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Wombat Forestcare Newsletter

Winter in the Wombat and a wonderful array of fungi is emerging. We celebrate the announcement to end native forest logging, if only it were true for the west. Read on…**Gayle Osborne** (editor) and **Angela Halpin** (design)

Logging continues in western Victoria

By Gayle Osborne

We were astounded that the undertaking to end native forest logging by 1 January 2024 did not mean all native forest logging in Victoria. For the many forests in western Victoria, it is business as usual, and threatened species remain in peril. These already damaged forests will continue to be treated just as a resource.

The announcement that native forest logging will end in six months is celebrated as a monumental win for our environment, however, we now learn that this does not apply to the west of the state. It was only following questions in the Public Accounts and Estimates Committee by Greens MP Ellen Sandell to the Agriculture Minister, Gail Tierney, that the true position was revealed.

We now know that Community Forestry operations, which are outside the 1.8 million hectares of public land currently subject to the timber harvesting allocation order, are not subject to the decision to end native forest logging. The majority of these licences end mid-2024 and the Victorian Government is still deciding what to do with them.

Yellow-tailed Black Cockatoos keeping an eye on the west.
Photography © Gayle Osborne.

Forestry operations in the west are managed by VicForests and are called "Western Community Forestry". The western region includes public land around Portland, Horsham, the mid-Murray, Bendigo, the Otways (the section that is not a National Park), Mt Cole, the Pyrenees and the Wombat.

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Storm debris program Barkstead. Photography © Gayle Osborne.

Salvage works are being undertaken by Forest Fire Management at Barkstead as part of their storm debris program. All storm-thrown trees are being removed.

There is no independent oversight or scientific justification for the extent of these works, which are being carried out in the name of fire prevention.

There are over 600 coupes listed on the Timber Utilisation Plan (TUP), covering approximately 51,000 hectares. The harvesting is mainly for low value timber such as firewood, however, at Mt Cole coupes are clear-felled for sawlogs. There is some harvesting for specialist timber such as Blackwood from the Otways.

Although the amount of logging is small compared to other areas in the state, it is significantly damaging due to the highly cleared landscapes that surround these forests. These areas of public land contain important habitat for many threatened species.

In the last 10 years, the logging of these forests has almost doubled and is almost completely state-subsidised.

There is an outrageous disregard for the protection of the environment and the species it contains. The Victorian government has committed to creating two new National Parks at Mount Cole and the Pyrenees but only after large areas have been clear-felled for timber. It seems that forests in the west of the state will continue to be subjected to further degradation until native forest logging ends in 2030.

There is some good news. We have been informed that surveying for the Wombat-Lerderderg National Park is well underway, and we expect the park to be legislated next year. It is now two years since the government's commitment to create the National Park.

VicForests will continue to have access to salvage coupes in the Wombat Forest until the end of the year. Commercial firewood coupes, designated by the government in their response to the Victorian Environmental Assessment Council recommendations will continue to be harvested until 2024 and 2030. The Forest Fire Management storm debris program is not classed as logging and will continue. There is no independent oversight of these works, and they have considerable impact on the ecology of the forest, particularly the removal of nearly all the storm fallen logs.

While the rest of the state celebrates, we in the west need to campaign to protect these important refuges for flora, fungi and fauna. ■

