

# THE CREEK

Volume 16 No 6, December 2012



**BERG** – Caring for the Balcombe Estuary Reserves

No A0034645Y ABN 50 224 628 623

## THE REWARDS OF BAT BOX MONITORING!

from Paul Bertuch

A crowd of Gould's Wattle Bats looked up at us – ten or more of them – when John Inchley and I checked one of BERG's bat boxes in November. Another box contained a single Chocolate Wattle Bat, and there were Sugar Gliders in all the Sugar Glider Boxes near Hopetoun Creek. The next step in this area is to set up boxes for Agile Antechinus to attract these amazing miniature marsupial carnivores to the area.

*Want to be involved in the quarterly monitoring of the bat boxes? phone Paul Bertuch on 0488 762 179.*



*Gould's Wattle Bats (left) and Sugar Gliders (below) roosting in bat boxes in the Balcombe Estuary Reserves, November 2012*

*Photos Paul Bertuch*



### Gould's Wattle Bats – some facts

These tiny bats average 115mm in length and 14g in weight. They emerge from their roost after sunset and emit high-pitched chirps as they forage for insects below the tree canopy. A study in Ivanhoe suggests they hibernate through winter, and the young (often twins) appeared in November and December, attaching to the mother's teats during flight. (source: <http://museumvictoria.com.au/discoverycentre/infosheets/goulds-wattle-bat/>)

### CAN YOU HELP?

#### DO YOU HAVE DESIGN SKILLS?

We are looking for a skilled volunteer who could advise the committee on design issues as we look at developing a fresh 'look' for BERG to increase our public profile.

#### DO YOU HAVE A LEGAL BACKGROUND?

As an incorporated association, BERG has, since 26 November, been operating under the Associations Incorporation Reform Act 2012. We need help to ensure that our rules comply with the new Act. If you can assist, please contact our Vice President Graham Hubbard on 9882 3975

#### BERG welcomes new members:

Diana Johns & Craig Lee  
Lynda McQueen

### FORGOTTEN FLORA

*Angela Kirsner reports*

They are the poor relations of the plant world – indeed, many of them are not actually plants – but cryptogams are everywhere, on trunks, soil, rocks, old boots, bones, branches... We know them better as lichens, mosses, liverworts, horn-worts and fungi, a diverse lot which all, nevertheless, reproduce by spores rather than seeds.

The name is from the Greek *kryptos*, hidden, and *gameein*, to marry, implying hidden reproduction. But for those at the BERG AGM in October, they are a little less cryptic after the fascinating talk by Dr Pina Milne, Collections Manager at the National Herbarium.

#### Bryophytes

Pina's particular interest is in mosses, liverworts



*Dr Pina Milne speaking at the BERG AGM*

*Photo Richard Kirsner*

and hornworts, a subgroup of cryptogams known as bryophytes. Unlike fungi, which are not plants but a separate kingdom, bryophytes have the pigment chlorophyll and so are plants and able to produce their own sugars. But unlike vascular plants, they have no internal transport system, and take nothing from their substrate, be it soil, branches or other – they do no harm to the plants on which they often grow. Instead, they take up and lose water (and mineral ions) directly across the leaf surface. This means so they dry out rapidly, but within minutes of being wet, they swell and unfurl. To reproduce they need moist conditions because the sperm swim to the egg, through a film of water.

#### Mosses

Mosses have stems and the egg and (cont. next page)

sperm cells are produced from the leaf area. After fertilisation, small stalks rise out of the leafy part of the plant, each topped with a spore capsule (though in some mosses the spore capsule is stalkless). The capsule has a lid which fall off when the spores are mature, but the release of the spores is controlled by one or two rows of tiny tooth-like structures around the mouth of the capsule. These remain closed when wet, but they open in dry conditions and air movement shakes out the spores.

Mosses also reproduce asexually. Any fragment will grow into a new plant. Local nurserymen hate them as they so readily colonise pot plants, but the Japanese base whole gardens on mosses.

