



Berg
Mt Martha

21 years of Caring for the Balcombe Estuary Reserves

THE CREEK

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OF OWLS AND BATS

Angela Kirsner reports

A pair of Powerful Owls has been hanging out around Citation Hill, below Citation Oval. They are newcomers to our bird list.

Nathan Litjens alerted us to them. Nathan grew up in Mt Martha by the creek and, living back here for a few months, has put his ecological talents to work in the reserves.

Powerful Owls were not what he'd expected to find; he was after bats. But in mid-April, he heard a male calling in the bush below Citation Oval and set out to track it down.

Success came when he made an owl-like 'hoot' and the huge bird burst out of the bush to perch about four metres from him! It stayed near him for the next half hour. Interestingly, this curious bird is not banded, so is unlikely to have had close contact with humans. The wonderful photo in the next column was taken then.

In early May, BERGer Jay Nemeč, in Taylor Crescent (near the Maude St reserve), arrived home late to see 'a very big owl' staring at him from the corner of his roof. Probably the same bird.

A few days later the female turned up and, Nathan reports, the male became less vocal (to see the pair, go to <https://flic.kr/p/248dCBv>). The owls pair for life (30 years plus), coming together towards winter to find a hollow to breed. What's needed is an old-growth tree with a hollow measuring at least 50cm in any direction.

If our pair don't find a suitable breeding hollow, they may move on. Given the dearth of old-growth trees in an around the reserves, Nathan erected a makeshift nest box, but is concerned it may not be big enough for what he describes as 'these notoriously fussy birds'.



Nathan's photo of a Powerful Owl below Citation Oval, taken in late April

Powerful Owl facts

- **Size:** Huge! Male 67cm high, female 58cm; wingspan 135cm.
- **Range:** E & SE Australia (E of the Great Dividing Range), from SE Queensland to South Australia, mostly in large continuous forest (though can survive in cities).
- **Conservation status:** Threatened
- **Food:** Mainly tree-dwelling mammals (eg Possums). May take roosting birds and small ground-dwelling mammals (eg rabbits).
- **Call:** slow, resonant, far-carrying double hoot, 'woo-hoo'.

Sightings at The Briars

Sue Brabender, recently retired ranger at The Briars, says a Powerful Owl was seen a few years ago on a guided spotlight walk in The Briars Sanctuary. 'soon after', she said, 'I was excited to hear one calling in the Sanctuary just on dusk'.

Last year some women frightened one as they jogged. Sue could not find it, but had a Powerful Owl nestbox installed in a tall

tree in the Sanctuary. It has not been used.

Further afield

There is a pair at Devilbend. Nathan says you might hear them call near the dam wall at dusk. Joshua Gunn, of the Shire's Natural Systems team, tells me this pair has been around Woods Reserve and Devilbend for a few years, and have bred over recent years. Josh speculated that the Mt Martha birds might be their offspring, young adults searching out their own territory.

Owl surveys

In 2013 a State Government survey of Powerful Owls on the Peninsula reported some seven pairs and ten or so more singles, one at Mt Martha Park. The survey looked only at specific locations and Josh Gunn suspects there were many more owls than recorded. Since 2013 there have been many sightings in new locations.

Over the past three years the Shire has monitored known breeding sites and collected observations from the public on sightings. Josh believes the Mornington Peninsula has a healthy population of Powerful Owls.

Micro-bats

Nathan has been using his new specialist 'bat detector', to hear and record the ultrasonic echo-location calls of these tiny insectivores, and identify the species.

Bat calls vary a bit from place to place; one needs to know the local calls to ID them. In our reserves Nathan has identified Long-eared, Chocolate Wattled, White-striped



Nathan's photo of a Lesser Long-eared Bat on Citation Hill

Freetail, Gould's, Large Forest, and at least one, probably two, species of Small Forest Bats.

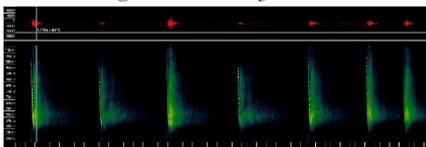


Nathan setting up his camera & bat recording equipment in the reserves. Photo Liz Barraclough

To photograph bats in flight takes infinite patience. Nathan sets up his equipment near bat roosts at night and if a bat passes exactly the right spot, it triggers the camera. Many nights he gets no images, but those he gets are wonderful (see p11). He hopes his techniques for photographing bats in the wild will make trapping unnecessary for great bat photographic records.



