Issue 27 - March 2014

Wombat Forestcare Newsletter

We move from the late stages of summer and head into autumn and the fungi season. Gradually we discover more about the species found in the Wombat Forest. Read about our bat surveys, the large numbers of Spotted Hyacinth Orchids this year and the Satin Flycatcher nesting near Trentham.
Gayle Osborne (editor) & Angela Halpin (design)

Mistletoe, Apple-berries and other Fruits of the Forest

Words & images by John Walter

In the recent Fruits of the Forest article I noted the dodder laurels had a bad press agent and the same could certainly be said for the mistletoes. Gayle's article in the September 2013 issue covered many of the positive aspects of mistletoes including their importance to a large number of bird species, butterflies and moths as well as their impact on the overall health of other plants by dropping leaves filled with nutrients. In this article I will note the local species and focus on their fruit.

Many people mistakenly believe mistletoe is introduced to Australia, while the botanists have actually recorded 91 native species (as of 2011) and no introduced species at all. We have the potential of finding six species locally although so far I have only located four. Mistletoes are found in a wide range of vegetation types including rainforest and deserts and pretty much everything in between but are not necessarily easy to locate. One reason for this is the tendency for mistletoe species to mimic the leaf shape and colouration of their preferred host species. We readily spot mistletoe when it builds up into large populations, generally on roadsides or on isolated paddock trees but it is far more difficult to spot one or two plants when you are "in" the forest.

Another reason for not seeing mistletoe is that we are often either not looking or we are looking in the wrong places. The most commonly seen mistletoes around Drummond are the Drooping Mistletoe *Amyema pendula* and the Box Mistletoe *A. miquelii* which are both found most often on Eucalypts but also occasionally on Acacias. We are in a transition point with the Box Mistletoe becoming more common to our north and the Drooping Mistletoe dominating in

Top and Inset – *Amyema pendula* Drooping Mistletoe showing the missing stalk on the middle fruit
Centre – *Amyema miquelii* Box Mistletoe
Bottom – *Amyema quandang* Grey Mistletoe

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the south. Both species are found around Daylesford with the pattern of distribution being similar to that at Drummond. They are easily confused as they look similar from a distance but the absence of a stalk on the central flower/fruit on *A. pendula* (flowers mostly in threes) and the textured rusty colouration on its new growing tips separate that species from the Box Mistletoe. The other local species are not found on eucalypts and to see them you have to examine the Wattles and She-oaks and other plant species.

The Grey Mistletoe *A. quandang* is readily found on Silver Wattle around Hepburn and Daylesford and I have also seen it on Blackwood while the Wire-leaved Mistletoe *A. preissii* also attaches to *Acacia* species. I have found it to the north of Mt Franklin, just outside the Wombat. The Fleshy Mistletoe *A. miraculosa* parasitises other mistletoes, especially the Box Mistletoe and its range might extend just far enough south to reach the Hepburn area. The last species, the Harlequin Mistletoe *Lysiana exocarpi* is also found on *Acacia* and sometimes on other mistletoes and can also be seen on exotic ornamental trees.

Upper left – Ripe fruit of Grey Mistletoe with an empty skin after an avian visit
Lower left – The sweet pulp of the Grey Mistletoe
Middle – Flower and unripe fruit of *Billardiera mutabilis*
Right – Flowers and developing fruit of *Billardiera heterophylla*

According to Watson, the larger and more plentiful fruit of the Harlequin Mistletoe made it the most popular species with the Aborigines but the fruit of all species is edible. I have tried two species and enjoy the fruit of Drooping Mistletoe, but the sweet Grey Mistletoe is my favourite of the two. The outer fruit casing should be removed and the white sticky pulp around the seed can be eaten. It is not recommended to eat the seeds as the seed of some European species are thought to contain toxins. However you will have to become adept at spitting if you are to remove the still sticky seeds from your mouth.

