



Wombat Forestcare Newsletter

It is summer and once again we urge you to go bird watching. So many birds visit the Wombat Forest to breed. Spending early mornings or late afternoons in the forest's lush gullies is incredibly rewarding. There have been many exciting discoveries in the forest in the last few months; we hope you enjoy reading about them in this issue. **Gayle Osborne** (editor) and **Angela Halpin** (design)

Powerful Discovery

By Trevor Speirs

Awesome is a much used word these days but when you encounter Powerful Owls *Ninox strenua* in the forest it is truly awesome.



Dozing female Powerful Owl with alert juvenile.
Photography © Gayle Osborne

At 60-65cm in length, with a wingspan up to 140cm, these imposing nocturnal hunters must send fear through the Greater Glider and local possum populations.

It was only by chance that recently we were able to track down a breeding pair in the Wombat Forest. One morning in August this year, while moving our motion sensor cameras along the Lerderderg River, we came across a large amount of splash (bird droppings) and some pellets/crops (regurgitated bones and fur) under a stand of Blackwoods.

This is usually a good indication of owl activity, but a thorough search of the area's Blackwoods, a favoured daytime roost tree, failed to locate any birds.

We returned several times, finding fresh splash, small animal bones and gizzards, and a feather, which was later confirmed as being that of a Powerful Owl.

On 23rd September we finally got lucky, when just before dusk an adult pair could be seen sitting high in a Messmate. Shortly after, a trill was heard coming from a large hollow in a nearby eucalypt. This had to be an owl chick, probably begging for food. It would not go hungry as the female owl held the previous night's prey, a ringtail possum, firmly in her talons.

Powerful owls are winter breeders, often mating around the solstice, laying 1-2 eggs, and most chicks are ready to leave the nest around the end of September. This is a perilous time for the young birds, with many falling to their death when trying to become airborne for the first time.

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We returned to the area on 2nd October and were thrilled to find the owl had fledged successfully. The fluffy, white chick was roosting with the adult female in a tall gum, and then we noticed the male was staring down at us from a nearby Blackwood.

As dusk descended the adult owls left their roosts and flew to another tree, where they sat “kissing” each other for a couple of minutes. This bonding behavior is called allopreening, and in owls is generally the grooming of the partner’s head. When the chick started calling from its perch, the parents took to the air, circling above the trees. We left soon after, not wanting to disturb the activity of the birds. (There have been reports of people being attacked by male owls during breeding time!)

By the second week of October the birds had left the breeding area, probably in search of more prey within their home range, which can vary greatly depending on food and tree hollow availability. Chicks stay with their

parents until February/March when they are dispersed to begin their adult life, although some stay with the parents for up to 12 months.

It has been wonderful to observe these magnificent birds in the Wombat. It really brings home the importance of large, hollow bearing eucalypts, which provide vital nesting sites for the owls, and homes for their arboreal prey. ■



As night falls, both adult Powerful Owls eat the ringtail. Later they take the remainder to feed the juvenile.
Photography © Gayle Osborne



The female Powerful Owl roosted during the day in a eucalypt.
Photography © Gayle Osborne

Congratulations, Trevor.

This is only the second record of a Powerful Owl breeding hollow submitted the Victorian Biodiversity Atlas (VBA) for Wombat Forest. Between 1999 and 2014, Sandy Scheltema has recorded Powerful Owl sightings of an adult pair near Trentham. She has also monitored and recorded pairs of juveniles on three separate occasions, confirming ongoing breeding. All other records held by the VBA are for Powerful Owls roosting in trees or having been heard.

Daytime view of a Greater Glider

Words and images
by Gayle Osborne

All available information on Greater Glider *Petauroides volans* behaviour states that they spend the daylight hours within tree hollows. How amazing to find one asleep high in a Blackwood on a warmish afternoon in September.

What a photo opportunity, I went home for the big lens and tripod and when I returned the glider was asleep with four legs hanging down, but quickly moved when it became aware I was there.

The Greater Glider is our largest gliding marsupial, the head and body about 40cm long with a tail about 50cm long. They are either brown with a creamy underside or almost white. Many people are unaware that this beautiful creature, which can glide 100 metres, inhabits the Wombat Forest.