Above: Nathan was watching this Lesser Long-eared Bat below Citation Oval when it landed on a branch and rested – most unusual. He snapped it with his phone. Below: The bat's sonogram, recorded by Nathan



Nathan's sightings are recorded on the Atlas of Living Australia at

<https://biocache.ala.org.au/occurrences/1480f616-01f8-4ab4-b802-af6146dd7f6f>.

For ALA's full Mt Martha species list go to: https://biocache.ala.org.au/explore/your-area#38.27696243937638|145.0298526123047|12|AL_L_SPECIES

FIELD NEWS

Field Officer Liz Barraclough reports

Tuesdays and Fridays

The Friday mob weeded Tradescantia and Winter Cherry near Uralla Rd, checked some north bank plantings, then moved to Maude St, near Victoria Cres, to weed Polygala, Cotoneaster, Pittosporum, Flaxleaf Broom and Agapanthus.

At our working bee on 13th April, we welcomed Dr Philip Moors, Chairman of the Helen Macpherson Smith Trust, and his wife Dr Debbie Moors. He had come to look over the work we have done below Maude St with our grant from the Trust, and both joined the Friday group (& Magpies!) for morning tea.



Dr Philip Moors, Chairman of the Helen Macpherson Smith Trust, & Dr Debbie Moors with Graham Hubbard & Liz Barraclough, sharing morning tea with the Friday Group and (below) opportunistic Magpies! Photos Angela Kirsner



In April five **Tuesday Groupers** weeded Rock Rose and Cape Ivy near the carpark in Latrobe Drive. In May, four BERGers planted and guarded Clematis, Rhagodia, and Goodenia below the Bowling Club.

Between kinder and tennis courts

We have a \$46K Biodiversity On-ground Action grant for a three-year project to transform this area. So far, the pines have been felled and their trunks placed to reduce trampling of its small woodland. The branches of fallen Teatree have been mulched

and 75 Osborne Primary kids helped spread the mulch at a working-bee on 25th May. (They also had sessions weeding forget-me-nots, water-watching and collecting litter.)

Sunday working-bees

In April our target was woody weeds (mostly Polygala) in the bush around the Watson Rd tennis courts. In May, five 'mums' spent Mothers' Day morning removing masses of woody weed seedlings (again, mostly polygala) below Maude St. We pulled Rambling Dock that threaten the reserve from a nature strip, planted 20 trees and shrubs, and filled a stack of bags with an invasive succulent (dumped garden waste).



Jenny Selby and the bags. What a weeder! – half the succulent gone. Photo Liz Barraclough

Coastal Group

Over the past year BERG MM has weeded to create a 5-10m buffer zone north of the Coolangatta Rd beach track. It's nearly finished, and in April five BERGers worked on it, removing large Polygala, Boneseed and Flax-leaf Broom. The Shire has gained a grant to continue weeding the cliff north of this.

In May, the group did its first planting for the year – 180 plants all guarded, from the Coolangatta Road track to North Beach carpark.

And between times, the hard working Suzanne Ryan and Andrew Jones have been erecting fencing to protect the coastal vegetation.

Another grant success

Suzanne Ryan's application for Port Phillip Bay Fund Round 2 grant has brought in \$31,400 for two years' of work on the foreshore, covering weed control, plants and fencing.

Corporate volunteer day

At the far southern end of the beach, work under our Sunshine Found-

ation grant was given a great boost by hard-working employees of Auto Data Processing (ADP), who joined seven BERGers and Tamara Keyte (Naturelinks). This sterling crew removed ten bulging trailer loads of Polygala and Boneseed. The result is a buffer edge along three paths between Hearn Creek Outlet and Balcombe Headland. They also planted 30 plants.



A gorgeous day to leave the office! One of the ADP staff planting at the corporate volunteer day Photo Liz Barraclough

Special thanks to Ian Gould and Andrew Jones, who brought the trailer and carted the weeds along the beach to the carpark for chipping.

Mapping workshop

Seven of us, from all BERG MM's working bees plus Estuary and Waterwatch, learnt to use Google Maps and Android phone GPS at a May workshop under a Community Skills Development grant. More BERGers are already keen to attend a second session. Thanks to Jonny Brownbill for IT support and the Yacht Club for the venue.