### Liverworts and hornworts

Many of us know liverworts from the green, flattish, lobed sheets that form often in pot plants. This is *Marchantia*, and it is the bane of nurserymen! It is a thallose liverwort, the green sheet being known as a thallus. Leafy liverworts, by contrast, have leaves on stems, just like mosses.

*Marchantia* spores form in the tiny umbrella-like structures that arise on stalks from the thallus, while in some liverworts, spore capsules are embedded in the thallose sheet. The spores are ejected by tiny springs called elators, which remain tight-furled when wet but expand rapidly when dry to project the spores.

Hornworts look just like thallose liverworts except that the spores are produced on an elegant, tapering 'horn'. When the spores are mature, the end of the horn unravels like a piece of rope and spores spill out.

### Bryophytes in the dry

We normally associate these organisms with damp places, but bryophytes also occur in dry environments. Pina has been involved in studies of bryophytes in the Wimmera and the Simpson Desert, where they are vitally important in forming a soil crust on the swales between shifting sand dunes. In the dry, they are

barely visible, but after rain they become a green carpet.

Not only do soil crusts help to bind the soil and prevent erosion, they also provides an area where seeds can germinate

when there is moisture, and it provides a home for many invertebrates. Indeed, bryophytes generally are home to a wide range of mites and other invertebrates.

### Lichens

A lichen is a compound organism, a symbiosis between a fungus and an alga or cyanobacterium. The fungus enables reproduction by producing spores, while the algae provide the photosynthetic pigment that enables the lichen to make its own sugars.

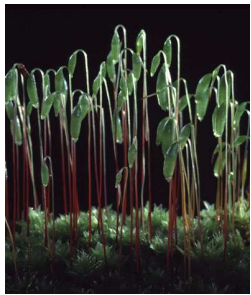
Foliose lichens are markedly three dimensional, like the 'Old Man's Beard' one sees hanging from trees. Crustose lichens are flat, their entire lower surface attached to the substrate – think of the mosaic-like lichens one sees on rocks. In between are fruticose lichens, flattish, sheet-like but with a lobed appearance and only part of their lower surface attached to the substrate.

Lichens are good indicators of pollution, which destroys their photosynthetic pigment, bleaching and killing them.

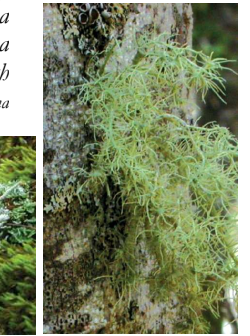
The Irish dyed their tweeds with an amazing colour range of dyes from lichens, steeping the lichens in urine to extract the dyes!

### Weeds

In addition to the cryptogams endemic to Australia and those that occur naturally here and around the world, we also have some



Clockwise from top left: a thallose liverwort; a leafy liverwort; a hornwort; a fruticose lichen; and another; a foliose lichen; and a moss with spore capsules Photos courtesy Pina Milne



invasive weed species. And they travel so easily, by wind, on cars, boots and animals. The mycelia of *Amanita muscaria*, the fairy fungus, takes over from native species. It grows right through the Mornington Peninsula, has been found in our temperate rain forests, and is moving into beech forests. Among bryophytes, *Pseudoscleropodium purum* is a common and invasive species. Simply mowing an area is enough to disperse it.

But weed cryptogams are very poorly documented. Unless a weed has been recognised, collected and sent to the Herbarium, we don't know about them.

### Gift to BERG

Pina very generously presented BERG with a set of Forgotten Flora posters that she and her colleague, fungi expert Dr Teresa Lebel, have developed. They are an outstanding resource on bryophytes, fungi and lichens for schools, naturalist groups, or anyone else, and will form a valuable part of BERG's resource library. Further copies are available for a small charge from Pina at [pina.milne@rbg.vic.gov.au](mailto:pina.milne@rbg.vic.gov.au).

### Further information

To explore cryptogams further, try: <http://www.anbg.gov.au/cryptogams/index.html>  
<http://florabase.dec.wa.gov.au/cryptogams>

## BIRDS IN THE RESERVE

from Pam Hearn, BERG & BirdLife Mornington Peninsula

Wednesday 3<sup>rd</sup> October looked like being a beautiful day once the fog lifted, so I took the camera down to the Estuary to see what birds were about. I knew a Shining Bronze Cuckoo was around, as we'd heard it on two Tuesday mornings at our working bee (its call sounds like someone whistling their dog).

