Issue 29 - September 2014

Wombat Forestcare Newsletter

Welcome to our spring issue, wattles are flowering and butterflies emerging. Greenhood orchids have started to appear. It is great time to explore the Wombat Forest. A fabulous range of beautiful orchids can be seen in the drier forests of the Upper Loddon Flora Reserve and the Hepburn Regional Park. **Gayle Osborne** (editor) and **Angela Halpin** (design)

Small Things Considered

by Alison Pouliot

Wandering through the Wombat a couple of months back, I spied a most unfamiliar fungus. Unable to resist the human obsession for naming things, I took it home for further investigation. Resting it on the table, I attended a couple of other matters, before returning to my fungus. To my surprise and delight, a spineless procession was wriggling, hopping, squirming and scurrying its way across the laminex in exile from its fungal sanctuary.

I dashed to get my magnifier. In all there were about a dozen different species. Among the more familiar were springtails, mites, millipedes, beetles, slugs, some unidentifiable maggots and a seemingly bewildered spider. In my haste to meet each member of the parade before scooping them up along with their fungal shelter for further relocation, I completely forgot to pay attention to the fungus. Never mind. Sometimes, not knowing names can be just as satisfying.

Ecologist E.O Wilson famously reminded us that it's the little guys that run the world. Indeed it's the invertebrates, fungi and micro-organisms that drive most of the Wombat's functions and processes. Functions and processes? Let's take fungi.

They build architecture in soils. Influence hydrology. Sequester carbon. Recycle organic matter. Form relationships with most plants and innumerable animals. Drive biogeochemical cycles. Engineer atmospheric and geospheric chemistry. They're not just lying around on the forest floor, but are seriously busy. Or how about ants. Often dubbed ecosystem engineers, ants constantly regulate, modify, maintain as well as create habitats within the Wombat. Ever met a lazy ant?

Above: The eyelash like fibrils of this lichen fruitbody (*Usnea* sp.) loom forth under 10 x magnification. Photography © Alison Pouliot

Yet for all their industriousness, our conservation efforts tend to focus on the bigger stuff, generally the so-called charismatic megafauna; often colourful birds and 'attractive' mammals. It seems that size does matter after all. These are the organisms, for myriad reasons, we have assigned greater value. Our emotions and empathic reactions typically extend to other organisms relative to their resemblance to ourselves. Hence we tend to identify less with slime moulds, stinkhorns or sucking lice. Well, most of us anyway.

The invention of the microscope in the seventeenth century radically changed the way we understood the world. Previously unseen micro-worlds of life were revealed. Many still remain

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undescribed today. But a $15 magnifier (or lupe, or as they were originally called, 'flea glass') can also take us to amazing new places.

Some of my most enjoyable moments in the Wombat have been shared with others as we've ventured into its microcosms; witnessing the delight of life magnified times ten. I recently passed my magnifier to a friend and pointed to a fruiting lichen on an overhanging blackwood branch. I observed as her head and the magnifier moved in and out trying to find focus. Then a great whoop of amazement signalled she'd indeed found it, and also brought others in our group running to share in the discovery. But as I watched her, bent almost double, nose jammed into the wet trunk, I saw her knuckles whiten as her grip tightened on the magnifier, the exclamations of discovery continuing. The others patiently waited for a turn, but I could see that under no circumstances was she going to surrender the magnifier and access to her micro-wonderworld until she was absolutely ready!

It took more than seven decades on the planet before my friend discovered the wonders of the Wombat's microcosms. While she's certainly making up for lost time, given the incredible diversity of life to discover in the Wombat, I fear there will not be time to sleep again before she shuffles off this mortal coil. Hence, it's much more sensible to start young, so as not to rush these things. There's not much you can buy a child for fifteen bucks these days. Barely half a running shoe. A T-shirt made in China perhaps? A $15 dollar investment in a tool that will last a lifetime must be one of the best presents you can buy a young curious mind. Fifteen bucks to open up worlds of wonder and discovery.