They are also prey for Powerful Owls, which occupy a similar habitat. Powerful Owls have been known to cause isolated populations to become locally extinct.

Like Koalas, Greater Gliders feed on eucalypt leaves and have a similarly enlarged caecum (beginning of the large intestine) to allow bacterial fermentation to break down the cellulose.

Greater Gliders are mainly solitary and do not den in groups as other gliders do. They use between 6 and 18 hollows to prevent detection by owls. If they emerged from the same hollow every evening the owl would just have to wait nearby. They also rarely venture out in bright moonlight.

Heat is an issue for Greater Gliders as they lack of sweat glands over the majority of their bodies and they lick themselves to distribute saliva to increase evaporative heat loss. We have just had our warmest spring on record and it possibly this glider needed to get some airflow to cool off.

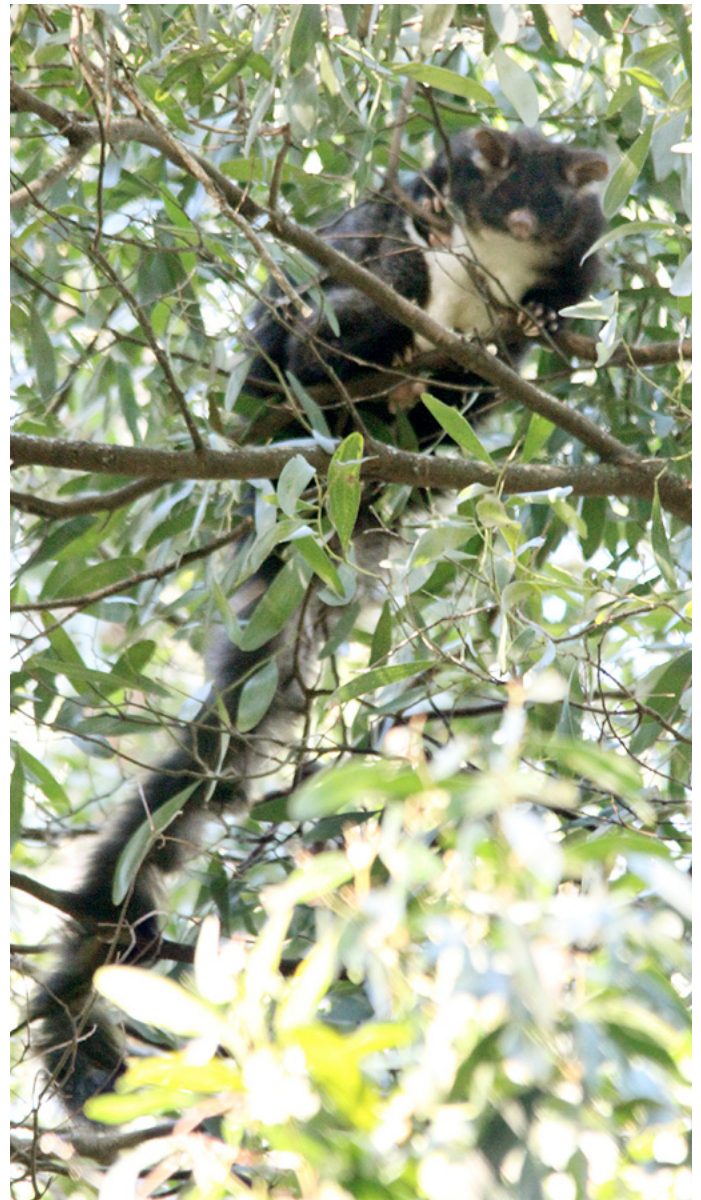
It is known that Greater Gliders are heat sensitive. A changing climate could be a challenge for Greater Gliders; can they cope with increased temperatures? How do they cope in fuel reduction burns with increased heat and smoke? ■

Reference

Lindenmayer, David (2002) *Gliders of Australia*



Greater Glider asleep in the canopy of a Blackwood



Greater Glider poses for the camera

Extremists in our forest

By John Walter

Our media commentary these days is rich in discussions about extremists and one could easily be fooled into thinking that extremism is a relatively new phenomenon. Extremism however is far older than that seen in our current social disorder, some 400 million years older in fact. I am referring of course to the well known extremophiles, the lichens. An extremophile translates as a lover of extremes and while it would be amusing, it is grammatically incorrect to refer to them as extreme lovers!

