Issue 67 - March 2024

Wombat Forestcare Newsletter

It is nearly three years since the Victorian government undertook to create the Wombat-Lerderderg National Park and we are still waiting. In the meantime, more populations of endangered Mountain Skinks have been discovered and some rare plants located. We hope that you enjoy this autumn issue of our newsletter. **Gayle Osborne** (editor) and **Angela Halpin** (design)

Goodbye VicForests but salvage logging continues

Words by Gayle Osborne

We should be celebrating the decision by the Victorian government that VicForests will cease to operate from 30 June 2024, but instead, in the Wombat Forest, we are faced with a continuing large salvage operation that is employing VicForests' contractors. Eight large 30 tonne logging machines are operating near Barkstead and Bullarto, with the stated intention by Forest Fire Management Victoria (FFMVic) to continue these works in the Wombat until 2026.

Fuller Track, Barkstead. Smashed and smothered. Photography © Gayle Osborne.

The damage is shocking. To remove the wind-fallen logs, the machine operators have trampled and destroyed the vegetation. The logs have been stripped of their bark. The bark and the treetops have then been crushed and distributed across the landscape forming a deep thick mat of debris that will impede the establishment of new plants. It will be many years before these areas recover from the onslaught.

Where the wind-fallen trees have been left undisturbed the understory vegetation is growing well and young eucalypts have established. The fallen logs are ecologically incredibly important. They shelter the soil from drying out, as they rot, they provide a home for fungi, small reptiles and mammals and insects for birds to eat. Eventually they become soil.

Where new tracks have been established and cleared of vegetation, weed species will easily establish. Blackberries are already emerging on some sites and there is no indication that any weed control is being undertaken.

It is important to clear fallen logs from tracks and deal with issues relating to the interface of private property and public land. It is equally important to recognise that the windstorm was a natural event and there are some ecological benefits.

The large holes created by the uplifted root balls collect water as well as creating a microclimate for new plants. Throughout the forest, a rarely seen fern, Bat's Wing Fern *Histiopteris incisa* has established itself in many of these holes. The increased light has enabled various ground covering and small plants to thrive.

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Industrial-scale logging at Fuller Track, Barkstead. Photography © Gayle Osborne.

From the time the Victorian government announced in June 2021 that they would create the Wombat-Lerderderg National Park and a number of regional parks, the Wombat Forest should have been managed as such and not subjected to an industrial style, heavy machinery salvage operation to extract resources for the timber industry.

We call on the Minister for the Environment, the Hon. Steve Dimopoulos, to immediately cease the salvage operations and legislate the long overdue Wombat-Lerderderg National Park. It is time for the minister to show that he takes the portfolio seriously and to ensure that our forest and its inhabitants are protected. ■


Ferns growing in upturned root ball. Photography © Gayle Osborne.

Court case update

In September 2023 Wombat Forestcare sought an injunction in the Supreme Court to halt timber harvesting works in a coupe called 'Silver Queen', claiming that VicForests had failed to properly survey for threatened species. Evidence from expert witnesses was tendered to the court to substantiate the claim and the injunction was granted.

When VicForests' consultants discovered nine endangered Mountain Skinks in and near the coupe, Justice Melinda Richards ordered all work to cease in the coupe.

VicForests then cancelled all current forest product licenses between it and logging contractors in western Victoria. On the eve of our hearing on 13 March, VicForests' legal team notified the court that VicForests would close by 30 June 2024.

However, our legal proceedings have not been finalised and we will participate in a mediation process in May.

The Cryptic Painted Button-quail

By Lynda Wilson

Motion sensing cameras have provided a glimpse of many creatures that we may not have otherwise encountered in the Wombat Forest. Some creatures are more cryptic than others. The Painted Button-quail *Turnix varius* is one such well-camouflaged bird.

Without the motion sensing cameras, to confirm the presence of Painted Button-quails in the forest we might be relying on the sound of the female's "boom boom" call as she endeavours to find a mate, or catching a glimpse of a fast-moving little plump bird as it is flushed from the undergrowth. Alternatively, its presence can be assumed where platelets of bare earth patches or shallow depressions in leaf litter about 15 centimetres in diameter are encountered, remnants of a circular foraging motion in the quest for seeds, fruits, leaves and insects.

In the 14 years since Wombat Forestcare has been using these cameras, only two observations of the Painted Button-quail have been recorded. As these ground-dwelling birds tend to be active and feeding during the evening, night and early morning, the cameras have also provided a better chance of capturing an image of these birds than those of us that may not venture into the forest at these times.

