

## ESTUARIES DON'T LOCKDOWN!

*Estuary Watcher Bruce Ferres reports*

EstuaryWatch (and Waterwatch) have remained on hold, at Melbourne Water's direction, even between lockdowns.

No lockdown, of course, for the Estuary itself! We have seen several berms come and go over the past two months, producing ever-changing vistas – peaceful and beautiful with still and often sunny weather combined with brisk mornings and spectacular sunsets.



Flooding behind the berm hit this year's high on 9<sup>th</sup> June, when the rotunda jetty disappeared under water and the upstream salt marsh was flooded. Then, next day, the berm was breached, and with low tide and a very calm bay, the water poured out at such speed that a sand and sediment delta and small sand island formed at the entrance beyond the shoreline.

*In July 2020 Photos Bruce Ferres*

*Left: A calm, sunny and crisp winter morning*

*Above: Quiet winter evening*

*And the estuary a lifetime earlier! The photo below was published 70 years ago, in The Australasian, 22 June 1940.*

*It is part of a page of photos recording the visit of the Governor General, Lord Gowrie, to Mt Martha. Other photos record troops charging from the 'thick scrub' with fixed bayonets, and operating Lewis guns and a machine gun.*

*The caption for this photo reads: 'The 7<sup>th</sup> Battalion crossing a pontoon bridge over a creek near the camp.' Source: Trove*







***Taken in the reserves over the past month, and worth celebrating in these difficult times!***

Clockwise from top left: Common Heath *Epacris impressa*, Purple Coral-pea *Hardenbergia violacea*, Common Correa *Correa reflexa*, Small-leaved Clematis *Clematis microphylla*, Sundew *Drosera* sp, moss on a log, and lichen on a tree branch

Photos Angela Kirsner



## NODDING GREENHOODS

By Angela Kirsner

In my garden opposite the north bank reserves, under old Coast Teatree, I have an expanding patch of Nodding Greenhoods (*Pterostylis nutans*) (see photo). I acquired them quite by accident years ago when BERG MM had permission to move plants from a bush block that was to be developed. I'd no idea I was digging up orchid tubers – just thought I was taking some grasses! The thriving patch is now over half a metre across with well over 50 flowers and still more rosettes. And I'm delighted also to be finding a few outliers, a metre or three away.

### How did the outliers get there?

Almost certainly by seed, environmental scientist Dr Graeme Lorimer tells me.

Nodding Greenhoods form colonies of clones (like mine). Each parent tuber usually produces multiple 'daughter' tubers each year, which form on short underground side-shoots.

But they are also very good at producing offspring by seed. Dr Lorimer planted a few into his bush garden at Montrose and within two or three years, they'd spread throughout the garden, 30 metres and more. That sort of spread, and the spread in my garden, he says, can only be explained by seed.

Based on his observations, Dr Lorimer thinks most germination is within 100m of the parent plant. While the dust-like seeds can travel long distances on the wind, the

density of seeds falling to the ground decreases rapidly with distance, as often does the suitability of conditions for germination.

Local ecologist Gidja Walker has observed that, if disturbed – for example, by a scratching bandicoot or echidna – Greenhoods tend to produce more daughter tubers. Weeding or scratching with a stick can simulate such disturbance. She has also found that, at least in other Greenhood species, many tubers can be dormant in any one season, so what we see above ground may be far less than is below.

### Gnats to a honey trap

Nodding Greenhoods use trickery to get themselves pollinated. Known as sexual deception, it's a common tactic among orchids – mimic the sex scent of a certain insect, and provide a flower structure that ensures the insect attends to the orchid's sexual needs. For the Nodding Greenhood, that insect is the Fungus Gnat.

Like all orchid flowers, the Nodding Greenhood has three sepals and three petals. One sepal is the flower's translucent hood, the other two are its two 'prongs'. Between these prongs is the labellum, a narrow U-shaped petal that curves downwards. The labellum provides the lure: the sex scent of a female fungus gnat.

When a deluded male gnat lands, the labellum flicks it up into the chamber formed



by the flower's hood. The only way out is via a small green tunnel.

As the gnat negotiates the tunnel, its back brushes against the stigma, the receptive female part of the flower, and any pollen picked up from a previous flower is wiped off, pollinating the flower. Next, the gnat brushes past a gluey substance that adheres to its back. At the tunnel exit are the pollinia, the flower's balls of pollen, and as the insect exits, the gluey substance picks them up.

Now laden with pollen, the male gnat then heads off to a female gnat or another flower. And over millennia, it seems that it has still not twigged to the deception!

Meanwhile, fertilisation takes place and seeds – thousands of them – develop in the orchid's ovary, which forms a bulge within a bract on the stem immediately below the petals and sepals.

