

SLEUTHING FOR DNA IN THE CREEK

Bruce Ferres reports

Imagine if every living creature in the creek clocked in with its own identifying barcode. Sounds a bit like visiting a restaurant in a COVID-safe fashion!

But this, indeed, is essentially what happens. In every waterway, there are DNA traces of the creatures that live there or pass through – known as ‘environment DNA’ (eDNA). Scientists are using cutting edge technology to identify this DNA and so the creatures in the waterway: fish, frogs, birds, platypus and more.

eDNA offers an unprecedented opportunity for biodiversity assessment in waterways, and importantly, to monitor endangered and invasive species. It is more sensitive, cost-efficient and accurate than traditional monitoring. It causes minimal disturbance, and carries only low risk of introducing alien species or disease.

Melbourne Water has added this technology to its arsenal in waterway monitoring, and BERG MM took part in their waterways eDNA project run in November in partnership tech start-up company EnviroDNA.

On-line training set us up, and we collected water samples at the Rotunda Jetty and further upstream at the Uralla Road Waterwatch test site. It will be fascinating to see the results – watch this space. Who knows, we may find the elusive Rakali, long suspected but not sighted!



The Lone Ranger, AKA Sue Milton, and Bruce Ferres taking water samples at the Augusta St bridge for eDNA sampling Photo Andrew Jones

SEEN IN THE SHALLOWS

BERGER Claire Swan sent the photo below that she'd taken of a handsome jellyfish swimming near the Estuary bridge on 12th November.



Sue Brabender, a keen snorkeler, identified it as **Haeckel's Jellyfish** *Pseudorbiza haeckeli*. She'd seen a big one recently at Mornington Pier, and provided her dive shots of one at Mornington's Royal Beach a couple of years ago (see below).



These beautiful creatures swim in waters up to about 30m deep, but are also seen stranded along the coast. They can be up to 40cm across, can deliver a mild sting, and are found in most Australian states.

WILD LIFE IN THE RESERVES AND NEARBY

Angela Kirsner reports

WILD POLLINATORS

Sue Brabender recently took part in the 6-monthly Wild Pollinator Count – a citizen science event that takes place Australia-wide over a week each April and November. (See wildpollinatorcount.com/ to learn more about it.)

Australia's many native pollinator insects are often overlooked, with attention focussed on the European honey bee. Native insects contribute to pollination in crops and gardens around the country. We have some 2,000 native bee species, all important pollinators. And of our 2,000 or so native butterfly, wasp, fly, moth, beetle, thrip and ant species, some are documented pollinators, but for many, we know little about their ecology, what flowers they pollinate, where they are found. The Wild Pollinator Count is helping to help rectify this.

Sue snapped a number of pollinators along the Bunyip Walk, some on *Goodenia ovata*, some on Coast Tea-tree and others on an *Olearia*.

SOME SPIDERS

Wildlife in my garden opposite the Victoria Crescent reserves has been varied and interesting of late. I'm grateful to talented natural historian Ian Endersby for his help in identifying some of them.



This handsome green spider doesn't feature in any of Ian's references books. it may be an Orb-weaver. Many spiders, he said, are difficult to identify, often requiring a microscope, and there are lots in Australia that are not yet named.



Photographed by Sue Brabender on the Bunyip Walk. Top left: Common Psednura (a grasshopper); My favourite; with its amazing camouflage it's not surprising I've not seen one before' writes Sue. She is not sure if it plays a pollinating role. Top right: Probably a Jewel Beetle. Most of these feed on the nectar of Eucalypt and Tea Tree flowers, so pollinate in passing. Below left: Australian Admiral Butterfly. Below right: Australian Painted Lady Butterfly



Of these two, Ian writes: 'The pattern of their eyes is different, so it's a picture of dinnertime, not conjugal bliss. The orange one looks like a Badge Huntsman Neosparassus diana. It should have an obvious badge-like marking under its abdomen. The other is possibly a male from the family Selenopidae (Wall Crab Spiders). If so, the one genus found in Australia is Karaops, but species ID usually requires a stereo microscope to examine the genitalia.