Reference

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Of Dragons and Damsels

Words and images by Lynda Wilson

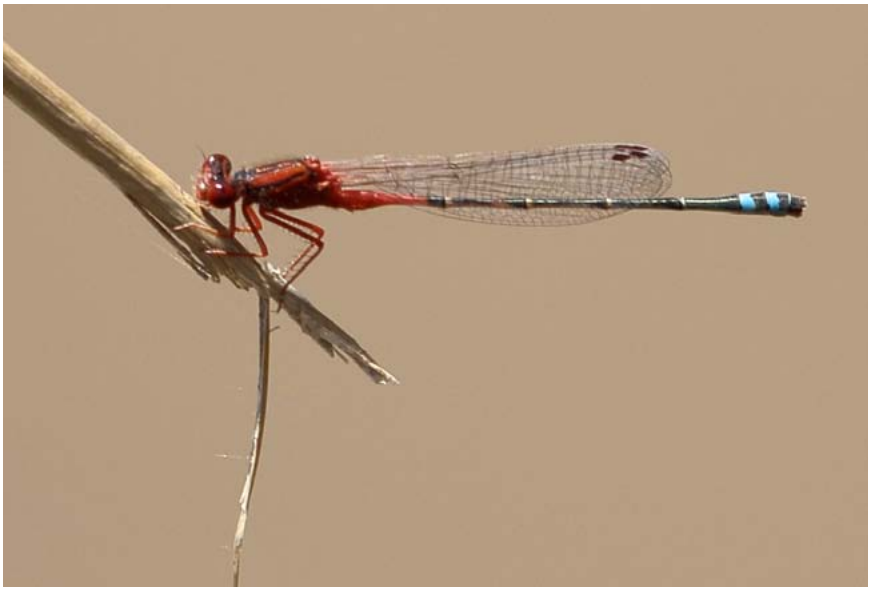
Part 2: The Very Dainty Damsels

I don't know if it was La Niña making conditions more suitable for aquatic organisms as a whole, or if I'd just become more aware of more of the smaller things living around us. During the warmer months of the last couple of years the brilliant colours, and striking patterns of some of the larger Odonates, suborder Anisoptera or dragonflies, had obviously caught my eye as outlined in our last newsletter. Over the same period there were equally absorbing encounters with the smaller Odonates, suborder Zygoptera or damselflies. With names like Red and Blue Damselfly *Xanthagrion erythroneurum*, Aurora Bluetail I*schnura aurora* and Blue Ringtail *Austrolestes annulosus,* it's not surprising that colour is again a major feature of these delicate creatures.

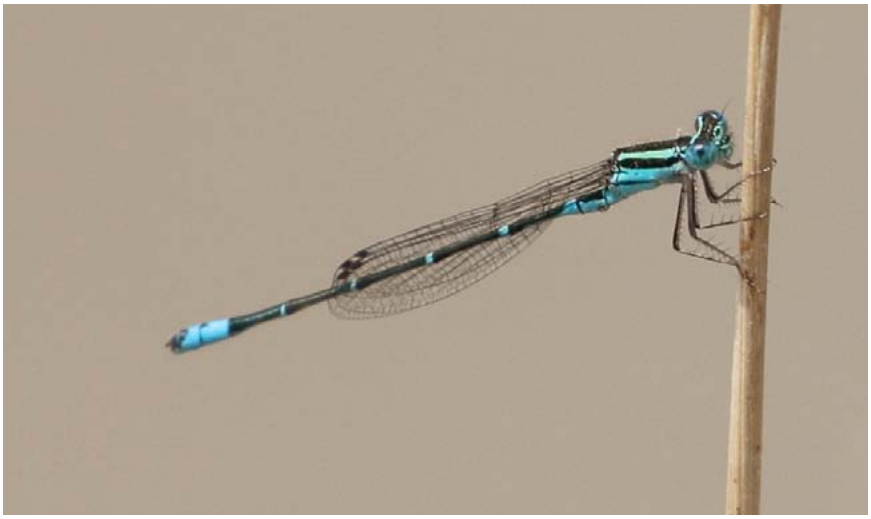
Globally around 3000 species of damselflies have been identified with about 25 species recorded in Victoria. Just a handful of these species are featured here, illustrating just a sample of the variation and vibrance of colour in our local damselflies.

As with dragonflies, damselflies are predatory, aerial insects found mainly near shallow, freshwater habitats. They are graceful but not strong fliers with delicate slender bodies and front and hind wings which are similar in size and venation. Unlike dragonflies, which generally hold their wings flat and perpendicular to the body, most damselflies fold their long, net-veined wings along-side or parallel with the body when at rest. Where dragonflies will tend to perch horizontally or in line with the perch, damselflies tend to rest at an angle out from their perch, resembling a twig or a bent outer leaf of a blade of grass.

Adult damselflies tend to hang out among grasses and low vegetation using their spiny legs to pick off prey items such as flies, mosquitoes, and other small insects from stems and leaves. This is in contrast with dragonflies which tend to hunt flying prey.



Red and Blue Damselfly *Xanthagrion erythroneurum*. Photography © Lynda Wilson.