Lichens are found in virtually every land based ecosystem on the planet with several hundred species extending into the intertidal zone and others living between the high and the low water level in running freshwater streams and lakes subject to wave action. A few freshwater species even extend up to 50cm below the low water level and may never be exposed to air. Lichens are also an important component of the soil crust flora of the arid and semi arid lands and if you find a large rock without lichen growing on it, you probably just haven't looked closely enough. They are so successful in colonising the most extreme environments that they are the dominant life form on

8% of the Earth's land surface, with most of this area occurring in the polar region and high in the mountains.

You might think that life for lichens in the Wombat is easy compared to the various *Cladia* species struggling to survive beneath the Arctic winter snow only to be sniffed out and eaten by a passing reindeer; or the Antarctic species *Umbilicaria aprina* that gathers the water necessary for photosynthesis from the vapour phase of snow¹ and is recorded to be still active at minus 17°C. Consider then for a moment spending an entire summer lying on a rock atop Blue Mountain or on a roadside embankment or a concrete gutter or footpath with no water other than the occasional dew or rainfall. At the end of a scorching Australian summer you have a little time to prepare for the winter where you will be regularly drenched (at least you would have been in the winters of my childhood) and be frozen² from time to time and then you get to repeat it again year after year. There are a great many other local species living on soil or dead wood where the temperatures are not quite so extreme but they and the species living on tree trunks and leaves must still survive extended periods of desiccation every year and a wide variation in temperature. Conditions extreme enough to kill many other life forms!



Top L to R: *Nephroma cellulorum* has orange brown apothecia on the underside of the thallus, *Cladonia* species are frequently massed together on soil or old wood, *Parmelia tenuirima* is a distinctive species found on the bark of tree trunks.

Lower L to R: Not ghostly alien faces but one of our many *Pertusaria* species, probably *P. gibberosa*, Some *Menegazzia* species are difficult to separate without chemical analysis, this is likely to be *M. platyrema* or *M. confusa*.

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Many readers will be aware that lichens are a symbiotic relationship between a fungus (a Mycobiont) and an organism capable of photosynthesis (a Photobiont), generally a species of green algae, sometimes a cyanobacteria species, and occasionally this relationship is established with both. Some scientists think that this symbiosis is actually a form of controlled parasitism and there is even some consideration given to the concept of a lichen as a minute ecosystem; complete with parasitic fungi, bacteria and invertebrates that live within or beneath the thallus of the lichen.

The lichen resulting from this symbiotic relationship bears little or no resemblance to either of the partners that formed it and while the overall appearance in most species is determined by the mycobiont, the photobiont must also be an influencing factor as the thallus only develops after the establishment of the symbiotic relationship. The *Coenogonium* illustrated is one example where the filamentous photobiont is determining the thallus appearance of the lichen which looks furry and much more like a moss than a lichen.

The extremism displayed by lichens is not limited to where they live; some lichens display some very extreme behaviour within the thallus as well. One example of

this is the behaviour of a parasitic mycobiont that moves into the thallus of a lichen and attacks and kills the original mycobiont, stealing its photobiont in the process. The original lichen thallus is gradually destroyed and a new, but different thallus arises. In some extreme cases the new mycobiont then gradually weeds out the original stolen photobiont and replaces it with its own preferred photobiont species.

Other examples, if not extreme, are certainly remarkable. Take the mycelium threads of a single fungus, the mycobiont, and place one part in contact with the right algal species and you have the formation of a lichen thallus. Meanwhile, another part of the mycelium of the same fungus comes into contact with a cyanobacterium species, and forms a completely different looking lichen that would rightly be classified as a different species. These lichens have been called chimera³ lichens but the more technical term is photosymbiodeme. They are a major concern for the taxonomy experts as all lichens are named after their fungus species, so technically both of the lichens in this example should have the same name.