The Apple-berry is another fruit with a palatable reputation. There are several species growing in Victoria and the Common Apple-berry *Billardiera mutabilis* (formerly *B. scandens* var. *scandens*) is found within the Wombat Forest although it is not as common there as its name suggests. The genus is named after the noted French naturalist Labillardière while "mutabilis" is a reference to the variable flower colour. Cribb advises waiting until the smooth-skinned fruit softens and changes from its green, yellow or reddish colour to a translucent brown; the flavour then being like dried apple. The other variety of *B. scandens* is now listed as rare in Victoria and has hairy fruit.

Billardiera belongs in the Pittosporum family and






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another member of this family is the Western Australian genus, *Sollya*, of which the well known native garden plant, *S. heterophylla* has become a significant weed in some parts of Victoria. *Sollya* has recently been included in *Billardiera* so the correct name is now *Billardiera heterophylla*, commonly called the Bluebell Creeper. It is a weed around Hepburn as well as Drummond and Lauriston although it is not yet in the large numbers seen on the Mornington Peninsula. Its fruit is also edible.

The Heath family is known for a number of species with edible fruit and two of the best known occur in our district. The Cranberry Heath *Astroloma humifusum* flowers in late autumn and winter and the green fruit ripen in spring. *Astroloma* comes from astron – a star and lôma – fringe and the fringed star is readily seen when the plant is in flower while "humifusus" means lying on the ground. It is a variable plant however and while mostly prostrate and flattened, some forms are a little more upright. The fruit of the "ground-hugging fringed star" was eaten by the Aborigines as well as early white settlers and is well referenced in every wild food publication. I rarely find fruit on our local plants but perhaps the birds are just up earlier than I am.

The Honey Pots is another well known food plant from the Heath family. Its full name is *Acrotriche serrulata* with akron meaning summit or extremity, and thrix or trikhos meaning hair, a reference to the hair tufts on the tips of the lobes on the flowers and serrulata being a reference to the minute teeth on the leaves. This latter feature does not appear on the local form however and it seems it was named by Labillardière after the NSW form which is sometimes toothed.

Honey Pots is a reference to its edible nectar filled flowers which are hidden on old stems within the prickly plant and the equally hidden small fruits that follow can also be eaten. This plant's sibling *Acrotriche prostrata* is also found in the Wombat Forest and has similar flowers and fruit.

The last of the Heaths are the Leucopogons (literally white beards) and a number of species from this genus are mentioned in food plant texts. Unfortunately none of the popular ones are listed for the Wombat Forest. The fruits of the other species are perhaps too small or too hard to have attracted much attention. The Common Beard-heath *Leucopogon virgatus* is widespread and the Twin-flowered Beard-heath *Leucopogon fletcheri* subsp. *brevisepala* has a small population near Taradale and another near Daylesford

Top and inset – *Astroloma humifusum* Cranberry Heath
Lower – Flower and fruit of *Acrotriche serrulata* Honey pots

with the main population occurring in eastern Victoria. We also have the Hairy Beard-heath *Leucopogon microphyllus* var. *pilibundus* found in the Lerderderg State Park and along the upper Lerderderg River valley near Blackwood. You have to travel to far eastern Gippsland before you find another population of this rare plant. I was unaware of its presence before researching this article and will be out in spring, camera in hand, to try and locate it. ■

References

Watson, D M (2011) *Mistletoes of Southern Australia*
Zola, N & Gott, B (1992) *Koorie Plants Koorie People traditional Aboriginal food, fibre and healing plants of Victoria*
Ewart, A J (1930) *Flora of Victoria*
Cribb, A B & J W (1975 Second Ed reprinted 1988) *Wild Food in Australia*
Atlas of Living Australia website at http://www.ala.org.au
Harden, G J Editor (1990-1993) *Flora of New South Wales*