St Andrew's Cross Spider Argiope keyserlingi, named for its web decorations: zig-zag ribbons of bluish-white silk in a full or partial cross through the centre of the orb web. The spider sits with its legs in pairs. The cream-coloured young spiders make a circular stabilimentum (like a white silk doily) that disguises them and may also protect from sun. As the spider grows the 'doily' is gradually transformed into a 'cross'. The species is found in eastern Australia, from rainforest margins to open forest and heathland

A FLY, SOME MOTHS



Above: A Crane Fly *Leptotarsus* (*Macromastix*) *costalis* (*Swederus*), also known as a Daddy-long-legs, on a cauliflower in my vegetable garden. Note the very long antennae, which identify it as a male. (Nils Swederus was the Swedish naturalist who named it.)

Below: A symphony in black and white! Unidentified but splendid moths in my garden



A MONSTER FUNGUS

There were some half dozen of these giants, in three clumps, in October on the land on the corner of Dominion Road and Somerset Drive.

They are the spring bodies of *Phlebopus marginatus*, the native fungus Giant Bolete, known in WA as the Salmon Gum Fungus. The big one below, photographed beside Suzanne Ryan's (albeit small!) foot, was about 60 cm across, but they can grow up to a metre, and a specimen recorded in Victoria weighed in at 29 kg. They are probably Australia's largest terrestrial fungus.



Photos Suzanne Ryan

Fungus flies breed in their soft fleshy tissue and the maggots make it decay rapidly. Sue Brabender tells me you smell them before you see them when the decay starts. Wallabies, Bush Rats and Swamp rats also like to eat them.

Millions of tiny spores are produced in the tubes on its underside. In the soil below is the feeding body, a fine network of threads which must be extensive to support these huge spring bodies.

It prefers grassy areas near Eucalypts, and can fruit at any time after rain.

It may even occur in rings – just imagine it!

SHADE WOOD SORREL AN INDIGENOUS OXALIS

This beautiful ground cover, *Oxalis exilis*, grows in our reserves and in my garden, where, for decades, it has been a naturally occurring but never aggressive survivor.

Its clover-like leaves are held on short stalks with distinct upward-pointing hairs. The five-petalled yellow flowers (much smaller than those of Soursob) appear from Spring to Autumn, opening with the sun, and the conical seed capsules are held aloft and covered with the same distinctive hairs.

With gentle fibrous roots and no bulbs, it has none of the nasty qualities of those ubiquitous *Oxalis* weed species.

It's a widespread herb; the books tell me it usually prefers winter-wet or damp places, but I'd hesitate to call my sandy soil 'winter-wet'!



A REVIEW OF THE YEAR

From President Peter McMahon

What a year it's been, with all the disruptions of COVID-19. BERG Mt Martha has, nevertheless, continued to do much behind the scenes, and while working bees and gatherings have been off for much of the year, our contractors have continued on-ground work within the Shire's COVID safe guidelines.

Honorary Life Member

At our AGM on 17th October, I was delighted to announce that past President Graham Hubbard, who retired from the Committee at the meeting, has been made an Honorary Life Member of BERG Mt Martha – an appropriate recognition of Graham's major contribution to our organisation.

What we've done

Among the year's achievements are:

- **ESO progress:** Our proposal for an Environmental Significance Overlay for the reserves has progressed to the consultant report & document-ation stage, in preparation for submission to the newly elected MPS councillors.
- **A comprehensive 'snap shot' of our flora and fauna:** The completed *Fauna Survey*, and *Flora Survey*, *Vegetation Mapping & Management Guidelines* update those of a decade ago for the Estuary reserves, while surveys of the Coastal reserve are almost complete, and underway for our Hopetoun Creek area.
- **Signage:** A major update through the Estuary Reserves is almost complete. Entry signs are in place, and upgrades to the Yellow Robin (campground) and Dragon Fly (boardwalk) audio trails, and the interpretive signs through the reserves are almost complete.
- **Website update:** Our website has had a major upgrade.
- **Addressing sedimentation:** We have negotiated agreement with the Shire and Melbourne Water to approve expenditure of ~\$300k on a Gross Pollutant Trap at Henley Avenue – one step towards reducing sediment and rubbish threatening the estuary.