On a different tack again is the northern hemisphere species *Parmelia saxatilis* in which the mycobiont can join with any one of three different photobiont species



Top L to R: *Parmeliella nigrocincta* apothecia are sometime more orange and the thallus is sometimes darker, *Coenogonium implexum* has pink apothecia in spring, The pink stalked fruit bodies of *Dibaëis arcuata* stand out against the black apothecia of an unidentified species. **Lower L to R:** Possibly an *Ochrolechia* species, The jelly-like thallus of *Collema leucocarpum* contrasts the pink apothecia which are coated in white crystals, *Lecanora farinacea* is a rock specialist.

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(all alga species from the same genera) and somehow still produces morphologically identical thalli regardless of the algal partner adopted.

There is every reason to assume that our Wombat Forest lichens are undertaking a similar range of extremist actions and more. Some of the research done on chimera lichens involved New Zealand species of *Pseudocyphellaria* and *Sticta*, both common genera in Australia and also found in the Wombat Forest. Australia has over 3500 lichen species and Victoria has just over 1000 but I suggest no one knows how many of these are to be found in the Wombat. All of the images accompanying this article were taken in the Wombat Forest, except the *Coenogonium* which is from near Melba Gully in the Otways. They show just some of the incredible diversity waiting out there for you to spy on and enjoy. Don't forget to take your lens. ■

Notes

1. The vapour phase (sublimation) of snow is the conversion

of the snow directly into vapour without it first melting. This can happen at temperatures below 0°C and is linked to pressure differentials, low humidity and dry winds.

2. Lichens can survive freezing to temperatures as low as minus 150°C and some species have even returned undamaged from two weeks in space where they suffered vacuum, extreme temperature and ultra violet radiation.

3. Chimera, mythical beast made up from parts of various other animals, often used to describe things composed of disparate parts, or things considered as implausible.

References

Thomas H Nash III, Editor. (2008 2nd edition) *Lichen Biology*
Rex Filson & Roderick Rogers, (1979) *Lichens of South Australia*
Flora of Australia Volumes 54-58 covering the lichens, various authors and more volumes to come
G Kantvilas & SJ Jarman, (1999) *Lichens of rainforest in Tasmania and south eastern Australia*



Rufous Fantail *Rhipidura rufifrons rufifrons*

Words and image by Gayle Osborne

The beautiful Rufous Fantail migrates from northern Australia to the Wombat Forest in spring to breed. In the Wombat they favour Musk Daisy Bushes *Olearia argophylla* in the wet gullies as nesting sites.

This nest was located just above a pool of water, fashioned on a thin Musk Daisy branch. The small cup-shaped nest, drawn out into a long stem, is a splendid construction of grass, fine strips of bark, moss and spider web.

We often see Rufous Fantails foraging for insects, mainly in the low to middle strata of the forest, but they are rarely still. This was a wonderful opportunity to observe the markings and the lovely rufous colouring. ■

http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=592

Idle Wandering in the Wombat

By Alison Pouliot

Do you often find yourself loaded with gear when wandering through the Wombat? Either cameras and tripods, field guides and binoculars, survey and collecting gear, or various other encumbering paraphernalia? If so, it's not a bad idea to occasionally remind oneself of the value of idle and uncluttered Wombat wandering.

To be idle is not to be indolent, or even necessarily inactive. In fact, I quite like the definition of 'idle' that refers to engines – to run slowly while disconnected from a load or out of gear. The idea of slowness and being disconnected from my load appeals enormously. French philosopher Frédéric Gros considers walking to be “the best way to go more slowly than any other method that has ever been found”. Hmmm, perhaps not especially philosophical, but good to remember all the same.

We all wander in the Wombat for different reasons. It's indeed exciting to discover new places or creatures, to visit a favourite haunt, contribute to conservation efforts, or engage in activities purely for the social interaction. Or one might walk with a destination in mind, or to maintain one's fitness. But idle walking is also valuable. It provides a place to think. Idle walking creates space for some of the most *imaginative* thinking.

Author Robert Dessaix reminds us that idle time has always been vital to the most creative and imaginative writers, artists, philosophers and thinkers. The purposeless walk, without fixed route or destination is a luxury that we too often forget. It emancipates us from illusions of the value of busy-ness. It's perhaps one of the last free pleasures. The likes of Bruce Chatwin, Henry David Thoreau, Vladimir Nabokov, Virginia Woolfe and WG Sebald were among the many writers who walked for inspiration. Author Geoff Nicholson considers there to be “something about the pace of walking and the pace of thinking that go together. Walking requires a certain amount of attention but it leaves great parts of the time open to thinking”. But most idle wanderers aren't famous and haven't written books. They just walk. For the sake of it.