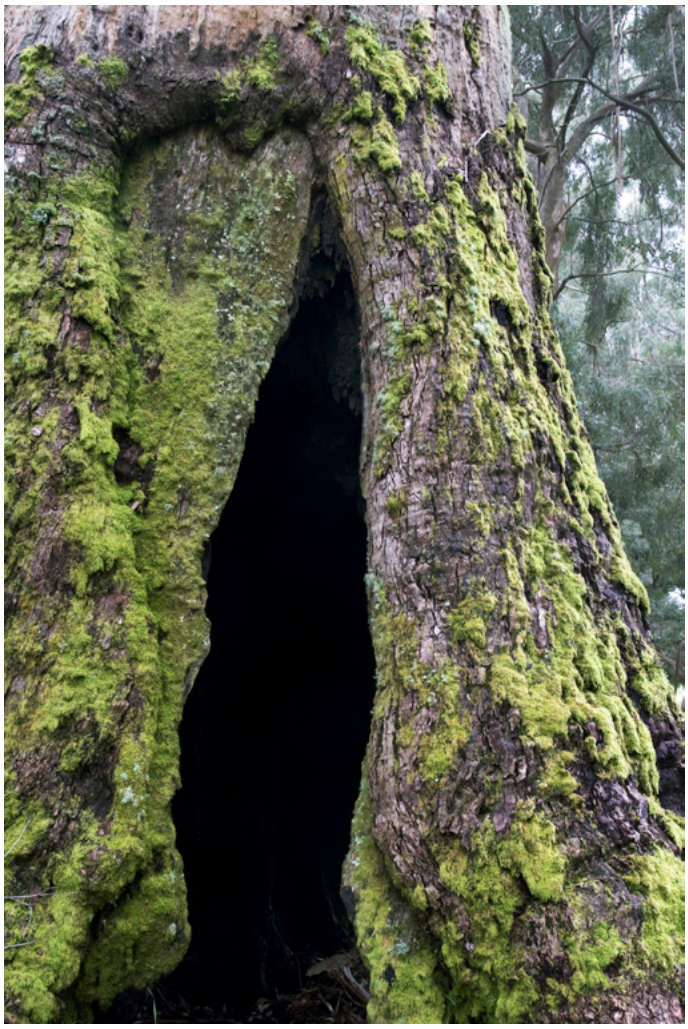
Listening to Old Trees - An interview with a Wombat Forest Elder

Words & images by Alison Pouliot

Some of you may remember British author, Roald Dahl and his story, 'The Sound Machine', published in 1949. In this story the innovative protagonist built a device to transform inaudible high frequency tones of nature into sounds discernable to the human ear. In testing his machine, he donned his headphones, went outside, and to his alarm, heard the desperate groan of an old tree as he whacked it with an axe, along with the shrieks of his neighbour's roses as they were ruthlessly snipped.

Unfortunately the machine was destroyed when a branch fell on it and smashed it to smithereens. Sixty-five years later, over the din of the chainsaw, perhaps something got lost in translation in how we might listen to old trees. Some people use Gross Domestic Product as a measure of a society's 'civilisation'. Other's talk about how well we care for the elderly. The formation of National Parks in the Western world is often viewed as another indication.[1] *But imagine a world where our response to old trees might be considered a measure of our level of 'civilisation'.*

This piece follows on from 'Nooks and Grannies - The Wombat's Woody Elders' from the last newsletter. In this issue we're privy to a rare interview conducted with one of the Wombat's old eucalypts by a resident dragon. Dahl's machine may have been smashed, but we have another. Here's the translation:



Dragon: Thank you for your time, Elder. I've been asked by some concerned local *Homo sapiens* to convey your thoughts on how they can better understand and care for the Wombat Forest.

Tree: Good morning Dragon. Firstly, let me just say, I'm not actually an elder. Sadly, there are no true elders, no really old trees left here in the Wombat. But I have been around awhile and I'm happy to share with you what I know.

Dragon: Could we perhaps start with your family, could you tell us about your grandmother?

Tree: Ah, she was truly amazing and lived to be many hundreds of years old. She was wise beyond what we can imagine. She offered her hospitality to all, sheltering countless generations of insects, of birds, sugar gliders and bats, as well as lesser known inhabitants. She held many secrets. Not just about the lives of those she harboured, but secrets of the seasons and changes in climate. Infinite chronologies of events. An archive of ancestral wisdom. Her magnificent weathered trunk bore the weight of the centuries; the changes of season, the shadows of generations, reflected the history of events. She was shaped by the elements, by the environment, by time.

