

ON DUTY 24/7

Bruce Ferres reports

Once again, EstuaryWatch and Waterwatch have been on hold through lockdown.

Excitingly, however, our 24-hour water quality monitoring station was installed on the estuary jetty on 23rd August by the team from Bio2Lab Pty Ltd.

With the monitoring station now in place, we have a link to a dashboard that shows the constantly updating results. Next step is a Zoom workshop when Bio2Lab will explain to us the functionality and result analysis tools.

Trigger levels

With 24-hour monitoring, we are able to set 'trigger levels' for each parameter to alert us to issues that need investigating. We will continue to refine the trigger levels in



consultation with South East Water.

Among the various such alarms the station sends to my mobile is a 'jostle alarm', triggered if the station detects any physical interference. It has gone off a couple of times already, but the causes fortunately have proved benign. But curiously, it didn't notice the recent earthquake!

South East Water have fully funded the first year of operation.

Steve Marshall of Bio2Lab with his newly installed monitoring station, the electronics box powered by solar panels above it.

Below the jetty, flexible cabling terminates at a casing that protects the sensors.



The Boardwalk and Beyond

Join us via Zoom

**Saturday 13 November,
9.15 for 9.30**

Help us celebrate what BERG MM volunteers have achieved over the past difficult year to nurture and protect the reserves, estuary, and coastal areas of Mt Martha.

Followed by a brief AGM.

Nomination and Proxy forms are on our website, at <https://www.berg.org.au/whats-on/>

We are still waiting to hear about our application to Melbourne Water for funding to cover years two and three.

Alongside this new technology, we will continue (Covid-permitting) to report monthly on the condition of the estuary mouth and take measurements at the Ferrero Oval and Augusta Street sites.

Augusta Street outfall

In July BERG Mt Martha alerted the Shire to sediment cascading into the creek via the Augusta Street storm-water outlet, from a mix of private earthworks, a depot site used by sewerage pipe contractors, and road resurfacing with sediment-laden gravel.

The only action to date is a sediment-trapping mesh barrier at the depot site. We don't know who installed it but hope it will at least help mitigate the problem.

WHO'S IN OUR NEST BOXES?

Nest boxes have long been part of our reserves, installed to provide alternatives for the many birds and mammals that rely on tree hollows to roost or nest – microbats, sugar gliders, parrots, kookaburras, possums and more. Natural tree hollows are in very short supply. With so few old growth trees left, there is competition for the few hollows that exist, and to be useable, they need to be big enough and close enough to food and water sources.

Nest boxes in our reserves are monitored each autumn. Of the 43 boxes inspected this year in the Balcombe Estuary Reserves, there were Sugar Gliders in five, and one was taken over by European Honeybees. In Greenfield Reserve, 17 boxes were inspected: Microbats present in two and Sugar Gliders in another two.

Anthony Fennel, of Naturelinks, is responsible for monitoring the nest boxes in the Shire's reserves across the Peninsula, many of which are in Mt Martha (The Briars, Norfolk Reserve, Mount Martha Park and Sunshine Reserve as well as Balcombe and Hopetoun). Last year, of the 267 nest boxes inspected, there were Sugar Gliders in 40, Ringtail Possums in 20, Microbats in six, Brushtail Possums in four, and European Honeybees were unwelcome residents in two.

How hollows form

Natural tree hollows have a long gestation: at least 100 years for small hollows for animals such as Agile Antechinus, up to 200 years for hollows big enough for parrots, and much longer for the large, deep hollows used by Powerful Owls.

Wind, heat, fire, lightning, rain, termites and beetles, fungi and bacteria may all contribute. Trees often shed lower branches as they grow and larger branches may break off in wind; both leave openings for the process to begin. Animals may help it along by breaking off bits of branches or bark.

CHAINSAW HOLLOW – A BETTER OPTION?

How would we get by in a house made of thin plywood in summer's heat or the depths of winter? It provides negligible thermal insulation. Yet many of the nest boxes in south-eastern Australia, ours included, are made of this material.

It's vitally important for the inhabitants. Extreme heat can be lethal, particularly for newborns, while nocturnal animals may leave a hot nest box and become easy prey in bright daylight.

Is there a better solution?

This is the question addressed by a group of Melbourne researchers from La Trobe University, Arthur Rylah Institute and The University of Melbourne.