I'm often content to return from a Wombat Forest wander with no species list, no images, and best of all no unidentified specimens with which to dement myself. Rather, I relish coming home with the serenity yet intensity of the experience; the sensory and cognitive stimulation; the random inspirations,



Idle wandering in the Wombat creates spaces for the most imaginative thinking. Photography © Alison Pouliot

the feeling of lightness that accompanies dog-tiredness; the germinating ideas ready to be expressed... but they can wait until tomorrow. But let's not dress it up. Walking is nothing mysterious. No more so than breathing. I may well be expressing the obvious, but it's oddly forgotten. All you have to do is put one foot in front of the other and hopefully move forwards in the process. But going backwards can also be fun. Whichever direction, the trick is simply to do it.

Wandering, rambling, meandering, roaming, ambulatory doodling ... all allow our senses to sharpen, our minds to expand, and our imaginations to take us to new places. We can come to deeply know the Wombat simply by traversing it, letting our feet learn the lay of the land, concentrating on the experience and the moods of the forest. With no destination, aims or expectations, one can only be satisfied.

Go for your next wander in the Wombat with nothing to do but walk. Resist the temptation to take the gear. Enjoy the freedom of just you and the Wombat. Relinquish the intention to get somewhere and allow yourself to be drawn this way or that; a scent over here, a sound over there. Rest assured that your iphone will not suffer separation anxiety or any other ill consequences if left to sit on its own at home awhile (it's a smart phone, it understands).

Simply enjoy following a path. Or not following a path. What better place can there be to get lost than in one's imagination in the Wombat... solvitur ambulando! ■

A handful of walker-writers

Robert McFarlane, *The Wild Places*

Rebecca Solnit, *Wanderlust*

Frédéric Gros, *A philosophy of Walking*

Geoff Nicholson, *The Lost Art of Walking*

Our Werribee water catchment at risk.

Words and images by Gayle Osborne

A mining licence (MIN5460) was issued on 3 May 2014 to Armstrong Constructions for 37.4 hectares in the Wombat State Forest near Spargo Creek. It abuts a mining licence (MIN4305) for 5 hectares issued to Bullarto Gold in 1993.



Community picnic at Spargo Creek

In November, Wombat Forestcare held a community information day with a flora walk on the site. Harry van Moorst (Western Region Environment Centre) discussed proposed mining in the Werribee catchment and John Forrester (Werribee River Association) described his role as the Werribee Riverkeeper.

Part of the licence area is an incredibly beautiful section of Sedgy Riparian Woodland, dominated by very old Yarra Gums *Eucalyptus yarraensis* and Spiny-headed Mat-rush *Lomandra longifolia* var. *longifolia*. This woodland, which once would have extended along the Werribee River is now cleared farmland and this may be one of the last remaining pockets of this vegetation.

Two peas that have not been listed as existing in the Wombat Forest have been found in this woodland. John Walter, armed with a microscope, reference books and great skill has identified both species. We have located examples of Upright Pultenaea *Pultenaea stricta*. The only historic record of this plant is from 1877 near Daylesford. There are two other records from near Creswick. The second plant of interest is the Wiry Bush-pea *Almaleea subumbellata* (previously known as *Pultenaea subumbellata*). It was collected only once in the district, in 1882 at Bolwarrah near Ballarat.

The licence area also encompasses a hill that resembles parts of the Lerderberg State Forest. It is abundant in flora species and on the day of our walk was covered in yellow Showy Podolepis *Podolepis jaceoides*, mauve Chocolate Lilies *Arthropodium strictum* and orange Trailing Shaggy-pea *Podolobium procumbens*. About twenty other flowering species were recorded and elsewhere on the site patches of Purplish Bearded Orchids *Calochilus robertsonii* and Spotted Sun Orchids *Thelymitra ixiioides* were seen.

