Issue 50 - December 2019

Wombat Forestcare Newsletter

Welcome to the 50th issue of the Wombat Forestcare newsletter and we take this opportunity to celebrate our readers and their love of nature. We salute our contributors, whose eloquence and scientific knowledge has helped to make the newsletter a successful publication. All the best for 2020.
Gayle Osborne (editor) and **Angela Halpin** (design)

Wombat Forestcare out in strength. Nineteen years after first visiting the steps of Parliament House, the Powerful Owls returned to lobby again for their protection. Photography © Sandy Scheltema.

Nature for Life rally

By Gayle Osborne

It was reaffirming to stand on the steps of Parliament House with committed campaigners from other environment groups from all over the state.

Over forty Wombat Forestcare members and friends came to support our campaign for park status for the Wombat forest. The day was warm and sunny and "Love Wombat Forest, Love Parks, Let's protect it forever" signs were everywhere.

Speakers at the rally called on the Andrews government to protect our forests, rivers, beaches, oceans, native plants and animals. A large banner proclaimed "Protect nature for life or we're in strife" and a beautiful 80-metre hand-knitted Mountain Ash tree was laid out in the gardens.

Wilderness Society Victorian Campaigns Manager Amelia Young said: "Victorians want forests and wildlife protected, and water supplies from forests secured. It's a big problem that the gap between recent forest announcements and what the community wants and needs is still too large."

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"Love Trees Save Bees" Great work from Charlotte and Billy

The recent announcement to phase out logging in Victoria's native forests by 2030 appeared to be a significant step, and it is, but for some forests there will be increased pressure. This may be the case for the Wombat. The recently released map as part of Victoria's Forestry Plan "Areas available for native timber harvesting prior to 2030" includes the Wombat State Forest.

What are we to make of the media release from the Minister for Energy, Environment and Climate Change on 7 November?

"The Andrews Labor Government has announced the largest environmental protection policy in the state's history, with immediate protections for the iconic Greater Glider species, native fauna and Victoria's remaining old-growth forest."[2]

Sadly, this will only set aside protected areas for some Greater Gliders, but does not mean that logging will cease in all Greater Glider habitats. An important critique of the policy can be found on the GECO website, https://www.geco.org.au/what_does_this_mean_for_victoria_s_forests

Although the Minister's media release states "These additional protections will provide over 186,000 hectares of area now protected from logging – equivalent to more than 100,000 MCGs and the biggest addition to our reserve system in over 20 years." It is worth noting, that at this stage, the immediate protected areas have no legislative or regulative basis and can be over turned at any time.

The policy is hardly "the largest environmental protection policy in the state's history", but it is an important step towards dealing with some of the current environmental challenges facing the state.

It is five years since the Andrews government came to power and in that time little has been achieved to solve the problem of a dwindling supply of available timber in our state forests and the failure to protect the habitat of many threatened species.

The importance of these large remaining areas of public land in the central west; the Wombat, Mount Cole, Pyrenees and Wellsford state forests are essential for the survival of many indigenous species. We look forward to their protection and inclusion in a park structure for the benefit of all Australians.

References (paste into browser)

1. https://www.forestsandreserves.vic.gov.au/__data/assets/pdf_file/0017/440603/Available-to-2030-Statewide.pdf
2. https://www.premier.vic.gov.au/protecting-victorias-forests-and-threatened-species/

Proud members of Wombat Forestcare

A Brush with Bronzewings

By Trevor Speirs

Australia is famous for its spectacularly colourful bird species, in particular our parrots, but a more subtle though equally handsome bird family are the bronzewings and here in the Wombat Forest and district we are fortunate to find two of Australia's three species. The Common Bronzewing *Phaps chalcoptera* and the Brush Bronzewing *Phaps elegans* are reasonably common here but both are shy and wary ground feeders and easily overlooked unless they are flushed and you are alerted by their loud clatter as they take to the air. Should you be lucky enough to get a sighting in good light, these birds have lovely iridescent colouring, with green, yellow, blue, chestnut and some white being prominent.

Bronzewings are primarily seed eaters and are often encountered when feeding on the ground along bush tracks. When startled, the Common Bronzewing will often fly to a nearby tree and perch for a short time, allowing the observer a clear view. Maybe this was one of the main reasons for significant local population declines when birds were once shot for food and sport. Brush Bronzewings, on the other hand, when flushed will usually fly a short distance, drop to the ground and quickly run away. Once flushed they are very difficult to see again.