But that all changed with the discovery of gold in 1851, when her life suddenly and violently ended. We're still not sure exactly what *Homo sapiens* learnt as their axes sliced through her layers of bark, through each knot and whorl, as it cleaved through seasons, years, decades, centuries, through climatological events, through fire and floods, through the guano of owls, through the scars of fire and storms. Through all the ways that she recorded time, recorded life.

Dragon: It's unimaginably sad, she sounded like a truly amazing individual. And what about her inhabitants?

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Tree: Well, actually, we don't think of ourselves as *individuals*, but as ecosystems, as connected assemblages of creatures and their dynamic interactions.

And yes, of course we'll never know whether her inhabitants found their way to safety. Whether the gang gangs – residents for sixty years – returned home to find their nests gone, their eggs smashed, their homes destroyed. Whether the powerful owl was woken from her daytime slumber to blunder away from destruction. We don't know what happened to the stories, the memories, histories and secrets held by her. They may well have disappeared forever.

Dragon: It's a terribly tragic story. But what about today? Do you think things have improved or do you still see problems with the way *Homo sapiens* manage the Wombat Forest, manage biodiversity generally?

Tree: There are certainly those doing terrific things, oh yes, very inspiring things, *Homo sapiens* can be so very inventive. But for others, I think it essentially comes back to what I said before about the need for better understanding of the nature of connectivity, or rather, the connectivity of nature. We're not isolated entities. All of us here in the forest exist in relationships, intimate associations with one another, and this includes *Homo sapiens*.

Let me give you an example. There seems to be an odd misconception that we trees can take up nutrients from the soil on our own. But you know, we really can't do this properly without the assistance of our fungal partners in the soil. That's because most of those lovely nutrients in the soil are not soluble or available to us without the help of our fungal friends. They help us determine which nutrients we need and also stopping us from taking up toxic stuff. Everything's interconnected, you see. In a very fitting metaphor, one inspired individual described fungi as the 'earth's internet' in reference to their vast interconnecting mycelial networks that link the earth's ecosystems.[2]

It might appear a bit messy out here in the forest but in fact we're highly organised, highly communicative and closely connected. Our intimate alliances are absolutely crucial to the resilience and persistence of the Wombat Forest.

Dragon: Do you think it's a matter of *Homo sapiens* needing to think differently about all this?

Tree: (Deep sigh) Ah, you see dragon, there seems to be this strange refusal to acknowledge our fundamental role in their welfare, their very existence. I really don't understand this way of thinking. It's about their perplexing sense of 'hyper-separation' from nature. Val Plumwood wrote much about this.[3] And yes, what I think they need is a shift in thinking that repositions them with the rest us of, within these complex matrices of life, among these intimate independencies, and to recognise that we all rely on each other to survive. We don't bite you know! After all, it would be a terrible tragedy if *Homo sapiens* were to go extinct.

Dragon: Yes indeed it would. Thank you so much for your time and do you have any final words of wisdom for our *Homo sapiens* friends?

Tree: (Pause) Well, yes I do dragon, but as we don't speak the same language, they may be more willing to listen to the words of their own, so to borrow from a wise one, from Herman Hesse, '*He who knows how to speak with and listen to ancient trees shall learn the truth.*' ■

References

1. Gissibl, B. Höhler, S and Kupper, P. (2012). Towards a Global History of National Parks. In: *Civilising Nature: National Parks in Global Historical Perspective.* Berghahn Books, Oxford.

2. Stamets, P. (2005). Mycelium Running: *How mushrooms can help save the world*. Ten Speed Press, USA.

3. Plumwood, V. (2002). *Environmental Culture: the Ecological Crisis of Reason.* Routledge, London.

"It was the hairy penis that clinched it" – bat identification fun in the Wombat Forest

By Gayle Osborne and Tanya Loos
Images by Gayle Osborne

Many people are familiar with microbats. They often roost in roof cavities and occasionally escape into the house, however not many people can identify the species, and many people are not aware that nine species of microbats are found in our area.

A grant from the Hepburn Shire enabled us to invite a scientist, Ann Williamson, to trap microbats at two locations on public land in the shire – Cornish Hill and the Glenlyon Reserve.