The Painted Button-quail is a small bird, less than 20 centimetres in length. The female is slightly larger and is more colourful than the male – quite unusual in the bird world. The use of the word "painted" in the name of this bird reflects the combination of buff and white spots, black and rufous barring, a rufous blaze on the shoulder and a red iris.

The female builds a nest dome constructed from leaves, twigs and grass situated within a grass tussock or at the base of a rock or young tree. She is thought to be the one who courts the male and after mating and laying his clutch of eggs, she leaves him in search of a new mate. This practice of having more than one mate is known as polyandrous behaviour.

In the meantime, the male is left to incubate the eggs and feed the chicks for 7-10 days after which time they are able to fly.

In addition to this unusual behaviour of the Painted Button-quail, I was intrigued to read in the Australian Bird Guide (Menkhorst, P. et al, 2017) that button-quails, which along with the Plains-wanderer *Pedionomus torquatus* form the Family Turnicidae, are related to shorebirds. The Bird Guide also states that they are "superficially" similar to unrelated true quails which include the Stubble Quail *Coturnix pectoralis*, Brown Quail *Coturnix ypsilophora* and King Quail *Exalfactorius chinensis*. Flicking the pages in the Bird Guide I couldn't help but think that the term "superficial" was a bit of an understatement. The main physical distinction between the true quails and the button-quails is that the true quails have a hind toe which is lacking in the button-quails.

The distribution of the Painted Button-quail includes temperate and eastern tropical forests and woodlands extending from Queensland to Tasmania with a separate population in southwestern Western Australia. There is some suggestion that the Painted Button-quail is migratory or disperses for the winter in some places. Hard data is limited but like many woodland birds, this species is thought to be in decline largely due to habitat loss. As a ground-dwelling bird it is also particularly vulnerable to predation.

The subspecies of Painted Button-quail *Turnix varius scintillans* is endemic to the Houtman Abrolhos islands off the west coast of Australia and is currently listed as Endangered under the *Environment Protection and Biodiversity Conservation Act* (1999). Let's hope the little plump painted bird of the Wombat Forest doesn't go the same way. ■

Painted Button-quail *Turnix varius.*

Mountain Skink
Liopholis montana

By Gayle Osborne

The discovery of a family of Mountain Skinks *Liopholis montana* in the Wombat Forest in 2020 was incredibly exciting and has led to scientists and Wombat Forestcare volunteers finding many more populations. Read about this initial discovery in our September 2021 newsletter

https://www.wombatforestcare.org.au/newsletters/WombatForestcareNewsletter57_September_21.pdf

In August 2022, *Liopholis montana* was listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999*. Throughout its range it occurs in a series of apparently isolated subpopulations at elevations ranging from 620 m (Wombat State Forest) to 1800 m (Mt Gingera, ACT).

Mountain Skink eating a beetle. Photography © Trevor Speirs.

During discussions with leading reptile scientists Dr. Zak Atkins and Dr. Nick Clemann, we were informed that Zak had genetic material (tail tips) from over 100 Mountain Skinks from across their range from the ACT to the Wombat Forest. This led to Wombat Forestcare raising the funds to perform DNA sequencing and have a specialist conservation geneticist, Dr. Michael Amor, prepare a report titled "An assessment of population structure and genetic diversity of the mountain skink, Liopholis montana" authored by Drs. Michael Amor, Zak Atkins and Nick Clemann. More samples were obtained from the Wombat Forest population and 92 samples, sourced from 26 locations throughout their range, were included in the project.

The elevation map from the report shows five distinct genetic populations of Mountain Skink across the region.