Differentiating between these two species isn't always easy. Brush Bronzewings are slightly smaller and squatter than the Common and have a shorter tail. That doesn't really help a lot unless they're standing next to each other, of course. The best diagnostic feature is a chestnut throat on the adult Brush which the Common doesn't have.

In SW Western Australia, the Common and Brush Bronzewings, as well as some other native species, have attained a degree of toxicity for introduced predators such as cats and foxes by eating the seeds of the *Gastrolobium* plants. Early settlers tell of dogs having fits, going mad and dying after consuming the bones and entrails of bronzewings, although the settlers themselves thoroughly enjoyed the flesh of the pigeon. Unbeknown to them, and the foxes and cats, these plants have a chemical, fluoroacetate, which concentrates in the bones of native animals when the seeds and leaves are consumed. Fluoroacetate now forms the basis of the poison 1080. Small native mammals and birds in that part of Australia are tolerant to the chemical, which some believe has given them some protection against the ravages of introduced carnivorous pests.

The Common and Brush Bronzewings are found in a variety of habitats, from the Alps to the Mallee as well as wetter forests like the Wombat. Here in the Wombat, the Common Bronzewing is generally seen in more open forest while the Brush Bronzewing prefers denser tree and shrub cover. Clearly these birds are adaptable, and perhaps not surprisingly, one of the more reliable places to see both species in our district is in and around the pine plantations to the west of Daylesford. These pines produce paper thin seeds which attract the bronzewings (unfortunately the seeds are easily wind-blown into the nearby forest). Bronzewing numbers, in particular the Common, are also believed to increase in response to flowering trees, especially eucalypts and banksias. This spring has seen the eucalypts surrounding the pines, in particular the peppermints, flowering very well, which is providing a good chance to spot these somewhat elusive birds.

Australia's other bronzewing, the Flock or Harlequin Bronzewing *Phaps histrionica* is a bird found in an entirely different habitat, the treeless interior of the country. Aside from its marvellous specific name, which apparently refers to the males black and white mask-like face, not behaviour, it has a notable place in Australian ornithological history. Early naturalists and settlers describe huge flocks of these bronzewings, 100,000 or more, taking to the wing with a thunderous sound and blackening the sky. However, towards the end of the 19th century, the Flock Bronzewing seemed to have disappeared from its desert environs. Their habitat was drastically affected by the introduction of grazing sheep and cattle, and also feral animals, particularly cats, and was thought to have gone extinct. Fortunately they have slowly recovered since the middle of last century but not in the same numbers of earlier times. ■

Above: Female or immature male Brush Bronzewing *Phaps elegans*
Below: Male Common Bronzewing *Phaps chalcoptera* perches on a branch after being disturbed. Photography © Gayle Osborne

A Few More Peas

Words and images by John Walter

Plant with masses of flowers and flower detail of *Gompholobium huegelii*

Now that we have moved out of the colder seasons my focus has once again shifted onto the wildflowers. The series of articles on the Egg and Bacon peas did seem to go on for a long time so it was nice to have a break, but now it is time to look at the remaining pea species of our region. These remaining species can easily be divided into two groups, those that are purple, and those that are not! I will defer those that are purple to subsequent issues and focus on the three species that are differently coloured in this issue.

The tallest of these species is the Common Wedge-pea, *Gompholobium huegelii*. It is named after an Austrian botanist Charles von Hügel who kept a botanic garden in Vienna, based in part on his collections made in Australia in 1833 and 1834. In 1837, this plant was named from his collection although the establishment of the genus *Gompholobium* dates back to 1798 when it was named by Sir James Edward Smith in the same paper in which he named the *Daviesia*.[1] Some publications refer to the Greek *gomphos* as a club while others suggest it means a nail or a peg or fastener. Fortunately for us Smith clearly stated in 1808 that the reference was to the club or wedge-shaped pod,[2] thus explaining both the origin of the genus and the common name in a single sentence. The Greek *lobos*, meaning pod, provides the second part of the genus name.

Trifoliate leaf of *G. huegelii* on left and the greenish smoky discolouration on the back of the petals on right

Each leaf is made up of three leaflets in the same way as a clover leaf, except each leaflet is quite narrow and pointed. This beautiful shrub grows to around one metre in height and is covered in large yellow flowers in early to mid-November in my district. The clean yellow face of the flower's petals makes this a distinctive species and the reverse side of the main petals has a smoky green tinge about it. There are small bracteoles on the pedicels (flower stems) but you need look no further than the leaf shape and flower colour to identify this species.