- **Wastewise Mt Martha:** As part of the Wastewise Peninsula project, we have hugely reduced the use of single-use plastic bags and other single-use plastics at Mt Martha shopping centre.

- **500+ trees & shrubs planted:** In response to the Fauna Survey recommendation and the critical need for more mature trees providing habitat and hollows.

We are most grateful to the Shire for extra funding diverted from working bee supervision, to ensure all our ordered plants were planted.

More than 110 active volunteers from among our 500 plus members have put in well over 5000 hours (probably a significant underestimate). Our Business Partners have grown to 20, while grants over the year have brought in \$107,000, plus \$15,000 in donations. Over 90% of this is spent in our on-ground works and projects.

Thanks!

While there are too many people to thank individually, our fantastic Field Officer, **Liz Barraclough** continues to drive both ongoing and new projects. **Suzanne Ryan**, who rivals Liz in drive and energy, is doing an amazing job along the Coastal Reserve, both on ground and in raising funds and awareness (plus her work on our IT upgrade). **Bruce Ferres** and **Sue Milton** our Estuary/Water Watch coordinators, working with the Shire and relevant authorities, are driving our action plans to reduce sedimentation before it is too late. Secretary **Di Lewis** and Treasurer **Julie Zammit** continue to provide BERG MM with their highly professional support, and our Editor-in-chief, **Angela Kirsner** provides our first class newsletters and **Tamara Keyte** works magic with our Facebook page.

Looking ahead

Over the coming year, priority actions will include:

- Continue to implement the recommendations of our flora and fauna surveys.
- Work with the Shire and Melbourne Water to ensure the Henley Avenue Gross Pollutant

Trap is either upgraded or a new unit installed as soon as possible.

- Urgently pursue further action under the Shire/Melbourne Water long-term sedimentation management plan, due to be released in the near future.
- Extend community engagement, localised environmental initiatives and communication programs.
- Continue to act as an 'environmental watchdog' for the Mt Martha community, responding to local environmental issues, particularly – but by no means only – planning matters that may negatively impact the future of our magnificent reserves.

MOVING SAND NORTHWARDS

From Suzanne Ryan

Consistent with recent study findings that showed no engineering treatment would return sand long-term to Mt Martha North Beach without adverse impacts, DELWP is not progressing hard structure options such as seawalls and groynes for the beach. DELWP is in receipt of a petition about hard structure options.

Update

In February 2020, the Victorian Government signed a funding agreement with the Commonwealth Government for a commitment of \$1.5 million for Mt Martha North beach. This agreement is supporting the current beach renourishment, which aims to widen the beach and so protect the adjacent shoreline and vegetation.

Water Technology has been engaged to advise further on future beach renourishment works, focusing on two methods: sourcing the sand for North Beach from South Beach or from offshore dredging.

The current sand transfer is moving 10,000m³ of sand from the south of the beach to the north, where it will be spread and shaped.

BERG Mt Martha welcomes new members Fiona Evans, Verona Rawson, Elizabeth Filgate & family, Paul de Bruin

THANKS TO OUR BUSINESS PARTNERS

- 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
- Mount Martha Chiropractic & Sports Injury Clinic
- Mount Martha Optical
- Mount Martha Veterinary Clinic
- Mount Martha Village Clinic
- Mount Martha Yacht Club
- Mr Curtis Wine Bar
- Roberts Beckwith Partners
- Rotary Club of Mount Martha
- Sea Side Shacks
- Terry Bateman Pharmacy
- Volpino
- Warlimont & Nutt Pty Ltd

FEATURING

MASTER MOVERS

▪ A third generation local removals company, open 7 days a week.