Above: A white smudge on a log? With just 10 x magnification the delicate intricacies of the slime mould, *Ceratiomyxa fruticulosa* are revealed. Photography © Alison Pouliot

So much of the beauty and wonder of the Wombat is in the detail. In the cracks and crevices and also in its nuances and subtleties. Closer observation of the less seen corners can reveal unimaginable treasures and the promise of a lifetime of endless discovery. ■

Mosses of dry forests in south eastern Australia

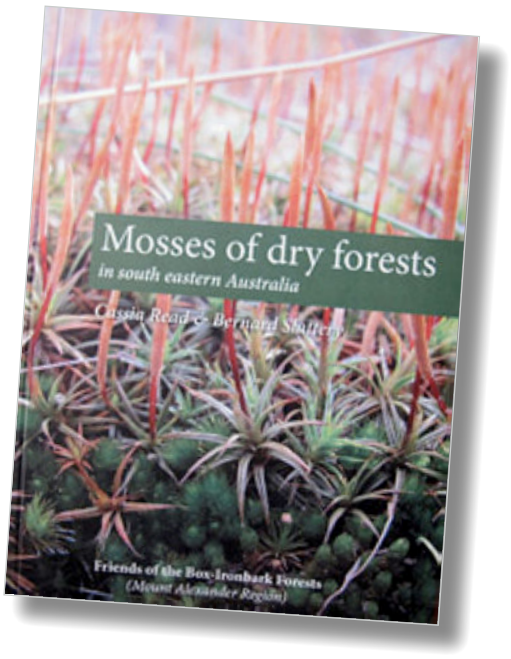
by Cassia Read and Bernard Slattery

We often remark on the beauty of mosses but know so little about them. The Wombat has many species in common with the drier forests and this guide is a great starting point for students and absolute beginners.

The guide contains an introduction explaining the life cycle of mosses and their importance in the ecosystem.

This book can be ordered from the Friends of the Box Ironbark Forest website.

http://www.fobif.org.au



Cinderella Plants Part 1 - Olearia

by John Walter

The Oxford Dictionary describes a Cinderella as a "person or thing that is undeservedly neglected or ignored". Our Wombat Forest has a great many plants that fit this description. Some have small flowers that are rarely noticed or perhaps the plant itself is small and unable to compete with the larger and showier members of the plant world. In others, the flower colour may be similar to the leaves and therefore do not catch our eye as do the more brightly coloured species.

There are also many plants whose name will forever lack the profile of other better-known plants. For example, what chance does the Common Sneezeweed *Centipeda cunninghamii* have when stacked up against the Orchids or the grandeur of a Manna Gum or Snow Gum. I will save the Sneezeweed and others like the Variable Stinkweed, the Knotweeds and the Lesser Joyweed for another article. Let us instead start with the genus *Olearia* which, is well represented in our forest but is perhaps easily overlooked. They belong to the Daisy family and are collectively known as the Daisy-bushes.

It was once thought, even by eminent botanists, that *Olearia* was named after the *Olea*, the genus of the Olive. This was supposedly due to the similarity of the leaves of the first *Olearia* named, to the leaves of the olive tree. More recent study has shown that the leaves are in fact not that similar and it is now accepted that when the German botanist, Moench, established the genus in 1802 he was paying tribute to another German botanist, Adam Olearius, (his name had been Latinised) who died in 1671. This is not really important information, but it does provide a clue to the pronunciation of the name and Baines [1] recommends we say "o-lee-AIR-ee-a" and do NOT make it sound like an Irish botanist by the name of O'Leary.