It is a common species in the northern sections of the Wombat State Forest, around Spring Hill and the Shepherd's Flat area and also occurs extensively in the Upper Loddon State Forest and the Fryers Ranges.

Our second species is equally distinctive and is the only red-flowering native pea species that occurs locally. This is of course *Kennedia prostrata*, the Running Postman. The genus was first described by E.P. Ventenat in 1804[3] and commemorates the famed nurseryman, John Kennedy, who operated in Hammersmith.

Flowers and leaves of *Kennedia prostrata*

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Robert Brown described the species in 1812 and, true to its name, it is quite prostrate; trailing through the litter on stems up to two metres in length and sending up occasional scarlet flowers to catch your eye. I have also found it cascading down road cuttings with the stems covered in massed flowers. Each leaf is made up of three roughly circular to oval leaflets (trifoliate leaves like clover) with the stem (petiolule) of the middle leaflet being much longer than the other two. The edges of each leaflet are also crinkled or wavy giving the plant a distinctive appearance even when not in flower.

There is one record on the Atlas of Living Australia for this species at Eganstown, however this is clearly a mistaken identification as the photograph accompanying the record is based on is actually of *Platylobium rotundum*. There are however two reliable records in the Shepherds Flat area, and I have occasionally found it in the forests to the north. It seems a little unusual that there are no records from within the wetter part of the Wombat Forest as there are records from around Mount Macedon. It appears to avoid the forest country but is happy in the more open woodland.

The last of the non-purple peas goes by the unusual name of Southern Tick-trefoil or *Desmodium gunnii*. The common name had me baffled for a while until I set out to collect seed from a population on a neighbour's property. I knelt down to search the plants for seed pods and when I stood up, I found I had numerous tick-like additions adhering to my trousers. The seed pod on most peas is called a legume and one chamber can hold many individual seeds. On *Desmodium* species the seed pod is called a lomentum, and it is constricted between each individual seed. The lomentum is covered in hook-tipped hairs, which readily catch on the fur of an animal (or my trousers) in the same way the hooks on a Tick's leg can catch onto hair or fur. In some countries the *Desmodium* species are known as Beggar's Lice. Each covered seed readily detaches from the lomentum and before long I had gathered a good quantity of "ticks".

The name *Desmodium* comes from the Greek *desmodion* meaning a small chain, which is a very good description of the pods of this genus.

Up until this point in the article I believed I had two records for *Desmodium gunnii* in the district, one on Swaby's Hill in the Wombat Forest between Little Hampton and Spring Hill, and the other a little further north on Pattens Hill near my own property in Drummond. While reviewing my images to make selections for the article, I realised that in fact I had recorded two different species and the Pattens Hill population is *Desmodium varians*, the Slender Tick-trefoil.

Flower detail and early morning dew on the distinctive leaves of *Kennedia prostrata*

The lomentum of *Desmodium gunnii* on left (4 ticks in waiting) and the delicate pink flower on the right

Trifoliate leaves of *D. gunnii* with equal length petiolules. The lighter green elliptic leaves near the top of the image belong to another pea species, *Glycine clandestina*, Twining Glycine (one of the purples).

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Desmodium species are found in Africa, India, South-east Asia, Australia and both North and South America, primarily in tropical and sub-tropical zones. The genus was first described in 1813 by the French botanist Nicaise Auguste Desvaux,[4] while the species *gunnii* is a reference to noted Tasmanian plant collector Ronald Gunn and the species *varians* is presumably a reference to the variable leaf shape.

Both species have small pale pink flowers and trifoliate leaves, however the petiolule on the middle leaflet in *D. varians* is at least twice as long as the petiolule on the other leaflets. On *D. gunnii*, the petiolules are all roughly the same length. You will also find two different leaflet shapes on plants of *D. varians*. The leaflets on lower leaves are obovate to orbicular, similar to *D. gunnii,* however the leaflets on the upper leaves are elliptic or narrow elliptic.