We heard Silvereyes everywhere, feeding on the flowering Swamp



Paperbarks, and my photo (left), showing a definite buff colour on the side of the breast, confirmed that they were the

Tasmanian variety, getting ready to head back home for summer.

Plenty of honeyeaters were also taking advantage of the Paperbarks, notably Little and Red Wattlebirds, Yellow-faced, White-eared, White-naped and New Holland Honeyeaters, and Eastern Spinebills.



Golden Whistlers were very vocal, and I finally saw, and photographed one (left). I also glimpsed one

Shining Bronze Cuckoo. A Black-shouldered Kite majestically surveyed its territory from a dead tree, and I later saw two in flight, one chasing the other and squawking – perhaps a youngster nagging its parent?

I was happy to see a few Yellow Robins, as they seem to have been a bit scarce in the district. There were plenty of Grey Fantails and Brown Thornbills, and I was delighted to see four perching Red-browed Finches. I heard a Grey

Shrike Thrush, and saw lots of Ibis flying overhead. When I returned to the Old Campground, there was a Great Egret perched in the Estuary with a Little Black and a Little Pied Cormorant.

A most satisfactory day, with twenty-six species seen and heard.

## FIELD NEWS

from Field Officer Liz Barraclough

At the **October working bee**, we planted 200 Lomandras and Poas along the firetrack below the Old Quarry, and they seem to be surviving despite our the incredibly dry November. The highlight of the morning, however, was discovering and recognising three species of bryophytes in the damper areas round Uralla Bridge. We were very excited, having learnt about them just the day before from our inspiring AGM speaker, Pina Milne.

The enthusiastic group at the **November working-bee** spread mulch on the pre-weeded beds in the Old Campground. The aim is to help control summer weed growth and retain moisture for the recently planted tubestock.

The **Friday Morning Group** has had to spend a few hours each week through November watering some of the recently planted grasses in the drier spots above the creek. We hope the recent rain will help them to establish and hang on over summer.

A diversity of trees, shrubs and grasses (184 in all) have been planted on the slope above **Hopetoun Creek** below the kindergarten. The rabbit invasion necessitated staking and guarding them, but we hope they will survive and thrive to revegetate the more open areas and fill in the missing links along this important habitat corridor. The next stage of the Melbourne Water grant program includes more extensive planting in autumn.

Thanks for all your support and hard work. Have a safe and happy festive season and we hope to see all rejuvenated working-bee-ers back in the New Year!

## PROMOTING BIODIVERSITY BY REMOVING COAST TEA-TREE

from Jo-Anne Tetters, Conservation Officer, Mornington Peninsula Shire

Coast Tea-tree *Leptospermum laevigatum* is an important component of some coastal ecological vegetation classes (EVCs) such as Coastal Heathland Scrub. It can, however, invade and dominate non-coastal EVCs, and has done so over time in areas of grassy and heathy woodland vegetation in the Balcombe Estuary Reserves, forming closed scrub that has limited diversity and habitat value compared to open woodland.

As part of the Shire's fire management program in the Balcombe Estuary Reserves, the dense Coast Tea-tree on the north bank below Maude St will be sensitively removed to reduce fuel loads and allow a more open, biodiverse woodland to regenerate. The works are planned to begin this summer and will be staged over several years. We will monitor the site closely, and intensive follow-up weed control will encourage the natural regeneration of indigenous species.



Spring 2012 proved how rich the regeneration has been already along Maude St in areas where the tea tree has been removed.

Photo Angela Kirchner

## BERG'S HISTORY

Mary Stemp is writing a history of BERG including dates, details and stories that relate to our group's great achievements. If you have any stories that could be relevant, please contact her, preferably by email at [mstemp@iprimus.com.au](mailto:mstemp@iprimus.com.au).