Eastern Billabongfly *Austroagrion watsoni*. Photography © Lynda Wilson.

Slender Ringtail *Austrolestes analis*. Photography © Lynda Wilson.

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The compound eyes of damselflies are widely separated to the side of the head and while seemingly large, are relatively smaller than those of a dragonfly. There are three simple eyes (ocelli) on top of the head and a tiny pair of antennae, thought to be used to measure light intensity and air speed respectively.

While generally smaller than dragonflies, damselflies range in body length from around 20 millimetres (members of the genus Agriocnemis or 'wisps') up to 130 millimetres (members of the family Pseudostigmatidae known as helicopter damselflies or forest giants).

Elaborate courtship behaviour precedes reproduction involving indirect insemination and delayed fertilisation. As with dragonflies, the "heart" or "wheel" shape is formed as the male clasps the female at the back of the head, the female then curling her abdomen to collect sperm from the base of the male's abdomen. Nearly all damselflies lay their eggs within the tissue of plants in or near water, sometimes with the male still clasping the female.

Damselfly larvae can grow up to 30 millimetres long and can generally be distinguished from dragonfly larvae by the three leaflike gills at the tip of the abdomen known as caudal lamellae contrasting with internal gills of the dragonfly larvae. As they are not as powerful as dragonfly larvae, damselfly larvae tend to prey on smaller crustaceans and water fleas.

As with dragonflies, the larvae of damselflies develop through around ten moults, wing pads progressively becoming visible, then climbing out of the water to undergo metamorphosis at the last moult. Once the skin has split down the back, they emerge and inflate their wings and abdomen to gain their adult form. Many species of damselflies are sexually dimorphic meaning males are often more brightly coloured than the females. Once emerged, it might take several hours to days for the males to attain their full vivid colouration.

Blue Ringtail *Austrolestes annulosus* with a meal. Photography © Lynda Wilson.

Blue Ringtails *Austrolestes annulosus* mating in tandem. Photography © Lynda Wilson.

Red and Blue Damselflies *Xanthagrion erythroneurum* in heart formation. Photography © Lynda Wilson.

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Even though the cooler months are well and truly with us and the adult damselflies are unlikely to be hanging around, I still keep an eye out for that tiny flash of brilliant blue or red, or the glint from a shiny wing amongst the reeds beside a freshwater pool or stream. In the meantime, it's intriguing to think that under the surface of any healthy waterbody, damselfly larvae could be on the hunt, passing through their progressive moults to emerge into next spring's stunning damselflies. Yet another reason to make sure local waterways remain healthy and protected. ■

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Damselfly larvae – Final instar showing well-developed wing pads and 3 tail gills (caudal lamellae). Photography © Lynda Wilson.

Dragonflies Australian Emperors *Anax papuensis* in tandem and the much smaller Red and Blue Damselflies *Xanthagrion erythroneurum*

Common Bluetail *Ischnura heterosticta*. Photography © Lynda Wilson.

Cobaw Forest update

By Gayle Osborne

A pile of logs on a roadside in the Cobaw State Forest appeared to be ready for collection, but on closer examination by some locals, they were found not to be native hardwood but pine. It turns out that these logs have been brought in to stabilise Pole Track in order to collect the windfallen trees that have been piled up along the heavily eroded track.

Pole Track, which is on granitic sand, is heavily eroded from 4-wheel driving and subsequent rains. Trail bikes continue to use the track, adding to the erosion.

It is hard to imagine a more futile and costly exercise. The wind damage in the Cobaw Forest was not extreme and there is no evidence that the fallen trees presented a greater fire risk. The wind-fallen logs would have been future habitat for insects, small reptiles and mammals and essential foraging habitat for Brush-tailed Phascogales.

Due to the overuse of Pole Track by 4WD vehicles and the subsequent erosion it is no longer possible for management vehicles to use the track should there be a need to contain a fire. Repairing the track and closing it for public use would have been a better outcome for fire prevention than the removal of the fallen trees. ■

Extensive erosion on Pole Track. Photography © Ben Gill.

Pine logs left in the Cobaw Forest. Photography © Ben Gill.