The differences in the leaf demands careful examination of the plants in order to recognise the species, and I had clearly been guilty of assuming the Pattens Hill population was the same as my earlier find at Swaby's Hill and only gave the plants a cursory examination. It seems that this time at least, I got one more pea than I was expecting! ■

Flowers of *Desmodium varians*

Lower orbicular and upper elliptic leaves of *D. varians*

Detail of the upper leaves of *D. varians* showing the longer middle petiolule

Notes

1. Smith, J E (1798) The Characters of Twenty New Genera of Plants, *Transactions of the Linnean Society Vol 4*, page 220.
2. Smith, J E (1808) Specific Characters of the Decandrous Papilionaceous Plants of New Holland, *Transactions of the Linnean Society Vol 9*, page 251. While Smith named the Genus, the naming of the species *G. huegelii* in 1837 is ascribed to George Bentham who later attempted to fully describe the flora of Australia in *Flora Australiensis,* which was published in 7 volumes between 1863 and 1878 and covered a total of 8125 species.
3. We met Étienne Pierre Ventenat in the recent *Bossiaea* article. His description of *Kennedia* appears in *Jardin de la Malmaison A Paris* (Garden of Malmaison in Paris), published in 2 volumes in 1803 and 1804 in which he described the plants in the garden of the Empress Joséphine.
4. Desvaux, N A (1813) *Journal de botanique appliquée à l'agriculture, à la pharmacie, à la médecine et aux arts*, page 122.

Time to trade barbs

Words & image Alison Pouliot

Barbed wire presents an under-recognised threat to the Wombat's wildlife.

Long legs are a boon in the bush, for leaping logs and boulders, and barbed wire fences. Except recently, I miscalculated. I got snared. By the crutch. With a heavy tripod in one hand and a heavier camera bag on my back, it required some tricky manoeuvring. But I managed to misjudge the situation further and somehow became inescapably entangled. Ten minutes later, unable to extract myself, I relented to the crutch being ripped out of my jeans and in frustration tore myself free from the fence. It was just a pair of jeans after all and fortunately I escaped serious injury. However, that wasn't the scenario for the tawny frogmouth I encountered further down the fence, hopelessly impaled, wing twisted and broken, one eye punctured, feathers matted in dried blood. It was, it seems, an agonising death.

Barbed wire wounds, maims and kills. Usually slowly. And unnecessarily. It slices up the Australian landscape and its inhabitants – at least 80 species according to a recent count, among them birds, bats, gliders, possums, macropods, koalas, platypus, echidnas, lizards . . . the list goes on, with an estimated death count in the tens of thousands each year. Most deaths happen in the dark, unseen. When animals collide with barbed wire fences they are typically in shock and in the struggle to free themselves, become entangled. Flesh tears, bones break, muscles are shredded, causing wounds that quickly infect or become flyblown. There is little chance of survival.

The Wombat Forest and particularly surrounding private land are plagued with countless kilometres of often unutilised or abandoned barbed wire. Every centimetre presents a potential death trap for animals.

High risk scenarios

Fencing, is of course, necessary to contain stock. However, as farming traditions and demographics change, so does the need for barbed wire fences. Tree-changers to areas like the central highlands often come to enjoy a country life, free from the responsibility of stock. Defunct barbed wire fencing often serves no purpose, but tends to get overlooked. Mostly it's a lack of awareness about the impacts of barbed wire fencing on wildlife – and there are many. Barbed wire not only causes wildlife injuries and deaths, but also restricts their movements and access to vital resources like water, food and shelter. There are also the bigger picture longer term consequences of fragmenting or limiting populations, thus potentially reducing genetic diversity. Barbed wire presents a risk to wildlife in all circumstances, but especially in the following situations:

- In darkness – the majority of entanglements are of nocturnal animals that are probably unable to detect barbed wire in the dark.
- Windy weather – birds, bats, especially juveniles with less strength and control can be blown off course into fencing.
- Fences across flight paths – large birds and bats are particularly prone, especially those that hunt prey close to the ground.
- Fences over, around or submerged in water – these are extremely perilous for birds that fly close to the water after taking flight or move long distances across water. Submerged barbed wire can entangle platypus and waterbirds.
- Fences on ridge lines – these are often invisible to birds and bats especially on exposed ridges without vegetation or above the highest point of the land.
- New fences – fences are often unwittingly erected directly across the travel routes of animals. These then catch them by surprise. Kangaroos are especially vulnerable.
- Highly fragmented areas – Wildlife populations in urban and rural areas are often limited to small isolated patches of habitat and have to negotiate barbed wire fences to reach other parts of their habitats.

An unfortunate paradox

Barbed wire fencing was invented for keeping stock contained – for keeping stock *in*. Ironically, conservation programs now fence to keep stock out – to stop grazing and trampling impacts, usually in riparian zones, revegetation areas or those of high conservation value. Fortunately, many

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conservation programs use plain wire rather than barbed wire. However, it should still be used with caution as any fencing limits access to non-target species, blocking their movements. Plain wire frequently traps animals such as kangaroos and emus by the legs. Other forms of fencing such as chicken wire and mesh can trap some lizards such as shinglebacks because they can push their heads through the holes, but their rear-facing scales prevent them from being able to retreat again. Moreover, many government-managed National and State Parks and conservation reserves still use barbed wire. Rallying all levels of government to conduct an audit of their barbed wire fences and remove them or, if necessary, replace them with safer fencing alternatives could draw greater attention to the issue.