The flower structure of the Nodding Greenhood is demonstrated by Dr Graeme Lorimer in a fascinating video clip at: [www.youtube.com/watch?v=cR-qNrGYfFY](http://www.youtube.com/watch?v=cR-qNrGYfFY)



Left: Nodding Greenhood flower. Note the U-shaped labellum curling down. Photo Angela Kirsner Right: A screen shot from Dr Graeme Lorimer's video (see link). One side of the flower hood is removed, the two 'prongs' are bent out of the way. The arrow (and the pencil tip) show the entrance to the tunnel, with yellow pollen at the exit.







**More to celebrate in the winter reserves**

Clockwise from top left: Eastern Spinebill (one of a pair watching the photographer), Hop Goodenia *Goodenia ovata*, more lichen on a branch, bracket fungus over tannin-coloured water, Hedge Wattle *Acacia paradoxa*, Coast Wattle *Acacia longifolia* subsp. *Sophorae*, Silky Guinea Flower *Hibbertia sericea*, Coast Beard-heath *Leucopogon parviflorus* Photos Angela Kirsner





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## A WORRYING INVADER – NEAT FEATHER-MOSS

Our recently completed flora survey reported a new (or at least newly discovered) and worrying weed in our reserves, Neat Feather-moss *Pseudoscleropodium purum*. There is a patch below Victoria Crescent, and it seems we may have other patches as well, both in the reserves and in nearby gardens.

This introduced moss is becoming a major problem in bushland reserves in southern Victoria, and was recorded in The Briars in 2016. A 2018 article in *Australian Geographic* (May 14<sup>th</sup>) reports that it is taking over parks, back yards, road verges and the edges of forest tracks in south-eastern Australia up to Sydney, as well as forest trails on Hobart's Mt Wellington. Its use as a packing material for nursery plants has helped it to travel south.

It spreads rapidly, outcompetes more delicate

native bryophytes and ground covers, and inhibits seed germination. Control entails removing every fragment, as each can grow.

The moss ranges from pale yellow-green to dark green. Its regular pinnate 'feathery' shoots can be up to 15 cm long, with branches of 1-3 cm. Gidja Walker describes it as 'a moss on steroids'!



*A healthy patch of Neat Feather-moss in the reserves close to the junction of Maude & Ernest Sts and Victoria Cres* Photo Angela Kirsner

## Help us Hit your Inbox! Help us Stay in Touch with you

We don't want you to miss out on BERG Mt Martha newsletters, invitations to events & membership renewal notices.

One or all of these things will help:

- The easiest thing to do – hit 'reply' to an email you receive from us and say 'hi' (or nothing at all, we don't mind). This will add us as a contact.
- Star or 'favourite' any emails from BERG Mt Martha – and drag it into your primary inbox anytime it strays into another folder
- Add member@berg.org.au & info@berg.org.au to your address book as well.

Keep in touch with us!

**BERG Mt Martha welcomes new members**

Chris Young & family

## FIELD NEWS

### *Field Officer Liz Barraclough reports* **Working-bees**

We hit the ground running for our brief window of working bees between lockdowns. Members came out in force to help. No-one was escaping north this winter! Then it all closed down again.

Hurrah say the weeds – freedom!!!

#### **Citation Hill**

June's Sunday working-bee tackled the western end of the slope below Citation Oval. A weeding crew tackled Boneseed, Pittosporum, Pine and Polygala seedlings, while a planting crew put in fifty trees: Manna Gums, Swamp Gums, Narrow-leaved Peppermint Gums, and some Sweet Bursaria. They will gradually replace the ageing Teatree and the Pines that have been removed, to provide over-storey habitat into the future.



*Pandemically distanced planting on Citation Hill! Photo Angela Kirsner*

The Friday group extended this work to the eastern end of Citation Hill, between the old quarry and the Pistol Club. We removed more Boneseed and Pittosporum and planted another thirty trees between the Quarry and the Pistol Club.

#### **...and more Friday weeding**

The Friday Morning Group also spent two June Fridays weeding and mulching west of Uralla Bridge, and confronting the weed Buttercup on the northern creek edge, which is threatening a patch of Maidenhair Fern. And we filled some large

puddles on the north bank fire track with mulch, to make walking easier.

#### **Planting**

We still had some 400 tubestock to plant, ideally by the end of July to get them established before summer. A few of us have been incorporating masked planting into our lockdown exercise program.

#### **Rusted Metal Sculptures**

We've transformed the clunky concrete 'feet' of our 'avenue of birds' – the rusted metal sculptures leading from the Old Campground to the boardwalk. You will remember they were installed in January by the Shire's contractor in rather over-sturdy concrete blocks.

BERGer and artist Anni Dowd to the rescue! Her colour genius produced a splendid, mottled rusty-earth paint disguise. Then Anni, Angela Kirsner (plus small and occasionally helpful grandson) and I planted grasses, sedges and scramblers round their bases, so in time the sculptures will just rise out of the understorey.