▪ Paul de Bruin and his team focus on service quality and efficiency, to provide the service customers deserves where others have failed to deliver.

▪ Master Movers manage local, country & interstate moves, providing the right truck for each job.

▪ They offer pre-packing and storage, and specialist removals such as grand pianos, balcony drops, antique furniture and pool tables.



VALE

JENNY ROLLESTON 1948-2020

Soon after Jenny Rolleston retired to Mt Martha in 2007, she was introduced to Liz Barraclough for advice on re-designing the garden. Not only did Liz create a stunning blend of exotics and natives, but she also recruited Jenny to BERG – not the first time that has happened!

Jenny attended Sunday working bees and soon became an active member of the newly formed Community Awareness Group, which ran many very successful community activities including Family Day at the Estuary, Terry Denton workshops, audio trails, films, speakers and other celebratory events. Jenny was also part of the BERG Ambassador team that spoke to community groups promoting BERG MM's work and she was part of the organising team for the annual Clean-up of Birdrock Beach.

Jenny will be missed by her partner and long time BERG MM secretary Di Lewis and by her many BERG friends.



PAT HEPBURN

Long-time BERG MM supporter Pat Hepburn passed away peacefully on 19th October. Pat's son Keith tells how she and her late husband Doug loved BERG working bees until the years caught up with them. They remained avid readers of *The Creek* and loved to be taken along the boardwalk to see what had been achieved. Their membership goes back to 1997, when BERG was founded.



DARCY DUGGAN

Environmental guru Darcy Duggan died of leukaemia on 31st October. A scientist, teacher and activist with fire in his belly, Darcy dedicated his life to protecting the unique Yarra Ranges environment.

But his influence spread far beyond this. With his splendid red beard and hair, overalls and beanie, he taught and inspired generations of volunteers, conservationists and environmental workers, including the many BERGers who did the Habitat Conservation and Management Course over the past 20 years or so. His expertise has had a profound impact in shaping our work and our skills. He will be hugely missed.

Far left: Jenny Rolleston at the launch of the Yellow Robin Trail, 2013 Photo Richard Kirsner

Left: Darcy Duggan at the 2011 SPIFFA Habitat Management Course Photo Cate Clarke



FIELD NEWS

Field Officer Liz Barraclough reports Working-bees are on again!

And it's so good to be back. We are still limited to nine volunteers and one supervisor per group at this stage, but if necessary, we can break into more than one group – so there is space for all!

On Friday mornings, we have returned to the Uralla Bridge area to rescue the Maidenhair Fern from the invasive Buttercups, and to weed and mulch along the paths and creek edges.



Tradescantia under the boardwalk – a Friday group target weed. Every last scrap needs to be removed to prevent it regrowing. Photo Angela Kirsner

And we squeezed in our first Sunday working bee for months on 29th November. Only four of us there, but we did some excellent hand weeding of the many annual weeds in the area between the tennis courts and pre-school on Watson Road. We'll return to our normal Sunday routine next year.

But we've not been idle through lockdown. Daily COVID exercise for some BERGers has included follow-up weeding of Forget-me-nots through the Melaleuca scrub and rampant grasses in the coastal reserve, while sisters Barb Thraves and Lynette Dell tackled the Angled Onion at the Hopetoun Creek outlet. We have also added to the plantings

Above: COVID weeding! – social distancing and masks at a Friday working bee Photo Liz Barraclough

Right: A couple of weeks later – masks off! Friday groupies Tamara Keyte (Naturelinks), Jock MacMillan & Marg Knight weeding Tradescantia near Uralla Road Photo Angela Kirsner



around the bases of the rusted metal sculptures in the Old Campground.

New grant possibilities

Melbourne Water has a new and wide-ranging grants program, 'Liveable Communities, Liveable Waterways', which focusses on innovation, liveability and collaboration across all areas of water management. Several of us have tuned into webinars to learn about it, and are excited about the range of possibilities it opens up.