I have found five species within the Wombat Forest plus another in the nearby Fryers Ranges that may also be found in the dryer regions out from Hepburn. There is also a record for one other species that I have not yet located. The largest and perhaps most well-known is the Musk Daisy-bush *Olearia argophylla*, so named for its musky scent but it could also claim the name Silver-leaf Daisy-bush as "argo" is a reference to silver and "phylla" refers to the leaves. As the dark green leaves move with the

1: Scattered plants of Musk Daisy-bush line the steep sided valley of the upper Loddon River
2: Silvery hairs coat the young leaves
3: Massed flowering of the Snowy Daisy-bush can completely hide the distinctive foliage
4: Ridged veins create intricate patterns on the underside of the Snowy Daisy-bush
Photography © John Walter

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wind they show their silvery undersides and new leaves have a silvery coating of hairs on their upper surface. This large shrub or small tree is reported to reach ten metres in height but I cannot recall seeing it over 5 or 6 metres in the Wombat. It forms dense thickets in the wetter gullies of the forest with each plant spreading over several metres; often excluding all other shrub species.

Another tall species is the Snowy Daisy-bush *Olearia lirata* which, reaches 4 metres in ideal conditions. This is a more slender plant, and while I have seen clumps several metres across, they are made up of numerous narrow plants. Such a clump can be a beautiful sight when flowering but the leaves often become tatty and the spent flowers soon detract from the spectacle. Mayfield [2] reports that 'lirata' means ridged but I have not been able to confirm this elsewhere. The leaves do have a beautiful ridged pattern to their underside, formed by the network of veins.

Next is the Swamp Daisy-bush *Olearia glandulosa*. I must thank Gayle Osborne for first discovering the location of one plant near Babbington. The foliage is very fine and wispy making it difficult to spot a plant when it is not flowering. It is easily recognised by the glandular swellings along the margin of the leaves should you discover a plant; hence the name 'glandulosa'. The Babbington plant is in the middle of a swampy patch of Saw-sedge where few dare to tread and while this species has been recorded from a number of locations in the Wombat, it is certainly not common. It is also extremely difficult to photograph, as the draft created by a butterfly's wings is enough to make the plant move just as you click the shutter.

The next two species are similar in both form and preferred habitat, and were once considered to be different forms of the same species. They are the Silky Daisy-bush *Olearia myrsinoides* and the Moth Daisy-bush *O. erubescens*. Both are small shrubs with stiff dark green leaves that have toothed margins. The Moth Daisy-bush can reach 1.5 metres in height but is generally less than that. Its leaves are longer than those of the Silky, reaching 8cm whereas the Silky's leaves grow to 3cm in length. The name 'erubescens' means reddening or rosy and seems to be a reference to the colour of the underside of young leaves.

The Silky Daisy-bush grows to about one metre and derives its name from the apparent similarity of its leaves to those of the tropical and sub-tropic genus *Myrsine*, known as the Muttonwoods. These two species of Daisy-bush are readily distinguished when flowering by the number of ray florets in each daisy flower head. Daisy flowers are made up from numerous florets, some, usually in the centre of the flower are tubular with no obvious petals, while others at the outer margin of the flower head are called ray florets

1: The fine foliage of the Swamp Daisy-bush sways in the breeze above the sedge
2: The small glandular bumps can be seen along the edges of the leaves
3: The Silky Daisy-bush has three ray florets per flower head in this image
4: This Moth Daisy-bush displays five and sometimes six ray florets
5*:* The Twiggy Daisy-bush has cottony covering on the stems and pale mauve tubular florets and white ray florets
Photography © John Walter

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and consist of one large petal. *O. myrsinoides* has 1 to 3 ray florets per flower head while *O. erubescens* has 4 to 8. While I have not yet found the similar Netted Daisy-bush *O. speciosa*, there was one reliable collection made west of Blackwood in 1980. It is easily confused with the Moth Daisy-bush but the flowers are more widely spaced and it has different shaped hairs on the underside of the leaf. You will need a good lens to observe the hairs and other subtle differences. "Speciosa" means showy.