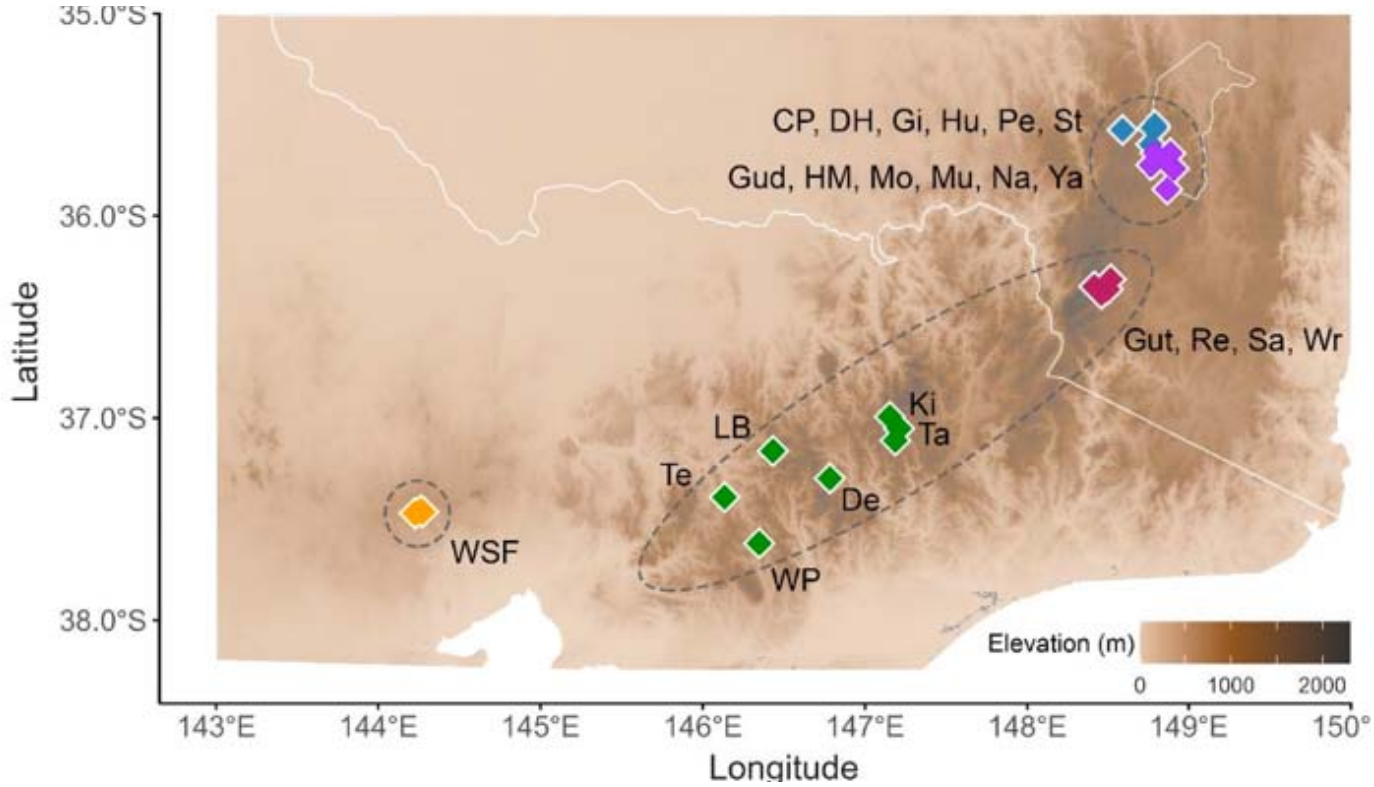

Figure 1. Elevation map of the mountain skink, Liopholis montana, in Victoria, New South Wales, and the Australian Capital Territory, Australia. Sampling localities encompass most of the known distribution and are indicated by coloured triangles, their colour reflects each individuals' inferred population via Discriminant Analysis of Principal Components (DAPC). Dashed ellipses group three populations identified by fastStructure. Both independent analyses indicate that the Wombat State Forest is a discrete population. Note: these preliminary findings have not undergone peer-review.

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Mountain Skink *Liopholis montana*.
Photography © Gayle Osborne.

The report shows that the Wombat population is very significant. The authors found that "the Wombat State Forest has the second greatest breeding population (effective population size) and the lowest degree of inbreeding of the populations sampled. As inbreeding is known to negatively impact the fitness of the species, population, and offspring (Charlesworth & Charlesworth, 1987), the relative fitness of the Wombat State Forest population makes it an important genetic diversity 'bank' and an ideal candidate for supporting breeding and translocation programs."

The Wombat population has a lower level of in-breeding and also lower levels of genetic diversity than other populations. Even if we can facilitate an increase in population numbers, their genetic diversity will continue to slowly decline.

The genetic research indicates that the Wombat's Mountain Skinks have 20% of the overall population's unique genetic diversity, which means that they have genetic material that is not found in the other populations. It is possible that as the Wombat Mountain Skinks are found at lower altitudes than the other populations, they have adapted to warmer temperatures and could prove to be an important genetic source as the climate warms.

Also, for the Wombat's Mountain Skinks to thrive, they need a genetic boost and that can only happen with translocation. This can be either wild to wild, where animals are released and left alone or a captive breeding program, where animals are easier to monitor.