They are investigating hollows carved directly into living trees with a chainsaw. It's an approach that has attracted some interest over recent years, but their work provides the first evidence that these chainsaw hollows make well-insulated homes.

Chainsaw hollows are created using plunge-cuts into a living Eucalypt, so minimising damage to the tree's outer layer. The tree must be healthy and large enough to support itself once the hollow is created. The finishing touch is a

timber faceplate that provides a suitable sized entrance for the target animal.

Unequivocal results

Their study, published in 2018, compared natural hollows in mature Eucalypts with three alternatives: plywood nest boxes; chainsaw hollows cut into live tree trunks; and chainsaw hollows in felled logs that were then attached to trees (a method used in some offset nest box programs).

The results were clear: daily fluctuations in temperatures were much greater in nest boxes than in natural hollows, chainsaw hollows and log hollows.

But will chainsaw hollows be used?

Will these artificial, well insulated hollows attract the wildlife they are designed for?

This was the next question the research team addressed. They installed chainsaw hollows in the trunks of medium-sized trees then, used motion-activated cameras, recorded the number of visits to each hollow compared to old hollow-bearing trees, before the hollows were installed, then 4 months and 7 months later.

The study was carried out in five reserves including four on the

Below left: A motion-sensitive camera monitoring the chainsaw hollow below it. Right: Researchers Katherine Best (with pole camera) & Kristen Semmens monitoring a chainsaw hollow.



Peninsula: The Briars, Woods Reserve, Warringine Creek, and Warringine Park.

Their results, published last year, are encouraging. A range of hollow-dependent mammals and birds quickly

found and inspected newly installed chainsaw hollows, and their interest hadn't waned by the 7-month survey.

Indeed, the chainsaw hollows attracted more visits than the old, natural hollows.

Furthermore, though the chainsaw hollows had only 35mm entrances designed for small marsupial gliders, various larger bird species were clearly interested. Crimson and Eastern Rosellas, Rainbow Lorikeets, Striated Pardalotes, Wood Ducks and Kookaburras all tried repeatedly to widen the entrance and get in!

Implications

In short, the study results suggest



*At home in chainsaw hollow: Left, two Agile Antechinus in a chainsaw hollow at The Briars. Photo Kristen Semmens
Right, Sugar Glider mum and young at the entrance to a chainsaw hollow at Warringine Park. Photo Steve Griffiths*

that chainsaw hollows that mimic the look of natural tree hollows can attract hollow-dependent fauna, particularly birds and Sugar Gliders, to developing trees in regenerating landscapes.

What next?

These studies are part of a larger, ongoing study looking at wildlife use over time of the different types of natural and artificial hollows, as well as monitoring tree health and maintenance needed.

The next step will be to understand how hollow-dependent mammals and birds go about looking for and selecting tree hollows.

Many questions remain to be answered. How effective are chainsaw hollows in

the longer term? How well do they work in different human-disturbed landscapes, such as agricultural or timber production forests? Do the occupants do as well as those in natural hollows? All questions to be addressed in this promising line of research.

Thanks to Steve Griffiths, of La Trobe University, for supplying the wonderful selection of photographs.

References

Stephen R. Griffiths, Pia E. Lentini, Kristin Semmens, Simon J. Watson, Linda F. Lumsden and Kylie A. Robert. 'Chainsaw-carved cavities better mimic the thermal properties of natural tree hollows than nest boxes and log hollows', *Forests* 2018, 9, Stephen R. Griffiths, Kristin Semmens, Simon J. Watson, Christopher S. Jones. 'Installing chainsaw-carved hollows in medium-sized live trees increases rates of visitation by hollow-dependent fauna', *Restoration Ecology* 28:5, 1225-1236

Let us in! Hopeful Eastern Rosellas and a Galah inspecting chainsaw hollows with entrances that are too small for them
Photos Katherine Best



The research team is currently working on widening the entrances to some of the chainsaw hollows. This one, at Woods Busbland Reserve, has been widened from 35mm to 65mm, and there are 3 crimson rosella chicks inside. Photo Steve Griffiths



AT HOME IN A MT MARTHA HOLLOW

The hollow below is in a large healthy Eucalypt in a private garden just outside the reserves, off Watson Rd. It's been used by Rosellas and Lorikeets for years, the property owners tell us. This year, it's a pair of Rainbow Lorikeets.