To Thin or Not to Thin Regrowth in the Wombat Forest

By Murray Ralph

Over one third of the Wombat State Forest (about 16,000 hectares) is Eucalypt regrowth resulting from intensive overlogging undertaken between 1980-2002. Trees in these areas are now 20-40 years old and are mainly Messmate and Narrow-leafed Peppermint. Although variable depending on age and other factors the regrowth is typically dense with many stems per hectare and relatively narrow trunks. The occasional larger old tree survived the logging and occurs amongst the regrowth,

Whilst this regrowth does provide some habitat for a range of native species, the young trees are not yet old enough to form tree hollows that are critical for many other forest dwelling native fauna. Hollows usually take at least 80-100 years to develop, and even up to 200 years for the very large hollows required by some native fauna.

As a result, hollow dependent fauna, such as Southern Greater Gliders, Feathertail Gliders, Brush-tailed Phascogales and Eastern Pygmy-possums, and native birds including White-throated Treecreeper, Sacred Kingfishers and Gang Gang Cockatoos, tend to be rare or absent in young regrowth.

Younger forest also stores less carbon (Williams et al 2005), uses more water (Vertessy et al 2001), and tends to have a sparcer understorey due to the higher competition for water, space, nutrients and light. Forests that have been logged also have a higher probability of experiencing more intense bushfires than older more open forests, according to research undertaken following the Black Summer bushfires (Lindenmayer et al 2022).

Given the above, and the high proportion of regrowth in the Wombat Forest, ecological thinning has been proposed as an option to hasten the transition of these areas to mature and later old growth forest.

Dr Phillip Zylstra, Adjunct Associate Professor at Curtin University, who specialises in bushfire research and Professor David Lindenmayer from the Australian National University, a prominent expert on forest ecosystems were contacted by Wombat Forestcare for their opinions on thinning the regrowth in the Wombat Forest.

In response Dr Zylstra stated that *"These trees will stay very slender until they grow tall enough to self-thin. Their close packing enables them to economise on trunk diameter because they create a structure that is less exposed to the wind. If they are manually thinned, a few things will happen:*

1. *Trees will gain girth but grow in height at a slower rate. This is often desirable from a timber perspective, but it's artificial for a natural forest. Leaving them to self-thin in their own time will create a taller forest with a cooler microclimate and lower long-term flammability.*

2. *Removing biomass and opening the canopy through thinning frees up light, water, and nutrients for new growth. This new growth begins from the ground up, which means that it will act as fuel, conveying fire into the canopy and greatly increasing fire risk"*

"I'd absolutely suggest you leave it to recover by itself. Disturbing it by thinning will lock in many more years of flammability, and increase the long-term flammability by preventing the forest from reaching its potential height. You'll also lose carbon." (P Zylstra 2023 personal communication)

Professor Lindenmayer, who has conducted research on thinning various types of forest (Taylor et al 2021) agreed with the above assessment of thinning regrowth in the Wombat Forest.

He stated that "*...these kinds of forests undergo natural self thinning ... my strong sense is that they should be left alone", and added that "Human thinning is also not good – it's a different trajectory relative to natural self thinning as the overstorey shelter has not developed appropriately to allow mesophication of the forest."* (D Lindenmayer 2023 personal communication)

'Mesophication' refers to a positive feedback cycle where cool, damp, and shaded conditions continually improve for shade-tolerant, fire sensitive native species and deteriorate for shade-intolerant, fire-adapted species.

Professor Lindenmayer has also recently stated that *"A second way to make some Australian forests more flammable is by thinning them. Thinning is where some of the trees are removed to open out a forest. Forestry advocates have recommended extensive thinning (including in national parks) to make forests less fire prone – and also to use the wood.*

But what does the science say on this? Past work by the Victorian government and the Tasmania government showed that thinned forests were a fire risk. Studies after the 2009 Black Saturday fires and also the 2019-20 Black Summer fires both showed that either thinning made no difference to the severity of those fires or in other cases, thinning made it worse. Thinning forests can be like striking a match to a tinderbox when it comes to potentially dangerous and catastrophic fires. In fact, not only thinning, but other forms of logging (including logging after windstorms and immediately after previous fires) increases the severity of wildfires.