Frog signs installed

Have a look at them in the Old Campground Laundry! Thanks again to framers and hangers Richard Kirsner, Martin Thraves and Case Varkevisser; and of course to Anni Dowd for the wonderful artwork.



Updating signs through the reserves

We plan to update both interpretive and directional signs through the reserves over the next six months. We welcome your input to help us define what's needed.

Deakin students

Suzanne Ryan and I are helping three Deakin University Environmental & Life Sciences students with their third-year unit in which they have to find a suitable organization and draw up a management plan for an environmental project.

Meanwhile, first year Deakin Environmental Science students Sian Berner and Mia Biggs were learning about Ecology in May, comparing five quadrats along the coast with five around the campground.



Sian Berner and Mia Biggs measuring up a quadrat by the estuary Photo Angela Kirsner

Clean Green Mt Martha

BERG MM will team up with Boomerang Bags in a display in the Mt Martha Village in June to present alternatives to plastic, as IGA's June 30th deadline to end single-use plastic bags approaches.

Boomerang Bags Mt Martha

Bag-making working bees every Monday 1-4pm at Mt Martha House. Contact Robyn Rubl, 0414 825 863, or robyn@avitdesigns.com.au

THANKS

to our new Noticeboard editors

Anni Dowd and Verity Mapp have taken over organising the displays on the BERG MM noticeboard in the old Campground.

Many thanks to Di Lewis, who has done a such great job for the past few years.

ESTUARY NEWS

Bruce Ferres reports

April's Estuary Watch observations, on Sunday 22nd, came after weeks with the mouth closed and the water level very high. Some weeks earlier a strong north-westerly storm plus high tide drove waves over the berm, further raising the water level, then more stormwater poured in for some days. When we measured it, the water was almost over the jetty, at 0.88m on the fixed gauge. There was minor flooding throughout the area.

The berm was higher and wider than it had been for many months. No easy way out for water after heavy rainfall! Sure enough, on 10-11th May heavy rains took the water level over the rotunda jetty.

Of concern were the low levels of dissolved oxygen in the bottom levels at the Augusta St bridge site, and the hydrogen sulphide smell in the water sample – a gas associated with breakdown of organic matter. Similar readings in February were investigated by the Shire Health Officer, who found a raised *E Coli* count. To date, we have had no feedback on possible causes.

Once again, George Murley (of South Coast Foot Clinic) took stills and video with his drone, from shore to Augusta St bridge (to see them, go to www.berg.org.au & click on the link). James Frazer of Melbourne Water was so impressed with the results, he is uploading some to their website!

Below: The flooded track from the campground to the submerged jetty, 11th May Photo Liz Barraclough



ESTUARY ALIVE!

Angela Kirsner takes up the story

After the heavy rain on 10-11th May, the berm started to give way, but it was so high, it took a few days to wear right down, leaving the estuary with its mud flats still shallowly covered for a few more days. And it was teeming with water-birds! – clearly a rich food source.

A couple of logs that had washed down the creek delighted the many Cormorants, both Little Pied and

Little Black. Perfect fishing and roosting platforms!

There were lots of Teal and Pacific Black Ducks; Eurasian Coots, and the ubiquitous Silver Gulls.

A Great Eastern Egret caught, defended, tossed about and swallowed quite a few Black Bream while I was watching.

The Royal Spoonbill was there, as it so often is, trawling the estuary floor. But for some days there was also a Yellow-billed Spoonbill, a rare

visitor to the Estuary, though more often seen some years ago, I'm told. While the species is widely distributed, it prefers fresh water, and is not often in estuaries or saline water.

At The Briars, Sue Brabender says there were Yellow-billed Spoonbills in the wetlands several times last year, and during March, a Royal and Yellow-Billed regularly fed together over some weeks. But Royal Spoonbills are more often seen there as well.



Clockwise from top left: The Push-me-pull-you Bird! – Royal Spoonbill & Great Egret; 'It's my fish!' – Great Egret with Black Bream & marauding Seagull; Cormorants enjoying a log perch in the Estuary; and on a mud island near the bridge; Yellow-billed Spoonbill with some tasty weed! Photos Angela Kirsner

FOUNDING PRESIDENT VISITS

BERG MM's founding president Richard Hawkins and wife Nancy caught up with BERG MM at our April committee meeting. Both in their 90s, the Hawkins were visiting family on the Peninsula.