Reducing the toll

For those who have no stock or need for fencing, the best option for wildlife, is to remove it completely. If it's a small fence in a garden area or close to a hotspot (e.g. waterhole, roosting tree, travel route) consider retrofitting it to allow the passage of wildlife. An old hose or polypipe, split lengthwise and placed over the barbed wire will reduce exposure to wildlife and increase its visibility. Reflective tape or other conspicuous material tied to the fence also helps improve visibility. If the fence is still needed, consider replacing the barbed wire strands with plain wire. If erecting a new fence, investigate the alternatives such as plain wire or electric fencing. Ensure electric fencing is high enough above the ground to allow animals such as wombats, wallabies, kangaroos and echidnas to safely pass beneath. These options still present problems but barbed wire is worse. Before erecting it observe local wildlife routes and look for clues of animal movement in the area and design and position the fence to cause minimal disruption and risk to wildlife. Ensure the lowest strand is a good 50cm or so off the ground to allow wildlife to pass beneath it. Regularly checking fences for wildlife helps identify hot spots.

Time to trade barbs

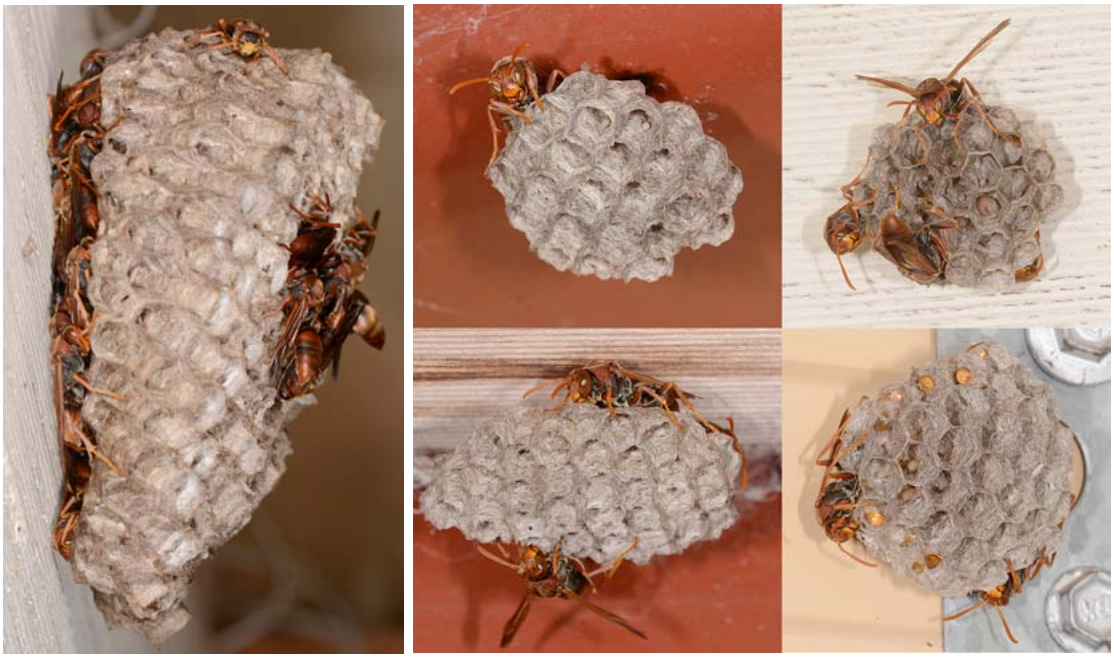
Animal deaths caused by barbed wire are largely preventable. We face many environmental challenges in Australia but wildlife deaths from barbed wire is an easily solvable one. There are simple and cheap solutions. It is mostly about increasing awareness and the motivation to change the situation. This begins with a mindset that prioritises the welfare of wildlife above the need to demarcate one's 'property' by a fence. We can also take inspiration from elsewhere. In the US – the country that invented barbed wire – volunteer teams are systematically removing old barbed wire from some National Parks. Norway has banned new barbed wire fencing because it limited animal migration. The 'freedom to roam', whether on private or public land, is a human public right codified in law in many European countries. Imagine if Australia took the initiative to take this further and to extend it to include other species. ■

Paper Wasps update

Words and images by John Walter

It turns out that my feared Paper Wasps *Polistes humilis* from last summer remained perfectly docile, never once showing threatening behaviour and never once attempting to share in our meals and drinks out on the covered deck; something their cousin the European Wasp is well known for.