One that our Estuary Watch team is actively pursuing is to set up a partnership with relevant bodies to obtain funding for a permanent water monitoring station in the Estuary.

Audio Trail

Our two audio trails, the Yellow Robin Trail in the Campground and the Dragonfly Trail along the Boardwalk, have been repaired and upgraded with funding from a Stronger Communities Grant. The project has been managed by BERG MM volunteers, working with contractors and suppliers. All the trail posts have new fascias and the audio content, accessible via mobile devices, is hosted directly from the BERG MM website.

We are now looking to involve BERGers who are also teachers to review the audio content and maybe develop some catchy signage to tell visitors how to use the trails.

Keeping us safe

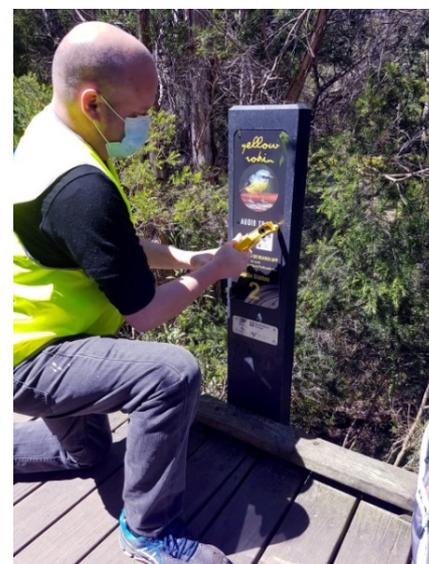
Suzanne Ryan has put together a Job Safety Analysis pack to be completed by BERG MM at every working bee. We need it for our own records and insurance, and while it doubles up on Naturelinks paperwork, it will cover us when Naturelinks workers are not present, as happens at two of the four Friday working bees each month.

Rabbits

Paul Bertuch (Eco-Agri) has finished fumigating and destroying warrens in the reserves for this year (funded by the Shire) and we are hoping for a Calicivirus release early in December.

Below: Paul McMabon attaching new fascia to a Yellow Robin audio trail post

Photo Peter McMabon



Nesting boxes

Paul Bertuch has also completed the installation of a number of new glider, bat and kookaburra boxes, and repaired and upgraded existing ones. Naturelinks will monitor the boxes once or twice a year, to check for occupancy and the state of box.

Flora & fauna surveys

With the flora survey of the Coastal Reserves almost finalised, Mal Legg began the year-long Fauna Survey of the Hopetoun Creek reserves in November, and I met Gidja Walker and Katherine Smedley in October to inspect the site ahead of their flora survey, which is starting in December. We will then have comprehensive surveys of all the reserves under our care.

COASTAL NEWS

Suzanne Ryan reports

Coastal working bees started mid-November and are back to their alternate Wednesdays routine. By the end of lockdown the weedy grasses were rampant, so hand-weeding around plants and brush cutting the rest was a priority.

BERG MM volunteers together with a number of interested community members have constructed (during lockdown) and are now installing some 40 vegetation buffer panels behind boatsheds and in the vicinity of the foreshore vegetation line.

Our coastal vegetation survey document is very soon to be released, after lots of discussion and

**MORNINGTON RAILWAY RESERVE
BIKE TRAIL OR BUSHLAND?**



BERG Mt Martha has expressed its deep concern in a submission to Mornington Peninsula Shire Council about the proposal to construct a shared bike path through the Mornington Railway Reserve.

BERG MM is also one of nine Peninsula environment groups supporting a report and submission to Council in late November, with the campaign spearheaded by BERGer Jeanette Miller.

The argument is compelling. The VicTrack land along the rail line lies within what was once the Moorooduc Plain; part of the Gippsland Plains bioregion. With 95%-99% of that land cleared for agriculture and urban development, the rail verge contains the last surviving remnants of natural Plains habitat. It includes remnants of three nationally significant, critically endangered Ecological Vegetation Classes and several endangered species, including Swamp Wallaby Grass, the Purple Diuris Orchid and the Growling Grass Frog.