Nancy & Richard Hawkins with Graham Hubbard & Liz Barraclough, who was on Richard's first committee Photo Angela Kirsner

'TRU OPPORTUNITY' FOR BERG MM

BERG MM is one of many charities that have profited from the efforts of Trudy Lennon-Bowers and her very special op-shop. Trudy opened **Tru Opportunity** a couple of years ago – with a twist. When you donate goods, you name the charity to be supported by their sale. All profits go to charity – the shop is totally run by volunteers. Thanks Trudy!

So, to recycle your 'stuff' and support BERG MM, take it to Tru Opportunity and nominate BERG MM to benefit.

Tru Opportunity, 8 Frank St, Mornington, 9.30-4.30 Mon-Fri, 9-1 Sat. <http://www.truopportunity.com.au>

LISTENING TO NATURE

Andrew Skeoch, naturalist, researcher, & nature sound recordist, spoke to a large crowd at Mt Martha House on 5th May, in another BERG MM event. Angela Kirsner reports

Nature's soundscapes comprise many voices: birds, frogs, insects, mammals and more. How have these varied repertoires evolved? What can we learn from nature's soundscapes? How do we interpret them?

For 20 years, Andrew Skeoch has been recording, the natural world across the globe, seeking answers to these questions.

But we started with him on his bush block in central Victoria's Iron Bark country, listening to its sounds and watching, simultaneously, a visual representation of the sound – a spectrogram. On it, highlighted in false colour, Andrew identified the many species we were hearing – 16 birds, a frog and a bushfly – each with its sonic signature.

Singing with intent

We were, said Andrew, 'hearing not just sound but minds, sentience, intelligence. A creature can't articulate itself in the world unless there's a mind making that sound'.

Alarm calls, penetrating calls in dense bush, delicate calls at close range – all have evolved because they do a job that's vital to the species to survive. Indeed, developing a new sound opens up a whole new lot of survival possibilities.

Take the Spotted Bowerbird Andrew recorded. He set up his rig near its bower and left, and for two hours the bird simply went through its usual repertoire. But as Andrew approached to retrieve his gear, it imitated the scariest sounds it knew – a Whistling Kite and a Brown Falcon. Clearly intentional behaviour, says Andrew.

Lessons well learnt

Songbirds (passerines), as opposed to the earlier-evolved non-song birds (non-passerines) – learn their sounds, first from their parents, then, when

the bird moves to establish its own territory, it 'unlearns' its parents' dialect to learn the new local one.

This enables birds not only to recognise a newcomer by its 'foreign accent', but to negotiate relationships with other birds in the area. It's what



Above: Andrew Skeoch starting his talk (Photo Richard Kirsner). Right: Andrew's photo of a Fairy Wren & spectrogram of its song, every phrase different.

they are doing in the dawn chorus; groups of birds sing back and forth to each other, essentially acknowledging each other's territory. This cooperative behaviour minimises competition and confrontation; it means the birds don't have to patrol and protect their territories.

Sound can differentiate similar species. Chirruping and Chiming Wedgebills, for example, look near identical but have very different vocalisations – a signal that this is a different species, for breeding.

Nor are the calls just exact repetitions. Andrew played us the call of a male Fairy Wren singing his heart out. But a close look at the spectrogram shows that every phrase is different. Over 15 minutes, he never sang the same phrase twice. Is he just showing off or is there more to it? The wren learnt his song, so is conscious of everything he is doing. He's articulating every one of those sounds.

An evolutionary driver

Andrew argues that it is not the species that has evolved the sound, but the sound that evolves the species. When a creature can come up with a different vocalisation, and a different strategy for using sound, it's on its way to being a new species.

Miners, for example, all have a mobbing call, but Bell Miners have made it a sonic strategy to create a

wall of sound that pushes other species from their territory.

Measuring ecosystem health

In recordings such as Andrew's we are hearing not just a collection of species, but a whole environment, and that can tell us a lot about the health of an ecosystem.

To do this, however, we need to look at months and years of data. Dr Michael Towsey, a researcher at QUT, has developed techniques that compress the huge amount of data involved, and differentiate different sound sources – at least to class level, so we can recognise birds, insects, frogs.

In a compressed spectrogram of two months' data, Andrew pointed out rainfall and wind, and how when wind was up, birdsong was down. We could see the dawn chorus getting earlier as the days got longer.