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Eucalypt regrowth resulting from intensive overlogging. Photography © Gayle Osborne.

The long history of logging, thinning, and prescribed burning across Victoria has sharply increased flammability and created fire problems that will be with us for decades to come. What are solutions to fire problems in Victoria? First, actions that make forests more flammable like logging of wind-damaged areas and thinning need to stop" (Lindenmayer 2023).

Thinning of regrowth areas, especially on a large scale, also causes other significant problems.

It is not possible to undertake mechanical thinning (the only viable method on a large scale) without causing widespread soil compaction, soil disturbance, damage/loss of understorey vegetation and potential weed introduction or spread. Research in NSW found that *"... thinning techniques led to a significant reduction of the scattered tall shrub and small tree stratum as a result of log yarding and felling disturbance"* (Peacock 2008).

The increased growth rates of retained trees following thinning also only tends to last for relatively short periods. One study of thinning in the Wombat State Forest for forestry purposes found the *"The maintenance of a response requires additional thinning after five years as the response declined significantly..."* (Kellas et al 1988). Multiple thinnings would significantly increase the damage to forest ecosystems and result in increased costs.

Finally, thinning of the regrowth over large areas is very expensive, especially given that the small trees being removed have no economic value to offset the costs. The trees are too small to be used as timber or even firewood.

So, the best approach appears to wait and let nature take its course. ■

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Great turn-up for moth hunting

By Gayle Osborne

Rugged up against the cold. Photography © Gayle Osborne.

On Sunday evening 30 April, environmental educationalist, Peter Crowcroft set up his moth lights and sheets at the Trentham Falls. Moths and nocturnal insects are attracted to light, particularly light with shorter wavelengths such as ultraviolet light.

More than thirty people braved the chilly conditions to participate and take photos of the moths. Although it was a very cold evening quite a few moths came to the light as well as a lovely brown cicada.

Earlier in the day Peter had run a workshop on submitting sightings to the iNaturalist app and this was the opportunity for participants to load their moth photos and get some help using the technology.

iNaturalist is a valuable network for sharing biodiversity information that helps people learn about nature and contributes to a vast database of species. Not only does it connect people to nature but is used by researchers to gain more information about the location of species.

iNaturalist uses AI to suggest an identification. As more species are loaded to the website the identification becomes more accurate. The sightings are then reviewed by other iNaturalist users with knowledge in their field of expertise and confirmation leads to a record achieving research grade. Research grade sightings are then uploaded to the Atlas of Living Australia.

This event was so successful and so much fun that we will run another one in the warmer weather. ■

Moths drawn to the light. Photography © Alana Mountain

Winter in the Wombat

By Trevor Speirs

A cold, wet and windy Wombat winter might not seem to be the best time and place to start breeding for birds like these Wedge-tailed Eagles, but for raptors it's all about having an eye on the future. By laying eggs around July, when 1 or 2 chicks (rarely as many as 4) have hopefully hatched successfully, by early spring there will be an increase in prey items to satisfy hungry beaks.

This adult pair are often seen around Little Hampton and Lyonville and it's assumed that a large stick nest on nearby Babbington Hill is used by them. Like most raptors Wedgies are territorial, and this area with forest abutting farmland would be prized habitat and well worth defending as it provides a good variety of prey species from rabbits to wallabies and possums. These birds have very dark plumage which suggests they are quite mature in age.

Some recent research has shown that rainfall quantities can have an effect on Wedge-tailed Eagle breeding success; pairs in higher rainfall areas are more productive than those in dryer areas. If that's the case our Wombat wedgies should be near the top of the tree in the breeding stakes.

Some of our other winter breeding raptors are of course the Powerful Owl which in the Wombat tends to lay eggs in mid to late June and the Barking Owl which seems to lay a few weeks later. The young of both these species will fledge in time for that mid spring flush of prey. ■

Wedge-tailed Eagles at Little Hampton.
Photography © Gayle Osborne.

Wombat Forestcare

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Wombat Forestcare Inc. is dedicated to preserving the biodiversity and amenity of the Wombat State Forest, Central Victoria, Australia, 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: $15 single and $20 family. Visit our website - www.wombatforestcare.org.au

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