While this preliminary report is still being prepared for publication, and thus peer-review has not happened, the research is exciting and it shows the importance of maintaining all the populations of Mountain Skinks in the Wombat Forest. A loss of this group would have a great impact on the ability to improve the overall genetic health of the Mountain Skink throughout its range.

Since Zak obtained the samples from one large area in the Wombat Forest more populations have been discovered. Some of these populations are quite a distance from those sampled including on the eastern side of the Trentham-Greendale Road. To enable an improved understanding of the genetics of the Wombat population, further samples will need to be acquired and genetically sequenced.

We have the situation where a number of populations of Mountain Skinks are located within proposed planned burns, which could modify the vegetation to a point where the skinks can no longer inhabit the site. A burn will remove vegetation that protects the skinks from predation and then as it regrows it is likely to include bracken and other vegetation that over-shades the area.

The bulldozing of trees that could be a hazard on the perimeter of the burn may disturb their burrows, increase the amount of sunlight and make access easier for predators. Track widening with bulldozers can also damage their habitat.

All the populations of Mountain Skinks that we have located so far have been in forest that has not recently been burnt (10 – 40 years since a burn or so long ago that there is no fire history). We have not located any Mountain Skinks in forest that has evidence of recent burns, even when the habitat appears suitable.

Now that the importance of all the populations of Mountain Skinks in the Wombat Forest has been established and that some are located within planned burns, it is to be hoped that burn plans can be modified by Forest Fire Management Victoria to exclude fire from these locations.

It is critical for the protection of the Wombat populations of Mountain Skinks that the Wombat-Lerderderg National Park is legislated so that the forest is managed for its conservation values rather than extractive industries. ■

Mountain Skink *Liopholis montana*. Photography © Gayle Osborne.

Batting for Victoria

By Trevor Speirs

Eastern False Pipistrelle Bat *Falsistrellus tasmaniensis*
Photography © Gayle Osborne.

Well before the last call of the Laughing Kookaburra signals the end of the daylight hours in the Wombat Forest, a small nocturnal mammal will be hitting the airwaves in the pursuit of a feed. Any venture into the Wombat at night, colder months excepted, will not go by without an encounter with one of the forest's micro-bats. While "encounter" might be stretching the point a little, if you are in the forest as dusk approaches, a micro-bat will almost certainly be flying close by. These micro-bats' incredible echo-location abilities always keeps them from tangling with an unsuspecting midnight rambler, although they can get quite close at times. This part of the world is home to about eleven species of micro-bats, and like our nocturnal birds, bats need a safe, secluded daytime roost to retreat to after their nightly activities.

Of all the Wombat micro-bats, all bar one species use either tree hollows, loose bark, buildings or other man-made structures for roosting. Some like the Chocolate Wattled Bat *Chalinolobus morio* and Eastern False Pipistrelle *Falsistrellus tasmaniensis* will also use caves, culverts and under bridges as well as tree hollows etc, but it is only the Eastern Bent-wing Bat *Miniopterus orianae oceanensis* that exclusively roosts in subterranean structures such as caves, mine adits or tunnels. The Eastern Bent-wing Bat is also the only Wombat bat that is on the threatened species list, being classified critically endangered under the Flora and Fauna Guarantee Act 1988.

The biology of the Eastern Bent-wing Bat is most interesting indeed. Although occurring along Australia's eastern mainland, the Victorian population breeds exclusively in a large maternity cave in Gippsland in late autumn to early winter. Although females fall pregnant immediately following mating, the period of gestation can be over seven months due to the female entering hibernation through the colder months. This trait of a long, over-wintering gestation and periods of torpor, is common with many of Victoria's bats. When juvenile eastern bent-wings reach independence the following autumn, most will leave the Gippsland maternity cave, with the young bats travelling distances of up to 300 kilometres from their birth place. It will be these and non-breeding males that will probably make up the majority of bats found in the Wombat.

With this area's history of gold mining, the forest has more than a few tunnels and mining adits offering these bats a potential home. Tunnels are chosen that provide the right thermal conditions; cold areas in winter to assist when in torpor and warmer spots in summer that enable the bats to activate quickly at dusk. Probably as important for the Eastern Bent-wing Bat in the Wombat is access to roost sites. While there are still a number of accessible tunnels and adits, there are quite a few others that aren't. When mining activity ceases, often a steel grate or door is placed at the mine entrance. This is possibly a legal requirement and while this stops people entering and potentially coming to harm, the door's grid spacing is so small it also keeps eastern bent-wings out.

