimum of five years to get to size to be any use to koalas. (Nesting and roosting hollows, of course, take 100 years or more to develop.)

Koalas struggle when temperatures rise above 38 degrees. The heat dries out gum leaves, the Koalas don't get enough moisture (they do drink water, but not enough), and they can

die from kidney failure. With more trees, the risk is lower; shade reduces both temperature and moisture loss, and so reduces stress.

BERG Mt Martha in action

Our recent (2019) Fauna Survey stressed the need to maintain and increase indigenous habitat throughout the reserves, and recommended that we plant 1000 Manna Gums and 1000 Swamp Gums.

Already this year, despite COVID-19 restrictions, we have put dozens of tube stock trees in the ground, and have more on order.

Mornington Peninsula Koala Conservation Project

is a joint, community-driven initiative by concerned residents, Southwest Mornington Peninsula Landcare and Mornington Peninsula Landcare Network.

KCP aims to encourage and assist landholders to protect and grow existing vegetation, and highlight how everyone can better protect the Peninsula's Koala population. For more information, go to:

www.mpkoalas.org.au

THE STRANGEST OF FUNGI



It goes by various names: *Anthurus archeri*, AKA *Clathrus archeri* – Seastar Stinkhorn, Octopus Stinkhorn, or Devil's Finger. A native fungus, it is growing just outside the north bank reserves, by Victoria Crescent. On the arms, a brown slimy spore mass smells like rotting meat. Flies flock to it and distribute the spores.



Photos Angela Kirsner

MPS WASTE WEBINAR

Liz Barraclough represented BERG MM at the Shire's Waste Webinar on 6th May, held as part of community consultation on their 10-year plan to send zero waste to landfill by 2030.

With 40% of food organics presently going to landfill, the Shire will introduce the FOGO (Food Organics, Garden Organics) system. This involves three colour-coded bins, the largest (green) for green waste, including kitchen scraps and food waste as well as garden waste. A yellow bin will be for recyclables, and a smaller red one for landfill waste. Green bins will be collected weekly, the others fortnightly.

A number of other points were raised. We need more collection points for soft plastics, education on what is a 'soft' plastic, and more drop-off sites for *all* recyclables. Supermarkets and commercial outlets need to be strongly encouraged to introduce 'plastic free' policies. And a 'Cash For Cans' program was seen as a priority (the State Government has just announced that a container deposit scheme will be introduced in 2022-23).

The meeting emphasised that the Shire should be required to use recycled materials wherever possible, for road surfaces, paths, outdoor furniture, playground equipment, fencing and posts, and more.

**BERG Mt Martha welcomes
new member Karin DeBruin**

BERG MM Working Bees	Other BERG MM Activities	Other Groups
<p>Note new times while COVID-19 restrictions remain in force:</p> <ul style="list-style-type: none"> ❖ Sunday working bee: monthly, 2nd Sunday, between 9 & 11am. Details emailed a few days ahead, or call Liz Barraclough 0408 388 430. ❖ Coast Group: fortnightly Wednesdays, between 9.30 & 11am, details emailed a few days ahead or call Suzanne Ryan 0418 387 604. ❖ Friday working bee: weekly between 9.30 & 11am. Call Liz Barraclough 0408 388 430. 	<ul style="list-style-type: none"> ❖ Waterwatch & EstuaryWatch testing: normally monthly, 3rd Sunday. For information while COVID restrictions remain in force call Bruce Ferres (EW) 0435 389 804 or Sue Milton (WW) 0407 350 175. ❖ BERG Mt Martha Committee meets monthly, 9.00am, usually the 2nd Saturday. Currently meeting via Zoom. 	<ul style="list-style-type: none"> ❖ BirdLife Mornington Peninsula bird-watching. All outings cancelled due to pandemic. Enquiries to Max Burrows 9789 0224, mornington@birdlife.org.au or www.birdlife.org.au/locations/birdlife-mornington-peninsula. ❖ SPIFFA Enquiries 5988 6529, or www.spiffa.org. ❖ Sunshine Reserve working bee. Call Pia Spreen, 5974 1096
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