An ingenious device, called a harp trap is used. Fine fishing line is strung from a frame, catching the bats, which fall gently into a long bag and as they crawl up the sides they are trapped under a flap. The trick is to place the trap on a bat flyway. Bats follow tracks and waterways and the harp trap usually is placed under an overhanging tree funneling them into the trap. Some bats turn off their echolocation when flying these well-used routes and are caught in the trap, however some manage to fly out.

Two traps were set up at Cornish Hill in the early evening and checked at 11pm for lactating females, which would need to be released. At this stage we had not captured any bats and we were anxious that we would have nothing to show the enthusiastic people who would arrive at 6.30 the following morning.

Luckily there were six bats in one trap. They were weighed and their forearms measured to assist with identification. Penis size and shape also assists with identification. We had five Large Forest Bats *Vespadelus darlingtoni* and one Southern Forest Bat *Vespadelus regulus*, all male.

Unfortunately, we were unsuccessful at the Glenlyon Reserve and Ann generously agreed to return. A few weeks later, we set up along the Loddon River near the reservoir and were thrilled with our collection of eleven bats (four species).

One Lesser Long-eared Bat *Nyctophilus geoffroyi*, two Southern Forest Bats *Vespadelus regulus*, six Large Forest Bats *Vespadelus darlingtoni* and two Eastern False Pipistrelle Bats *Falsistrellus tasmaniensis*.

Eastern False Pipistrelle Bat *Falsistrellus tasmaniensis*

Lesser Long-eared Bat *Nyctophilus geoffroyi*

The Eastern False Pipistrelles were of great interest, as they are not regularly caught. The species confirmation was the weight, 21grams and forearm length being more

Large Forest Bat *Vespadelus darlingtoni*

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Intimate examination of a male Eastern False Pipistrelle Bat

Not so hairy male Large Forest Bat

Above - Dismantling harp trap
Below - Ann Williamson offers a close examination of a Large Forest Bat

than double the usual species found. The hairy penis on the male was the final validation. They are widely distributed in Victoria but considered uncommon and prefer wet/damp forest types. The Pipistrelles are dark coloured, and quite a bulky bat. The pair were very quiet, and submitted graciously to forearm measurement, penis / nipple examination and of course a barrage of photographs.

The Large Forest Bats and Southern Forest Bats are quite similar, with neat compact ears and uniform body colour, the main difference being the size. It is always great to see the two species side by side so that the size can be compared. The Southern Forest Bats almost looks like it could be a juvenile of the Large Forest Bat.

The Lesser Long-eared Bat was a little cold, so its long ears were folded back, much like a concertina fan.

As with many birds and animals, each bat species also has its own niche in the ecosystem. Eastern Falsistrelles forage just below the forest canopy and avoid dense understorey and regrowth, whereas the Lesser Long-eared Bats tend to fly close to vegetation and into the understory and the Large Forest Bats forage in the spaces between trees. Large Forest Bats are commonly seen foraging at dusk over dirt roads in the forest in autumn, fattening up for the lean winter months.

Each bat species also has preferred insect types and this will be seen with their type of teeth; large teeth for beetles and moths. Microbats help keep our insect populations under control. "A small bat can catch and eat more than 600 mosquitoes in one hour." [1]

All microbats rely on large old trees as an essential habitat component. Large old trees have hollows which are maternity roosts, and rough peeling bark which provides part-time roosts. The big old trees also flower more profusely, with higher nectar flow, and thus have a much more abundant and diverse insect fauna to provide food for the bats. ■

Reference:
1. Greg Richards and Les Hal (2012). *Bats Working the Night Shift*

Spotted Hyacinth Orchids

Words and images by Gayle Osborne

Do we look closely? Every year Rosy Hyacinth Orchids *Dipodium roseum* pop up in the last week of December along the Glenlyon-Little Hampton Road. Last year I saw two stems growing together with flowers that seemed very white. As I needed help with this and I sent my images to John Walter and was excited to find that it was the Spotted Hyacinth Orchid *Dipodium pardalinum*, listed as "rare" in Victoria.