Late one sunny afternoon, I waited, camera at the ready. The two birds hung about in the tree tops for some time, clearly reluctant to be seen entering their hollow by the many aggressive Noisy Miners flying about. Finally, when the Miners had largely moved on, one took the risk.

Photos Angela Kirsner



LOOK OUT FOR...

Near right: The gorgeous golden yellow of *Hibbertia riparia*, Erect Guinea Flower, in flower in many places in the reserves.

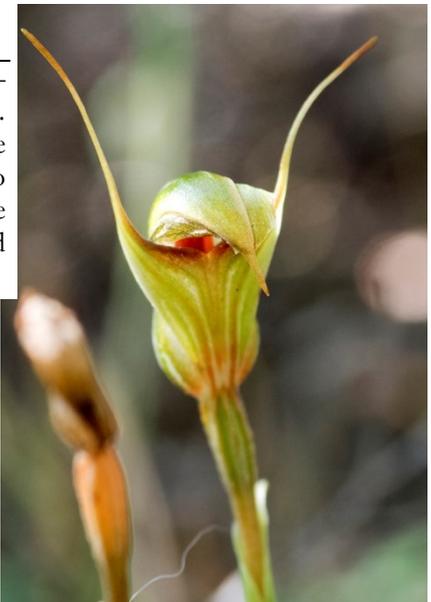
Far right: The elegant feathery flower heads of *Stipa mollis*, Soft Spear Grass.

Photos Angela Kirsner



GREENHOODS AGAIN

Nodding Greenhoods have been prolific this year – but this one is the Striped Greenhood *Pterostylis striata*. This one patch is near the ovals, but maybe there are others well hidden in the reserves. The first two photos were taken late August, but there was one flower remaining at the start of October (right), faded almost to a golden yellow. *Photos Angela Kirsner*



THANKS TO OUR FABULOUS BUSINESS PARTNERS

And in particular, for their loyal, ongoing support through these trying times

- Bell's Meats
- Bendigo Bank Mount Martha
- Bonaccorde
- Boomerang Bags Mt Martha
- Bunnings Mornington
- Complete Colour
- Complete Step – Podiatry & Footwear Specialists
- Danckert Real Estate
- Master Movers
- Mornington Peninsula Gardening
- Mount Martha Chiropractic & Sports Injury Clinic
- Mount Martha Veterinary Clinic
- Mount Martha Village Clinic
- Mount Martha Yacht Club
- Mr Curtis Wine Bar
- Proscape Landscaping
- Ritchies IGA
- Roberts Beckwith Partners
- Rotary Club of Mount Martha
- Sea Side Shacks
- Terry Bateman Pharmacy
- Volpino
- Warlimont & Nutt Pty Ltd

BE BLUE-TONGUE AWARE AS THE WEATHER WARMS UP

IN THE CAR

- ◆ Blue-tongues are on the move as the weather gets warmer.
- ◆ Be blue-tongue aware when driving, especially on our suburban roads.
- ◆ Avoid them if you see them on the road – if you can do so safely.
- ◆ Let's try to make a difference and reduce the number of blue-tongue lizards that are run over this year.



AT HOME

- ◆ Be Blue-tongue Friendly!
- ◆ Try to keep your pets away from them.
- ◆ Be mindful when mowing or whipper snipping.
 - ◆ Blue-tongues love to eat snails, so don't use snail bait – try going out on rainy nights to squish the snails instead.
 - ◆ Create a lizard lounge of logs in your garden – a safe place where they can hide & sleep.

- Blue-tongue lizards are our largest species of skink.
- They eat a variety of plants and animals, mostly slow-moving ones – they're not very agile. Their large teeth and strong jaws can crush snail shells and beetles.
- They shelter at night among leaf litter, rocks or logs. They emerge early morning to bask in sun before foraging for food as the day warms up.
- Unlike many other reptiles, they don't lay eggs, but give birth to live young.
- Eastern Blue-tongues may have up to 19 young (usually about 10) each year, each about 130-140mm long.

ABOUT BLUE-TONGUES

- At mating time, males may fight, even engaging in crocodile-like death rolls with each other.
- They are not aggressive, but a frightened blue-tongue may bite if picked up. But they have no venom.
- When threatened, they open their mouth wide and stick out their broad blue tongue, which contrasts vividly with their pink mouth. If the threat remains, they may hiss and flatten their body to look bigger.
- Eastern Blue-tongues can grow to almost 600mm long.
- Blue-tongues are long-lived. Several captive animals have lived for 20 years, and they may live much longer.