The written submission to Council was accompanied by a short video made by Jeremy Loftus-Hills, which shows just how special this bushland is. You can access it at: vimeo.com/channels/railwayblues

Given the huge significance of this small surviving remnant, high priority should be given to ensuring that the vegetation communities of the Mornington Railway Reserve remain intact. While BERG MM acknowledges the importance of providing a network of safe bike tracks, we urge MPSC to seek an alternative route.

Image taken from the cover of the group submission to MPSC

refinement. Already we are finding that it is a wonderful resource and baseline to work from and add to.

We have also met with Jeremy Little, the Shire's Bushland Fire Management Officer, to talk about sensitive management of the mix of grassy weeds and indigenous plants in the vicinity of the Esplanade and coastal reserve. Jeremy is developing a management plan for slashing of grassy weeds (while preserving indigenous vegetation) between North Beach car park and Watson Road, including pathways and bush paths, while we have slashed and will maintain the reserve from the Yacht Club all the way down to Dominion Rd, on the coast side of the road, in areas where we are able to work safely.



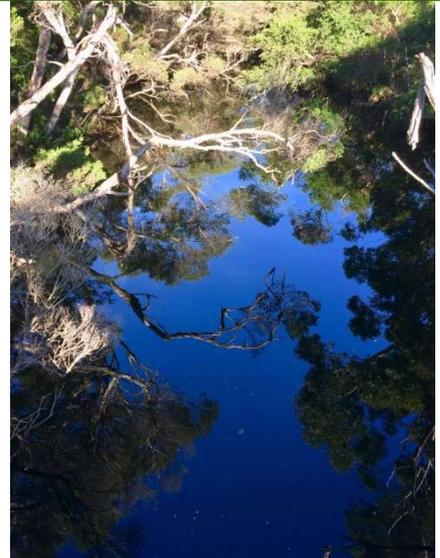
Installing the wire panels. Left to right: Andrew Jones, Ian Gould, Ian Croker, Peter McMabon & Paul McMabon Photo Suzanne Ryan

WHITE FINGER ORCHIDS

These delicate flowers were found and photographed by Tamara Keyte (BERGER, Naturelinks) in the bushland near Ferrero Ovals. She also found lots of Sun Orchids about to bloom.



*EstuaryWatcher
Bruce Ferres writes:
The berm was back
in mid November,
and the still creek
water provided some
glorious reflections,
seen here at
Augusta St
Footbridge*



BERG MM Working Bees	Other BERG MM Activities	Other Groups
<p>❖ Sunday working bee: monthly, 2nd Sunday, 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 working bee: weekly between 9.30am & noon. Call Liz Barraclough 0408 388 430.</p>	<p>❖ Waterwatch & EstuaryWatch testing: monthly, 3rd 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, 9.00am, usually the 2nd Saturday, next meetings 13th December by Zoom</p>	<p>❖ BirdLife Mornington Peninsula: runs regular bird-watching. Enquiries to Max Burrows 9789 0224, mornington@birdlife.org.au or www.birdlife.org.au/locations/birdlife-mornington-peninsula.</p> <p>❖ SPIFFA Normally 1st Monday, 7.30 pm, at Seawinds Community Hub, 11A Allambi Ave, Rosebud West. Enquiries 5988 6529, or www.spiffa.org.</p> <p>❖ Sunshine Reserve working bee 9.30am, last Sunday of month. Call Pia Spreen, 5974 1096</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 BARRACLUGH • COAST GROUP SUZANNE RYAN • WATERWATCH SUE MILTON • NEWSLETTER ANGELA KIRSNER</p>		
<p>Balcombe Estuary Reserves Group Mt Martha Inc. No. A0034645Y ABN 50 224 628 623 Mail: PO Box 433 Mt Martha 3934 Email: info@berg.org.au Mob: 0447 160 288 Web: www.berg.org.au</p>		

THE CREEK

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**SURFACE
MAIL**

**POSTAGE
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