There is one such mine in the western part of the Wombat that had Eastern Bent-wing Bats roosting in

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Lesser Long-eared Bat *Nyctophilus geoffroyi.* Photography © Gayle Osborne.

it about a decade ago but now has a gate preventing any possible bat access. There are several mines around Blackwood, one the subject of recent community opposition, that also have barriers at their entrance, again blocking any bats looking for a potential roost site. There has been research undertaken by bat experts such as Dr Lindy Lumsden, which provides guidelines for relevant authorities whereby "windows" can be inserted into these steel doors. These windows need to be the correct height above ground as well as the right dimensions to enable comfortable bat movements and I believe the information is readily available and should be acted upon by the relevant authorities. These are critically endangered mammals after all.

Bent-wing bats are very sensitive to disturbance and interference, even if unintended, and this is especially so when they have entered their winter hibernation. At this time of year when roosting in the coldest part of a mine or tunnel, a bat's body temperature drops low enough to enable it to slowly conserve its fat deposits which have been built up over summer and autumn. Should a bat be disturbed by a flashlight or worse, it might be shaken from its slumber and once activated can quickly use up these reserves of body fat, putting its life at risk.

While bats can get some negative press at times, or worse, flying foxes being shot, without them we really would have something to complain about. Crops would be constantly under attack by a myriad of insects and our lives would be intolerable with mosquitoes, midges, flies etc. making everyday existence a merry hell. With some species of micro-bats eating as many as 600 mozzies a night as well many other moths and various arthropods, these small, amazing mammals really do play an invaluable role in both our world and the natural world. ■

Large Forest Bat *Vespadelus darlingtonia.* Photography © Gayle Osborne.

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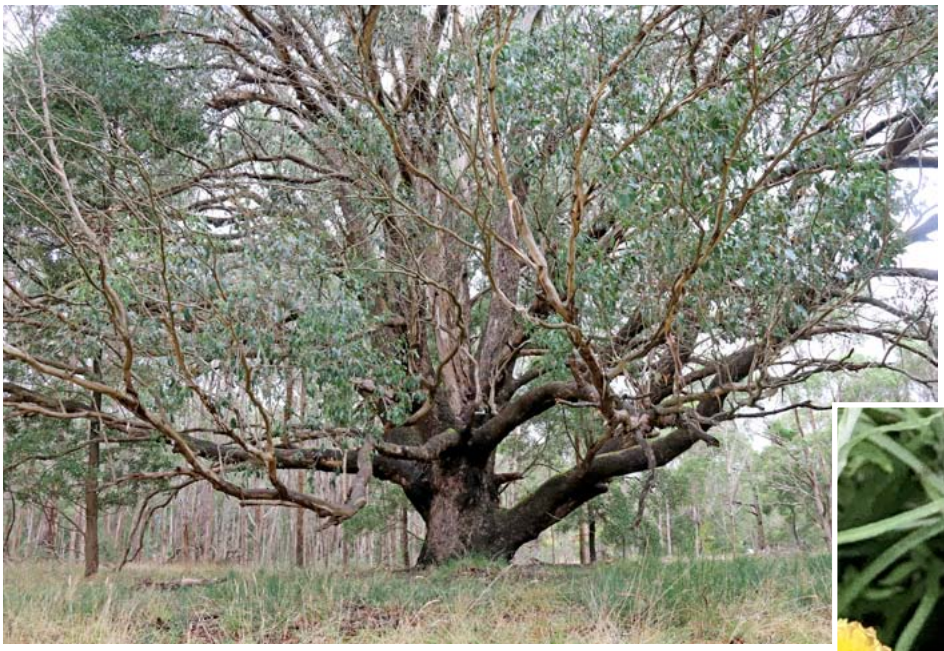
Western Wombat Forest

By Jeremy Neal



Yarra Gum *Eucalyptus yarraensis*. Photography © Gayle Osbonre

To the west of Ballan-Daylesford Road is a section of the Wombat Forest that bears many scars old and new. Aerial photographs of the Barkstead to Spargo Creek area show a conspicuously modified landscape; a patchwork of pine plantations, roads and powerline easements. Adjacent to these modified areas, the remnant forest has been historically subject to widespread and intensive timber harvesting.

Given the above, it would be easy to dismiss the area as too degraded or fragmented to support a thriving forest ecology. However, on the fringes of the pine plantations and snaking through them, are some surprisingly intact swamps and watercourses supporting a host of regional and state significant flora species.