By June they spent most of their time huddled together between the nest and the beam and all signs of activity stopped soon afterwards. As the days started to warm again, I noticed nine survivors moving around the nest and then soon after I realised that the old nest had been abandoned. Then in early November I found six newly established nests in various locations on the same covered deck, so now I have a summer with six nests to content with. I do hope they remain friendly, both with each other and also with me. ■



The original in June 2018 on the left and 4 of the 6 new nests on the right.

YOU & Me Biodiversity

a Wombat Forestcare initiative

You, me & Biodiversity

Please join us for two noteworthy speakers in 2020.

Photography © Gayle Osborne

21 March – Professor Stefan Arndt

School of Ecosystem and Forest Sciences, University of Melbourne

Resilience of the Wombat Forest to changes in climate

"Changes in climate are affecting forest ecosystems worldwide, leading to forest decline and in extreme cases forest mortality. Over the last decade we investigated the forest growth processes and carbon uptake in the Wombat Forest and also studied the tolerance of key eucalypt species of the Wombat Forest to drought. Our research shows that trees in the Wombat Forest are generally very resilient to seasonal changes in climate. The eucalypts have high and consistent growth rates, with stem growth for 9 months of the year and canopy expansion for the remaining three. As a consequence, the forest is a constant carbon sink and rarely releases more carbon than it takes up. The bulk of biomass is stored in the large trees, which are also the ones that grow most unrestricted.

The key mechanism to drought stress of messmate stringybark (*Eucalyptus obliqua*) is drought avoidance. The species is moderately drought tolerant and avoids severe drought stress by deep roots and shedding leaves in times of water shortage. Most of the drought resistant features of the trees are genetically controlled and are not plastic. This means they will likely not adjust with changes in climate, which is a possible point of vulnerability. Different provenances of messmate respond differently to drought stress and these features are inherent and passed on to the next generation of trees. This means that careful selection of provenances may be required to make the Wombat Forest more resilient to potential changes in our climate in the future."

Prof Stefan Arndt

20 June – Dr Holly Sitters

School of Ecosystem and Forest Sciences, University of Melbourne

Wildlife conservation in changing landscapes - a tangled tale of forest fragmentation, fire and fauna

"Globally, the abundance of terrestrial animals has fallen by 50% since 1970, and populations face ongoing threats from forest loss, fragmentation, disturbance and climate change. Each of these threats may interact and have cascading effects on animal populations. Typically, conservationists are limited in their capacity to directly influence rates of forest clearance, fragmentation or climate change, yet fire management is increasingly used to reduce wildfire risk and conserve biodiversity worldwide.

In this presentation, I'll discuss:

1. the diverse responses of birds, reptiles and mammals to fire,
2. fire management strategies we currently use to conserve Victoria's wildlife, and
3. exciting new approaches that may help animal populations to persist under changing climates."

Dr Holly Sitters

Elusive Powerful Owls

Words and images by Gayle Osborne

Over the years we have located a number of breeding sites for Powerful Owls, and recorded the young just out of the nest hollow. Returning to these sites last year, we observed that the owls seemed to have moved to new locations and we do not know if they bred.

This winter, one pair returned to their usual gully, east of Blackwood, and may have attempted to breed. There was a lot of white defecation under a large hollow early in the breeding season but this eventually tapered off and it became evident that no chicks were raised.

We were unsuccessful in locating any other breeding evidence this year until we were spotlighting for Greater Gliders in the southern part of the Wombat. As we were waiting for night to fall we heard some trills, but they did not seem strong enough for Powerful Owl young.

Pair of juvenile Powerful Owls in a Blackwood.

Large male Powerful Owl high in a pine plantation

Luckily Trevor Speirs had a few hollow-bearing trees to check further down the track and as he swept the spotlight around he saw two juvenile Powerful Owls perched in a Blackwood. We were elated.

For about eight months, we have been observing a large male roosting in a small pine plantation, 1.7km from the sighting of the young. Despite looking very hard we have never located a second owl in the plantation. Is he the father of these young? Perhaps we will never know, but hopefully if he is, the family will at some stage in the future move into the pines. ■