In a compressed spectrogram of a whole year, we tracked the dawn chorus getting earlier from spring into summer, the start of the insect chorus in the warmer months. Bird song largely stopped when the cicadas were active. And the long evening cricket chorus was there in the warmer months, absent during cooler months.

Stack these one-year plots year on year, and you have a tool to measure the acoustic signature of long-term environmental and climate change.

Eco-acoustics is the name of this new scientific discipline, going beyond the single-species focus of bio-acoustics to study the sonic landscape. A key task is to identify the acoustic signifiers of a healthy environment. Diversity of sound is an obvious one, mirroring species diversity, and from this an Acoustic Diversity Index has been developed. It's exciting work, still in its early stages. Watch this space!

Visit Andrew Skeoch's website to listen to his recordings or buy his CDs:
<https://www.listeningtoearth.com.au/LE/index.php>

CAN YOU HELP?

Benton Junior College, MON 6TH AUGUST

Lots of Grade 1 students are coming to learn about the estuary, pollution, and biodiversity.

We need lots of BERGers to help!

Call Liz Barraclough: 0408 388 430.

Friday working bee coordination

David Street & the ubiquitous Liz have taken over coordinating the Friday working bee. They'd love some help! **Again, call Liz on 0408 388 430**

BERG Mt Martha welcomes new members

Lynn Murdoch & Stewart McLachlan; Alice & Mark Bryant; George & Anita Murley; Winnefriede & Colin Kennedy; Jodie & Phil Shanahan; Sally Brisker; Sue Brabender

THANKS SUE!

Sue Betheras has stepped down from coordinating the weekly Friday morning working bee, after many years.

Sue took over as coordinator soon after the group began, in May 2010, with just three people. Under her guidance the Friday workers have transformed the old quarry from a weedy mess to an indigenous bushland haven with masses of small birds, and have done lots more work near Uralla Rd bridge and further afield. 'It's been extraordinary', says Sue, 'to see what a committed weekly group can achieve.'



*Sue with her favourite weeding tool!
Photo Liz Barraclough*

BERG MM Working Bees	Other BERG MM Activities	Other Groups
<ul style="list-style-type: none"> ❖ Sunday working bee: monthly, usually 2nd Sunday, between 9am & 12noon – but June WB is 17th, ie 3rd Sunday. Details emailed a few days ahead, or call Liz Barraclough 0408 388 430. ❖ Tuesday working bee: monthly, 2nd Tuesday between 9am & 12 noon, meet at end of Latrobe Dve. Call Jenny Selby 0432 719 288. ❖ Coast Group: monthly, 3rd Wednesday, between 8am & 11am, meet in car park by the Yacht Club. Call Suzanne Ryan 0418 387 604. ❖ Friday working bee: weekly between 9.30am & 12 noon. Call Liz Barraclough 0408 388 430. 	<ul style="list-style-type: none"> ❖ Waterwatch & Estuary Watch testing: monthly, 4th Sunday 9.15am, starting at Augusta St Bridge. Call Sue Milton 0407 350 175. ❖ BERG Mt Martha Committee meets monthly at Mt Martha House, 9.00am, usually the 2nd Saturday. Next meetings 16th June (3rd Sat) & 14th July. All members welcome. 	<ul style="list-style-type: none"> ❖ BirdLife Mornington Peninsula bird-watching 2nd Wednesday and 3rd Sunday. Enquiries to Max Burrows 9789 0224, mornington@birdlife.org.au or www.birdlife.org.au/locations/birdlife-mornington-peninsula. ❖ SPIFFA 1st Monday, 7.30 pm, at Parks Vic, Hinton St, Rosebud. Enquiries 5988 6529, or www.spiffa.org. ❖ Sunshine Reserve working bee 9.30am, last Sunday of month. Call Pia Spreen, 5974 1096
<p>BERG MT MARTHA COMMITTEE PRESIDENT GRAHAM HUBBARD • VICE PRESIDENT PETER MCMAHON • SECRETARY DIANNE LEWIS • TREASURER JULIE ZAMMIT • FIELD OFFICER LIZ BARRACLOUGH • COAST GROUP SUZANNE RYAN • WATERWATCH SUE MILTON • COMMUNITY AWARENESS BARBARA THRIVES • PHILANTHROPY BRONWYN STREET • NEWSLETTER ANGELA KIRSNER</p>		
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THE CREEK

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