## THE BUNYIP

from Mary Stemp

Our loyal band of workers Isobel Cook, Pam Hearn, Patricia Nelson and Mary Bell may not spend a whole morning in the Bunyip but we do try to turn up each week during the cooler months, if only for a couple of hours. Mary's creaking joints and stiffening muscles have latterly prevented her from doing much work but she still determines the project for the day and enjoys the

morning tea break and chat. A few weeks ago we welcomed a new young woman to our group, Verity, who hopes to instil a love of the bush in her young daughter, Gwen.

We observe that regeneration of indigenous plants, particularly hibbertia with its bright yellow guinea flowers over several months, has been quite spectacular in the places where tea tree has been removed, although not with the diversity of wild flowers that we could have wished. It seems that most of the orchids, lilies and

herbaceous plants are the first to go when the soil has been disturbed over the years. I keep hoping they aren't lost forever.

### BERG COMMITTEE

The BERG committee was elected unopposed at the AGM on 20<sup>th</sup> October. We are delighted to welcome Graham Hubbard to the committee. Graham has accepted the office of Vice President, and his considerable skills will be very valuable to BERG.

BERG Working Bees	Other BERG Activities	Other Groups
<ul style="list-style-type: none"> <li>❖ <b>Monthly working bee:</b> 3<sup>rd</sup> Sunday, from 9.00 to 12.00. Next are <b>20<sup>th</sup> January</b> and <b>17<sup>th</sup> February</b>. Meet at the Rotunda (Mel: 144 K11) or phone Liz Barraclough on 0408 388 430 to find the work site.</li> <li>❖ <b>Tuesdays</b> 9.00 to 12.00 in the cooler months. Enquiries to Mary Stemp, 5974 3996.</li> <li>❖ <b>Friday mornings.</b> For details call Sue Betheras, 0408 808 201.</li> <li>❖ <b>Hopetoun Creek Greenfield Reserve.</b> Contact Hazel Athey, 0419 899 560.</li> </ul>	<ul style="list-style-type: none"> <li>❖ <b>Waterwatch testing:</b> Monthly at the Augusta St Bridge. Enquiries to John Inchley on 5974 1095.</li> <li>❖ <b>BERG Committee</b> meets 2<sup>nd</sup> Saturday at Mt Martha House, 9.30am. Next are 12<sup>th</sup> January &amp; 9<sup>th</sup> February. All members welcome.</li> </ul>	<ul style="list-style-type: none"> <li>❖ <b>Fairbairn Bushland Reserve Friends Group</b> working bees. Contact Judith Whittaker 5974 8174 or John Stoker, 5977 1397.</li> <li>❖ <b>BirdLife Mornington Peninsula</b> birdwatching 2<sup>nd</sup> Wednesday and 3<sup>rd</sup> Sunday. Enquiries Max Burrows 9789 0224, mornington@birdlife.org.au or <a href="http://www.birdlife.org.au/locations/birdlife-mornington-peninsula">www.birdlife.org.au/locations/birdlife-mornington-peninsula</a>.</li> <li>❖ <b>SPIFFA</b> (Southern Peninsula Indigenous Flora and Fauna Association) 1<sup>st</sup> Monday, 7.30 pm, at Parks Vic, Hinton St, Rosebud. Enquiries 5988 6529, or <a href="http://www.spiffa.org">www.spiffa.org</a>.</li> </ul>
<b>BERG COMMITTEE</b> PRESIDENT JOHN INCHLEY • VICE PRESIDENT GRAHAM HUBBARD • SECRETARY DI LEWIS • TREASURER RICHARD KIRSNER FIELD OFFICER LIZ BARRACLOUGH • NEWSLETTER, MEMBERSHIP ANGELA KIRSNER • SCHOOLS LIAISON JENNY SELBY MICHAEL SANDERS • ROTARY CLUB LIAISON GEOFF KAYE • PUBLICITY BARBARA THRAVES & ROS CROMPTON HOPETOUN CREEK GREENFIELD RESERVE GROUP HAZEL ATHEY • CENTURY DVE HABITAT LINK GROUP TONY O'CONNOR		
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### THE CREEK

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