FIELD NEWS

Field Officer Liz Barraclough reports

Lockdown has prevented working bees since late June, but our wonderful contractors Naturelinks have been able to work, and lots has been achieved.

Heaps of Forget-me-nots have been removed before seeding and piled under black plastic to compost.



Black plastic covering composting forget-me-nots

Large flowering Boneseed, Flaxleaf Broom, Polygala and Pittosporum have been cut and painted and lots of small seedlings removed, again, before seeding. Tobacco Plants, from seedlings to small trees, have gone from near the highway. And a couple of aggressive climbers have been nipped in the bud along the SE Water easement from Victoria Cres.

Spot-planting has continued to boost diversity and fill gaps – by the tennis courts, in the Bunyip, below the ovals, and near Uralla Bridge.

Naturelinks has also planted out an impressive ‘garden’ of low indigenous plants at the end of Wattle Avenue, between the walking path and a new private fenceline (see photo).

And COVID has allowed us lots of computer time to submit another grant application to Melbourne Water!



RELEASE OF OUR FIRST COASTAL FAUNA SURVEY

BERG MM's first survey of vertebrate fauna in our coastal reserve has been released. Done over 12 months by Mal Legg of Mal's Ecological & Environmental Services, it covers some 8.2ha of the foreshore reserve from Balcombe Point to the Coolangatta Road path.

The survey extends Mal's three previous surveys of the adjoining Balcombe Estuary Reserves, completed 1999, 2008 and 2019, and these will be further extended by the fauna survey now underway in the Hopetoun Creek reserve.

Native species

The coastal survey found 68 native species in the vulnerable bushland strip between Esplanade and bay:

- **Six fish:** Short-finned Eel, Common Galaxias, Long-finned Goby, Mullet, Black Bream and Smooth Toadfish, all within the estuary mouth;
- **Four amphibians:** Common Froglet, Southern Brown Tree Frog, Verreaux's Tree Frog and the occasional Southern Bullfrog;
- **Nine reptiles:** Long-necked Tortoise, White-lipped Snake, and seven species of lizards, including Blue Tongue;
- **Thirty-eight birds:** coastal, wetland and woodland;
- **Seven land-based mammals:** possums, microbats, and a healthy population of Swamp Rats; plus
- **Incidental sightings of four notable marine mammals:** Burrunan Dolphin, Bottlenose Dolphin, Humpback Whale and Southern Right Whale.

Introduced species

Eight introduced species were

found: four birds and four mammals, including feral cats, foxes, black rats, Mynas, Starlings and Blackbirds.

Significant species

Humpback Whale (vulnerable) and Southern Right Whale (endangered) are of National Significance. Five State Significant species were recorded: Common Long-necked Tortoise, Pied Cormorant, Pacific Gull, Burrunan Dolphin, and Great Egret (listed as threatened). A further eight species are of Regional Significance, and another is of High Local Significance.

Due to large population and habitat losses across the Mornington Peninsula, the remaining native fauna recorded within the reserves are considered of Local Significance.

A blueprint for action

‘Collectively’ the report states, ‘the foreshore reserve is of Regional Significance and its continued protection should be of high priority’.

Five recommendations will guide the Coast Group in protecting and maintaining the reserve's diverse habitats and fauna species:

- 1. Habitat protection:** Maintain and increase crucial indigenous habitats throughout the foreshore reserve and continue to remove habitat-changing weeds throughout.
- 2. Woodland habitat:** Continue to restore the Coast Banksia Woodland throughout by removing habitat-changing weeds and replanting Coast Banksia and Drooping Sheoak trees.
- 3. Nesting boxes:** Install nesting boxes for listed key species and deploy additional habitat logs throughout (especially Coast Banksia trunks).
- 4. Pest animal control:** Implement pest animal control programs with specific frequencies to control foxes, cats, mynas and rodents.
- 5. Environmental monitoring:** Develop and implement a longitudinal environmental monitoring program, informed by the results of this study, that captures changes to species diversity and abundance in response to variable seasonal conditions, particularly for endangered and threatened species.

THANKS TAMARA!

Tamara Keyte, our amazing bushland supervisor, has moved on from Naturelinks to an exciting new job as a Senior Ranger with Frankston City Council. We will miss her hugely at Friday Group and Coast Group activities.

But she's not lost to us. Tamara is a committed BERGER and will continue as the much valued coordinator of our Facebook and Instagram pages – and maybe more.