#### **Grants**

In these COVID times, we've been granted extensions for work under most of our grants.

#### **Signage upgrade**

We're getting there bit by bit, despite COVID19, in this collaborative effort with the Shire's Natural Systems team. Bollard signs have been installed at all the major entrances to the reserves (see photo), and the damaged plank sign at the end of Mirang Ave replaced. New map entrance signs are ready to be installed. The new interpretive signs along the tracks



*Liz Barraclough and Anni Dowd planting around one of the rusted metal sculptures Photo Angela Kirsner*

will take a bit longer – work is underway, but decidedly slowed by COVID-19.

#### **Cats, rats and bunnies**

Paul Bertuch, of Eco-agri, completed cat, rat and rabbit control works in the reserves in June. His records and maps will provide the basis for a regular follow-up program. He fumigated seven rabbit warrens, and caught ten rats (in five traps), but the five cat traps yielded no return.

If you see a cat in the reserves, please report it to BERG MM with details of where and when, a description of the cat – and, if you can manage it, a photo.

#### **On-ground Planning**

We held our annual planning meeting with the Shire's Natural Systems team and Naturelinks on 1<sup>st</sup> August to plan our work for the next 12 months. This involved working through the recommendations of our recent flora and fauna surveys, and funding available.

We were pleased to have Jeremy Little, the Shire's Fire Management Officer, and Dan Reid, Biodiversity Officer, involved. Jeremy has been at the helm for the recent fire control works round our streets, which have focussed very successfully on removing environmental weeds and leaving indigenous flora and habitat logs on nature strips.

#### **BMX tracks**

I am in mild despair about the proliferation of these tracks and the incredible damage being done to the bushland. It's a problem across the Peninsula.





A particular concern is the potential spread of plant pathogens, notably Cinnamon Fungus (*Phytophthora cinnamomi*), a virulent mould that can cause permanent damage to ecosystems and landscapes, and is easily carried on tyres or boots.

The Shire has a multi-departmental working party looking for solutions, involving Natural Systems, Infra-structure & Planning, Parks & Re-creation, Youth Services, and more.

We continue to emphasise the need for negotiation rather than confrontation, and for alternative sites for these kids looking for outlets in these difficult times.

#### **Bikes on the boardwalk**

Temporary signs asking cyclists to dismount have been put up at all entrances to the boardwalk. We wait in hope for some effect, to make walking a little safer.

## **COASTAL NEWS**

### **Suzanne Ryan reports**

Our Coastal Working Bees re-started on 3<sup>rd</sup> June in a new format, fortnightly 9.30-11am, to the delight of our volunteers. We managed three before second lockdown, all in gorgeous sunny (if nippy) weather. A good-sized group tackled the highly visible strip along the Esplanade opposite the Village, and along the first and second south beach pathway. Weeds were pulled and whipper-snipped, plant guards restored, and we cleared space for lots more grasses, and planted some.

One of our amazing volunteers, Richard Sellars-Jones, spot-weeded and planted from Balcombe Point southwards to Lovers' Seat during the school holidays. Liz, Cate Clarke and I did a 'walkthrough' this area in July and are drawing up a works plan for it, to add to our grant wish list.

Over recent years we have already done substantial work just north of here, from the South Beach carpark to Balcombe Point, funded in part by a Sunshine Foundation grant.

We have been busy applying for new grants and embracing the new



*Ian Croker, Cat John, David Chalmers staying apart at the coast working bee. Photo Cate Clarke*

normal – planning for online training sessions by various organisations.

Gidja Walker has nearly completed our coastal vegetation survey. The first such survey of the Mt Martha foreshore, covering Balcombe Point to Coolangatta Road, it will form the baseline for future comparisons. A Coastcare grant funds the study.

## **WATERWATCH DURING LOCKDOWN**

### **Sue Milton reports**

With no water quality or macro-invertebrates testing allowed since February, Melbourne Water has occupied us on a regular basis with on-line workshops and Expert Connections webinars.

#### **Water pollution**

The most recent webinar was on stormwater pollution, its impact on our waterways and, ultimately, Port Phillip Bay. The presenter, Dave Sharley, Water Ecologist of BIO2Lab, told us of his study of the Werribee River in the Melton area, and its associated creeks, with findings that are relevant to all urban waterways. Essentially, as urbanisation and industry increase, so does the threat of water pollution, especially where there are large areas of impervious surfaces, so potentially polluting stormwater, rather than being naturally filtered, flows in volume and at high rates through concrete drainage systems.

#### **Balcombe Creek**

Balcombe creek rises on the eastern side of Mt Eliza and meanders some 40 kilometres across the Moorooduc plain, through the low parts of Mt Eliza Regional Park, through The Briars and eventually, below Augusta

Street bridge, widening to the tidal estuary, where it flows under the Esplanade into Port Phillip Bay. Along the way it is crossed by five major roads, and flows past farmlands and houses on large allotments.