Many people concurred that this is one of the Wombat's prettiest spots, and the old Yarra Gums (listed as 'Rare') have large hollows, however none of this will save the area from mining. Nor will Greater Glider and Powerful Owl records from near the site.

Armstrong Constructions now need to obtain an approved Work Plan from the Department of State Development, Business and Innovation (DSDBI) to carry out exploration or mining. They stated in their application that the proposed work program includes "hard rock open cut and underground mining and bulk sampling."

A Work Plan details the work that will be carried out and the process does not allow for public comment. Once the Work Plan is agreed to by DSDBI it is then submitted for review and conditions to

- the biodiversity section of the Department of Environment and Primary Industries (DEPI)
- the water authority (Melbourne Water)
- the Moorabool Shire (only if the works are classified as mining rather than exploration).

There are conditions in the Water Act that require a "works on waterways permit" that may apply here once the extent of the proposed works are established.

The native vegetation permitted clearing regulations have changed and it will not be clear how this affects the site until the extent of the proposed works are known. However, regardless of this, clause 52.17 of the Victorian Planning Provisions has been amended to state that no permit is required to remove native vegetation to the minimum extent

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Upright Pultenaea *Pultenaea stricta*



Wiry Bush-pea *Almaleea subumbellata*

necessary to enable the carrying out of mineral extraction under an approved work plan and authorised by a work authority.

Once a Work Plan is approved, there is an obligation for the lessee to consult with the community. There is no obligation to be bound by community concerns and the community consultation may be as little as having a website.

Community pressure will be critical to protecting this area. Writing and speaking to government ministers and local politicians is important. Advocating for an Environmental Effects Statement would ensure that the effects on the environment are assessed. This process is initiated at the discretion of the Minister for Planning.

Wombat Forestcare considers that mining is totally inappropriate in an area that is a catchment for the Werribee River. Residents in the area pay a special levy for the protection of the water catchment, which seems totally at odds with allowing a mining venture a few hundred metres from the Werribee River.

The Wombat Forest is slowly recovering from massive previous exploitation and is important habitat for many endangered species.

The protection of our catchments, our ecosystems and our flora and fauna are incredibly important. The Wombat Forest is public land and therefore belongs to the people of Victoria. We suggest that it is not being managed it in a way that the majority of the community expects. ■



Through a Child's Eyes

Words and Photography by Ari Scheltema

I found this spiky, furry ball, which is called an echidna, sticking his head in a hole looking for his dinner. ■

Wetland Plants

Words and images by Gayle Osborne

The hydrology of the Wombat Forest has been altered by gold mining in the 1800's and also more recently with culverts under roads. Areas that had water spreading across the land have been channelled. Culverts funnel water, turning the swampy areas into creeks.

There is an area south of the Domino Trail near Trentham where water still spreads across the land and it is here that the beautiful Large Sickle Orchid *Pterostylis falcata* is found. This orchid grows on stream banks, in wet soaks and swamps and can sometimes be found growing in water.

Not surprisingly, we have found a few plants in this area that have not been recorded in the Wombat. Our first examples of Wiry Bush-pea *Almaleea subumbellata* were found close to the orchids and Swamp Daisy *Allittia cardiocarpa* was flowering on the creek edges.

While none of these plants are rare this is probably one of the few places in the Wombat where they are found.

Another plant on this site that is rarely seen in the Wombat, but is common elsewhere, is the aquatic yellow flowering Running Marsh Flower *Ornduffia reniformis*.

An undertaking has been made by DEPI to exclude one of these areas from the proposed fuel reduction burn and we are hopeful that a further area can also be excluded. ■



Large Sickle Orchid *Pterostylis falcata*



Running Marsh Flower *Ornduffia reniformis*



Running Marsh Flower *Ornduffia reniformis*

Wombat Forestcare Membership

research • education • action

Wombat Forestcare Inc. is dedicated to preserving the biodiversity and amenity of the Wombat State Forest by utilising the skills and resources of the community. By becoming a member you will have input into our activities and projects, and give support to caring for our forests.

For memberships and further information contact Gayle Osborne, (03) 5348 7558 or email info@wombatforestcare.org.au
Membership fees are only \$15 single and \$20 family. Visit our website - www.wombatforestcare.org.au