The Twiggy Daisy-bush *Olearia ramulosa* is widespread in Victoria and while there are no official collections for our district, I have found three small populations in the Fryers Ranges to the north of the Wombat. The vegetation around Porcupine Ridge and also Shepherds Flat has some affinity with the Fryers Ranges flora so it is possible populations will be found there also. This is a very floriferous species, covered in masses of flowers in a good season and as the Latin name 'ramulosa' suggests, it is covered with many small branchlets. Former Government Botanist Jim Willis [3] noted there is a rare form of this species found between Daylesford and Heathcote but I have not yet determined if the populations I have located represent this rare form. Rare of not, I hope these Daisy-bushes are viewed with renewed interest and that we learn to recognise their importance to the other species that inhabit our beautiful Wombat Forest. ■

References

1 - **Baines, James A** (1981) *Australian Plant Genera*

2 - **Mayfield, Enid** (2013) *Flora of the Otway Plain & Ranges 2*

3 - **Willis, James H** (1972) *A Handbook to Plants in Victoria Volume II*

Rediscovering the Country

A film journey into landscape restoration

This inspiring film shows how much committed people can achieve. We continued to clear our landscape when we should have known better and now we are faced with some very degraded landscapes. The film opens with tractors dragging a huge wrecking ball and chain. The voice over says, "overrun by vine and tree in tangled, useless profusion…" as we watch eucalypts and native scrub ripped from the ground.

It is this 'useless profusion' that we now need to reinstate. To restore diverse and productive landscapes across our farmlands.

The film describes the concepts behind successful landscape restoration locally as well as in Sri Lanka.

There is agreement that land restoration projects work well when they are community driven and rely on local knowledge.

There are some wonderful examples of marrying restoration with primary production, where productivity increases after the revegetation of significant areas. One property owner in NSW has planted a third of his property that was salt affected due to the rising water table. Now he runs fine wool sheep.

For our own well-being we all need to live in a healthy landscape. I recommend finding the time to watch this film and to hear from the inspiring and committed people behind a multitude of projects.

She Oaks Films' Stephen Oakes with Eve Kantor and Mark Wootton at Jigsaw Farms, western Victoria. Photography © Ian Penna

This film can be viewed on the Rediscovering the Country website. **http://www.rediscoveringthecountry.org/**

Fruits of the Forest

By John Walter

The last fruit in this series on the fruits of the forest is one generally associated with volcanic soils and I have found it in such situations along both the Loddon River and the Coliban River. It is closely related to many of our most popular food plants such as the tomato, potato and eggplant while the capsicums and chillies are near cousins. This is of course the Large Kangaroo Apple *Solanum lanciniatum*, also called the Cut-leaf Nightshade by some. The term "nightshade" is generally enough to strike fear into the heart of the most ardent wild food consumer with tales of poisoning via Deadly Nightshade abounding in European history. The true Deadly Nightshade *Atropa belladonna* is not found in Australia, not even as a weed; but one of its relatives, the Black-berry Nightshade *Solanum nigrum*, is generally mistaken for it and this plant can be found as a weed in many gardens.

The Black-berry Nightshade is considered edible by some but there is really a complex of eleven species in the S. *nigrum* group in Australia, some edible and some maybe not. Some websites treat the edible S. *americanum* as the same species as S. *nigrum* and this is where the risk begins. Which website is reliable and how well do you know all eleven species, which of them is safe and which are not, and can you tell them apart in your garden? With members of the Solanum family it is always best to play safe and if you do decide to eat, ensure the fruit is fully ripe and try just a small amount first.

Above & below : *Solanum lanciniatum* Large Kangaroo Apple, green fruit and flower. Note the bisected leaves near the top of the plant. Photography © John Walter

The Large Kangaroo Apple is definitely edible, but only when the fruit is completely ripe. Green or half ripe fruit are poisonous! The most toxic part of the plant is the green fruit which can cause nausea, vomiting and diarrhoea. The ripe fruit are orange and the taste is mild, rather like a watery insipid tomato. With an abundance of delicious tomato varieties to grow in our gardens and eat, I will not trouble myself by eating the fruit again. While it is good to have knowledge on the edibility of our native fruits, we 21st century humans have so much choice for food, whether home grown or purchased, that we can leave the bush foods to support the local wildlife who are finding all of their choices are under increasing pressure as a result of our over abundant lifestyle. ■