#### **Risks of pollution**

Stormwater that flows via drains into the creek may carry pollutants from driveways, roofs and roadways, street litter (including dog excrement) and more. Run-off from farms may carry chemicals and fertilisers. Abandoned fishing lines and lures can be disastrous to wildlife, both terrestrial and aquatic.

While there is no significant industry along the course of Balcombe Creek, the two automotive Service Centres flanking Peninsula Link are near the headwaters of the creek. Their permit to operate includes strict environmental protocols. No significant polluting events have been recorded since they opened, but the risk increases as they age.

#### **Current pollution**

The current threat to the Balcombe catchment system is the continuing sedimentation of the estuary due to run-off from unmade roads. BERG MM is in ongoing discussion with the Shire and Melbourne Water, and continues to press for effective measures to mitigate and halt this serious threat.

#### **Monitoring water quality**

Melbourne Water's citizen science programs Waterwatch and Estuary Watch provide a structure for us to monitor the creek's water quality and potential pollution. Our test results are usually within the acceptable range for waterways in our region other than a spike in phosphate readings in January and February, both this year and last. This appears to be seasonal, when water levels are low due to lack of rain.

The numbers and species of water-bugs (macro-invertebrates) present provide a good measure of water quality. We normally monitor for water-bugs quarterly, but December was our last test, and it returned a poor rating due to low water levels.

## AT MT MARTHA 100 YEARS AGO – ZOOMING!!

*Extracts from an article published in The Herald, 31<sup>st</sup> December 1920    Courtesy Trove*

### **CROWDS WELCOME AERIAL NEWS MAIL PILOTS GIVE GRAPHIC ACCOUNTS**

Great success is attending the aerial deliveries of “The Herald” to holiday resorts. The pilots of the aeroplane news fleet have met with interesting experiences and rousing receptions. Like the winged Mercury of classical mythology, each has carried out his daily mission without fail...

#### **Starting with a Zoom**


The pilot waves his hand, the chocks are drawn away from the wheels, the machine glides along the aerodrome, gathers speed and leaves the ground. Suddenly it “zooms” steeply for about 100 feet and, dropping into its normal climbing angle, swings out across the Bay...

Mount Martha is not a good spot for low flying, but the parcel was safely delivered. Wind “bubbling” over Arthur’s Seat at a great velocity produced air conditions that needed the skill of the experienced pilot in getting away from Dromana...

Sorrento and Portsea were visited in turn without incident. Visitors waved greetings from various points of vantage, and eager crowds awaited the day’s news...

#### **APPRECIATED AT MT MARTHA**

Mt Martha tourists greatly appreciate the daily delivery of “The Herald” by aeroplane.

BERG MM Working Bees	Other BERG MM Activities	Other Groups
<p>❖ <b>All working bees are cancelled</b> until further notice, due to the COVID 19 pandemic. This includes the monthly <b>Sunday working bee</b> (2<sup>nd</sup> Sunday), fortnightly <b>Coast Group</b> (alternate Wednesdays) and weekly <b>Friday working bee</b>.</p>	<p>❖ <b>Waterwatch &amp; EstuaryWatch testing</b> are cancelled until further notice</p> <p>❖ <b>BERG Mt Martha Committee meetings</b> continue via teleconferencing, 2<sup>nd</sup> Saturday of each month.</p>	<p>All activities subject to COVID-19 restrictions:</p> <p>❖ <b>BirdLife Mornington Peninsula:</b> see <a href="mailto:mornington@birdlife.org.au">mornington@birdlife.org.au</a> or <a href="http://www.birdlife.org.au/locations/birdlife-mornington-peninsula">www.birdlife.org.au/locations/birdlife-mornington-peninsula</a>.</p> <p>❖ <b>SPIFFA:</b> see <a href="http://www.spiffa.org">www.spiffa.org</a>.</p> <p>❖ <b>Sunshine Reserve</b> working bees cancelled until further notice.</p>
<p style="text-align: center;"><b>BERG MT MARTHA PATRON: TERRY DENTON</b></p> <p style="text-align: center;"><b>COMMITTEE:</b> PRESIDENT PETER MCMAHON • VICE PRESIDENT &amp; ESTUARYWATCH BRUCE FERRES • SECRETARY DIANNE LEWIS • TREASURER &amp; BUSINESS PARTNERS COORDINATOR JULIE ZAMMIT • FIELD OFFICER LIZ BARRACLOUGH • COAST GROUP SUZANNE RYAN • WATERWATCH SUE MILTON • MARKETING GRAHAM HUBBARD • NEWSLETTER ANGELA KIRSNER</p>		
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