A student volunteer

Tamara started working as a volunteer with the Friday group in 2014 during the final year of her Conservation and Land Management course at RMIT, and she was a regular from the start.

Sue Betheras writes: 'There were about six of us most weeks. Tamara asked lots of questions and was always interested to hear about our experiences working in the reserves'.

Indeed, in Liz's words, 'She soaked up knowledge like a sponge.'

When she graduated, she joined the Naturelinks crew, a move Liz and Sue strongly encouraged, and over recent years has been a Project Manager with them, managing bushland crews and working with a number of volunteer groups.

She has developed a detailed knowledge of our reserves and the works needed, and has managed her Naturelinks crews expertly to address these needs

A teacher and a leader

Tamara returned to the Friday group as Naturelinks supervisor, monthly at first then twice monthly. Sue Betheras again: 'It has been fabulous for us. She took on teaching us about bush management, things such as plant ID, and how and when



Tamara in morning tea mode (above), and dead-rat-disposal mode (below)! Photos Liz Barraclough

to remove different weeds'.

With the Coast Group she instigated a 5-year weed management plan and trained the group to follow it through.

Both groups have thrived on the intellectual stimulation this training has provided. 'Each bushland activity with Tamara was a mini training session, developing our knowledge and confidence', said



Suzanne Ryan, Coast Group coordinator. 'She'd take time to check that each volunteer was OK, that they understood what they were doing and why'.

In short, Tamara has played a major role in building the capacity of BERG volunteers to manage our works with the Reserves – and in holding their interest.'

Grant applications

She has also become invaluable in helping to put together grant applications. Liz again: 'Tamara introduced and produced workplans, photo point reports, detailed maps, ongoing management plans and charts, and more. Her great technical and computer skills made up for my lack of them!'

Media whiz!

Under Tamara, BERG MM's Facebook page has been transformed, and Instagram added to our communication arsenal – both vital in this digital age. For those who understand such metrics, Facebook reach under Tamara has grown to over 10,500, and followers to 690, and average posts reach over 250 people, with the highest a huge 5000+. All the result of Tamara's fabulous, engaging post style! And this, she will be continuing.

She has also, of course, starred in two of our recent short videos on weeding (see youtu.be/BY48YLCnv98 & youtu.be/vlx5pooHv4A).

Liz summed up: 'We shall miss her terribly, but always realised that she'd have to move onward and upward, with her talent and so much to offer in the environmental sphere'.

CAN YOU HELP?
BERG MM is foraging for a new
Membership Coordinator

who loves to chat to new people, and to work collaboratively with a fabulous team of volunteers who are passionate about caring for our reserves.

Might this be you?

You'd be the first point of contact for many members, answer their queries, and maintain member records.

Time taken? - an hour or two each week.

Interested? Call Jan Jones, retiring Membership Coordinator, on 0435 136 476 or member@berg.org.au.

She'll be happy to discuss it with you.

BERG Mt Martha welcomes new members
 Matt Sykes, Ian & Wendy Sharp, Kathryn Holland & family, Kathleen Smalley & family

Come along to our Bushland Activities	Other BERG MM Activities	Other Groups
<p>ALL COVID-DEPENDENT:</p> <p>❖ 2nd Sunday of the month: between 9am & noon. Details emailed a few days ahead, or call Liz Barraclough 0408 388 430.</p> <p>❖ Coast Group: fortnightly on Wednesdays, between 9am & noon. Call Suzanne Ryan 0418 387 604 for details. Location emailed a few days ahead.</p> <p>❖ Friday Group: weekly between 9.30am & noon. Call Liz Barraclough 0408 388 430.</p>	<p>❖ 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.</p> <p>❖ BERG Mt Martha Committee meets monthly at Mt Martha House (or via Zoom), 9.00am, usually the 2nd Saturday. AGM Saturday 13th November (by Zoom), 9.15 for 9.30.</p>	<p>❖ 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.</p> <p>❖ SPIFFA 1st Monday, 7.30 pm, at Seawinds Community Hub, 11A Allambi Ave, Rosebud West. See www.spiffa.org.</p> <p>❖ Sunshine Reserve working bee 9.30am, last Sunday of month. Call Pia Spreen, 0437 299 847.</p>
<p align="center">BERG MT MARTHA PATRON: TERRY DENTON</p> <p align="center">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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THE CREEK

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