References

Zola, N & Gott, B (1992) *Koorie Plants Koorie People traditional Aboriginal food, fibre and healing plants of Victoria*

McKenzie, R (2012) *Australia's Poisonous Plants, Fungi and Cyanobacteria*

Our day at VCAT

by Gayle Osborne

Community walk around the south Bullarto mine site. Photography © Angela Halpin

Wombat Forestcare sought a declaration from the Victorian Civil and Administrative Tribunal (VCAT) that the proposed 'bulk sample' from MIN5349, South Bullarto constituted mining, not exploration and therefore would require a planning permit from the Moorabool Shire.

The hearing was presided over by Mark Dwyer, Deputy President and ultimately he dismissed our application. However, he did note that the authorisation for the holders of the mining licence to only explore for two years has expired. The consequence of this is that should the miner intend to proceed with the Work Plan and take a 'bulk sample' they would require a planning permit from the Moorabool Shire.

During the four hour hearing, our barrister, Barnaby Chessell argued that the area from which the sample was to be taken is environmentally important due to the hydrology and the vegetation and that the purpose of the different requirements in the act for environmental assessment of exploration and extraction is to distinguish between low and high impacts on the environment.

He pointed out that should mining proceed after the 'sample' was taken, that all the vegetation on the site would have been already removed and hence the miner would not have to establish the environmental effects of vegetation removal for a planning permit or a Environment Effects Statement.

Barnaby argued that the 'bulk sample ' was the first stage of a mine, citing the construction of dams and roadworks and that exploration had already been carried out as detailed in drilling schedules.

Barnaby stated that the estimated gold value was in excess of $1M and constituted a commercial quantity, however, the value was not considered relevant by the tribunal.

The argument for taking a 'bulk sample' is that as gold in Victoria tends to occur in a 'nuggety form' this is the only way to estimate the resource. The definition of 'exploration' under the MRSD Act 1990 includes "extracting minerals from land, other than for the purpose of producing them commercially." However, it would seem that the size of the sample was dictated by the costs of removal and processing. Information from the core samples aready taken lead to the conclusion that a profit would be made.

The Deputy President pointed to the mismatch between the mining act and the planning scheme stating that "The interrelationship of the MRSD Act and planning schemes is not however as straightforward as may first appear. For the consideration of whether a planning permit is required, planning schemes do not distinguish between 'exploration' and 'mining' as under the MRSD Act, but rather distinguish between land used for 'mineral exploration' and land used for 'mineral extraction.'"

As the mining licence holders, Mr Neil Stuart and Mr Barry Friend declined to appear, questions could not be asked about the contents of the Work Plan. It seemed to me that the tribunal did not have a clear picture of the works proposed.

The judgment states, "The proposed bulk sampling under the work plan here involves the extraction of 5,000 tonnes, being 4.16% of the total estimated resource, and nearly 10% of the higher-grade resource. Save for 10-metre buffers, the bulk sampling will occur across the entire mining tenement, to a depth of 20 metres."

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If this were the case, nearly 5% is found to a depth of 20m. To obtain 100% the miner would have to go to a depth of 400m. It appears, although it is not clear from the work plan, that only approximately 100m of reef to a depth of 20m was to be excavated. This represents only a fifth of the length of the site and is why Barnaby argued that clearing the entire site could be considered the first stage of a mine.

John Mitas, the Department's Chief Inspector of Mines and Quarries attended the hearing only to provide advice to the tribunal. This meant that our barrister could not question any of his statements, which seemed to carry a great deal of weight with the tribunal.

The tribunal noted that, "I agree with WFC that the nature and extent of bulk sampling in a particular case could conceivably lead to a finding that the bulk sampling was, in reality, in that particular case, mining rather than exploration." Such a pity he didn't extend this consideration to our case.