The Moorabool River East Branch and tributaries and many tributaries of the Moorabool River West Branch occur within the area. These feed reservoirs downstream, including the Korweinguboora and Moorabool Reservoirs, before their confluence with each other, then the Barwon River, which ultimately flows into Bass Strait.

Within the swamps and alongside the humble watercourses of the upper Moorabool Rivers, grows the Yarra Gum *Eucalyptus yarraensis*. A species endemic to Victoria and considered Critically Endangered under the Flora and Fauna Guarantee Act (FFG Act), this stout tree, to 15m or so, is common throughout the Spargo-Barkstead area. The grand old example (pictured) is located at the Spargo Mineral Springs.

Around the feet of these Yarra Gum, can be found the Pale Swamp Everlasting *Coronidium gunnianum* (FFG Act Critically Endangered). This species, spreading via underground stems, can form considerable patches when conditions suit. A patch or two of this species can be found in most swamps of the area.

Pale Swamp Everlasting *Coronidium gunnianum*. Photography © Jeremy Neal

With great excitement, I recently stumbled across Lacy River Buttercup *Ranunculus amplus* (FFG Act Critically Endangered) within one of the previously mentioned waterways. To my knowledge, this species has not previously been recorded in our region. Although I am yet to see it in flower, the sturdy stems and umbrella-like leaves are reason enough to pause and appreciate this attractive plant.

Many species of regional significance also occur in

Leaf of Lacy River Buttercup *Ranunculus amplus*. Photography © Gayle Osborne

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this area, some of which are not recorded elsewhere within the Wombat Forest. Some species of note include Mountain Baeckea *Backaea utilis*, Pithy Sword-sedge *Lepidosperma longitudinale*, Tussock Sedge *Carex iynx*, Mountain Lagenifera *Lagenophora montana*, Water Woodruff *Asperula subsimplex*, Grassy Bog-sedge *Schoenus tesquorum*, Slender Spike-rush *Eleocharis gracilis*, Rosemary Everlasting *Ozothamnus rosmarinifolius*, Sickle Greenhood *Pterostylis falcata* and Mat Water-milfoil *Myriophyllum pedunculatum*.

Mountain Baeckea *Backaea utilis*
Photography © Jeremy Neal

After admiring the population of Lacy River Buttercup, my excitement was tempered by a pile of old vehicle parts immediately upstream, dumped or washed within the watercourse.

This is a problem that I can remedy the next time I visit. However, ever-expanding patches of Blackberry and other weed species are evident, eating away at the integrity of these ecological systems.

Looking again at the extent of land modification in the aerial photography, I feel grateful that these unique patches and corridors of native vegetation were not lost to pine plantation. Hopefully we see the threats to these ecosystems adequately managed in the coming years to safeguard the biodiversity within. ■

Tall Sickle Greenhood *Pterostylis falcata*
Photography © Gayle Osborne

Sedgy riparian woodland found within the pine plantations.
Photography © Gayle Osborne

Spencer's Skink

By Trevor Speirs

Skinks have been making big news in the Wombat Forest these past couple of years, and it's all been about the endangered Mountain Skink *Liopholis montana*. While this reptile has been deservedly hogging the limelight, there are quite a few other interesting skinks out there. When including the Lerderderg State Park, these forests are home to around 12 species of skinks, one of these being Spencer's Skink *Pseudemoia spenceri*.

Spencer's Skinks inhabit cool to cold forests, mainly in eastern Victoria, but also to the south in the Otways and as far west as the Grampians. The one in the attached photograph, was seen in the far SE corner of the Wombat and prior to this observation by Gayle Osborne, there were only a couple of 30 year old records on the Victorian Biodiversity Atlas.

Spencer's Skink *Pseudemoia spenceri*. Photography © Gayle Osborne.

While you tend to think of skinks as spending most of their days on the forest floor where they can feed amongst leaf litter and bask on logs and rocks, these lizards have other ideas. What sets the Spencer's Skink apart from the other skinks in the Wombat is its ability to climb large, dead trees where it can bask above the forest's canopy. Remarkably, heights as much as 75 metres have been recorded as basking spots. With the Wombat's history of intensive logging, there is no chance of any dead (or live) trees of that size here but you occasionally find reasonably tall dead trees still standing in the less disturbed parts of the forest.

The Spencer's Skink lives in the cracks and fissures of these old dead trees while also using logs on the ground where it preys on flies, ants, termites etc. It's just another example of the vital importance that standing and fallen trees play in the lives of the many diverse forest animals in the Wombat Forest. ■

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