We have a situation where the department has a role to promote and encourage mining and the same department also oversees the regulations. This results in department facilitating mining with little regard for the legal environmental protections.

In the case of the South Bullarto Mining Licence, the department denied the existence of a waterway on the site, despite mapping showing its existence. We pursued this matter and Melbourne Water has informed us that a works on waterway permit is required.

The government has many legal obligations to protect the environment and biodiversity, which it is clearly ignoring. Protections are swept away in a program to allow land clearing, mining and fuel reduction burns.

Despite our failure to obtain a declaration from VCAT, we remain convinced that the proposed works constituted mining. Describing these as 'exploration' avoids environmental protections.

WFC thanks all at Environmental Justice Australia (formerly Environment Defenders Office), particularly Nick Croggon, our initial solicitor, Ariane Wilkinson, our current solicitor, Felicity Millner, Director of Litigation and Brendan Sydes, Chief Executive Officer. Their support for our group has been very special.

Our thanks also go to Barrister, Barnaby Chessell, who was outstanding.

Although there were expenses and fees for both Barnaby and Environmental Justice Australia, basically this was pro bono. An incredible number of hours went into the preparation of our case and we thank both Barnaby and Environmental Justice Australia for their generosity. Many thanks to all those who generously donated to this case.

The full judgment is on our website.
www.wombatforestcare.org.au ■

Welcome Home Welcome Swallow

The Golden Whistler

"On an autumn day of soft rain this lovely Golden Whistler graced me with is presence. He flitted around the veranda singing the most exquisite song, distracting me from my work. He stayed for a day, then was gone. I hope he returns next year."

Words and Photograph by Sandy Scheltema

Trevor Speirs comments: The Golden Whistler *Pachycephala pectoralis* is one of the most beautiful songsters of the Wombat Forest. Usually solitary, the birds start pairing for breeding in spring; their persistent, clear, ringing musical calls are heard throughout the day. The bird in the photo is a male. The female is much less conspicuous, being predominately greyish brown. ■

Camera Project update

By Gayle Osborne

We approach each collection of images from our motion-sensing cameras with great anticipation. Usually we are faced with thousands of images of Agile Antechinus *Antechinus agilis* interspersed with Bush Rats *Rattus fuscipes*.

We placed a camera in a lovely patch of forest, with peppermints, poas and lots of fallen timber, near the northern boundary of the Lerderderg State Forest. We were rewarded with many images of an Eastern Pygmy Possum *Cercartetus nanus*. It is listed as Near Threatened in Victoria.

A camera installed in Miller's Cutting, off Domino Road, Trentham produced lovely images of a Dusky Antechinus *Antechinus swainsonii* and a Sugar Glider *Petaurus breviceps*. Neither is listed as 'threatened', but the Dusky Antechinus is definitely rare in the Wombat Forest.

Last year we found that Echidnas were out and about on very cold winter evenings and this year we captured a great image of an Echidna on a snowy log. Indeed, there are many reports of Echidnas seen on snowfields leading to scientists re-evaluating common beliefs. It seems that Echidnas enter torpor/hibernation for reasons other than the traditional view that they are escaping the impacts of cold and shortages of food. ■

Through a Child's Eyes

Words and Photography by Ari Scheltema

Left: Frozen leaf. I saw icicles sticking up in the air on this leaf.
Lower left: Bird wing in water. It was fun taking these photos because there were pictures in the ice.
Below: Little fungi umbrellas. When I lay down on the grass these looked like little ant umbrellas.

Wiry Bauera, *Bauera rubioides*

By Gayle Osborne

This sturdy plant is inexplicably only found in one area in the Wombat Forest near Lyonville, although more searching may uncover other locations. This population, recently located by John Walter is extensive and is found either side of a damp gully.

The flowers, which are just beginning to appear, are small, with pinky–white petals and yellow stamens. The stalkless leaves are in opposite pairs, each divided into three leaflets. They are slightly serrated and sparsely hairy. ■

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**