The key to this was the spotted labellum. The labellum is a modified petal that acts as a landing platform and attracts pollinating insects to the flower. It is the petal opposite the fertile column.

For many years all hyacinth orchids were considered to be one species, *Dipodium punctatum* and it was not until the 1980's that David Jones began reviewing the genus. There are now six known species of *Dipodium* in Victoria and the two species found in the Wombat Forest are *D. roseum* and *D. pardalinum.*

The two species are very similar and colour is not a good indicator. John's guide is as follows:
- *D. roseum* – open flower with clearly recurved apices (the tip of the petal) and clear dark stripes on the labellum.
- *D. pardalinum* – open flower with clearly recurved apices and spots on the labellum.

It is not definite that we only have two species of Hyacinth Orchids in the Wombat and we would be pleased if you could forward us images of those you find next summer.

John has seen Spotted Hyacinth Orchids at a few other locations in the Wombat. All the examples seem to be on road or tracksides, despite carefully searching in the surrounding forest. Do they need the additional sunlight?

This year there were Spotted Hyacinth Orchids all along the road and only a few Rosy Hyacinth Orchids. Why did this happen? We know so little about why some species are abundant one year and often absent in following years.

These orchids are dormant for most of the year; they have fleshy roots and in the Wombat they produce a tall leafless flower spike in January, not unlike an asparagus spear.

These terrestrial orchids form mycorrhizas (a symbiotic association between a fungus and the roots of a vascular plant) to obtain nutrients. They are hemiparasites as they have some chlorophyll in the stem, which enables them to synthesise some of their food.

The fungus, in turn derives its nutrients from the roots of a nearby eucalypt species via another mycorrhizal connection. This is a wonderful three-way relationship that highlights the importance of fungi in our ecosystems.

Pollination of hyacinth orchids is by native bees and wasps and I wished I had had time to wait to see if I could spot some of these creatures as the labellum will be particularly designed to attract just the right insect.

You need to be quick as it is quite usual to find when you return that the orchids have been browsed by wallabies. ■

Ref: https://www.anbg.gov.au/fungi/mycorrhiza.html

Left - Rosy Hyacinth Orchid *Dipodium roseum*
Right above - Spotted Hyacinth Orchid with spotted labellum
Right below - Rosy Hyacinth Orchid with stripped labellum

Summer Visitors

By Trevor Speirs and images by Gayle Osborne

It is always exciting to come across birds breeding in the forest. This family of Satin Flycatchers *Myiagra cyanoleuca* provided some interesting observations.

Spring migrants to the Wombat Forest, Satin Flycatchers build their nest on a horizontal, dead branch, usually high in a eucalypt, putting the young in a vulnerable position.

On one occasion, a Sacred Kingfisher *Todiramphus sanctus*, which can take nestlings, landed in a nearby tree but was quickly attacked by the adult flycatchers and eventually driven away.

Diligent behaviour such as this enabled the only chick (usually three in a clutch) to successfully fledge in early February.

These flycatchers will leave the Wombat around March and head to North East Queensland and New Guinea.■

Above - Male Satin Flycatcher *Myiagra cyanoleuca*

Above - Female and chick in the nest
Above right - Chick out of the nest and about to fly

Call for Contributions

Special June Issue on Fungi in the Wombat Forestcare Newsletter

Endless Forms Most Beautiful – These were the words of Charles Darwin in describing the diversity of life in *The Origin of Species* in 1859.

The Wombat Forest is home to an endless assortment of life-forms that are not only *most beautiful,* but also most bizarre, enchanting and essential. Many of these belong to a kingdom that has so often been overlooked in Australian biodiversity conservation – the Kingdom Fungi.

Australia is a signatory to the Convention on Biological Diversity, an internationally legally binding treaty that aims to conserve the world's biodiversity. Australia is also a megadiverse country and yet the Kingdom Fungi – with possibly tens if not hundreds of thousands of species – is not included in Australia's Biodiversity Strategy 2010-2030.

In 2015 there is a review of this Strategy. Every effort to represent the significance of fungi may enhance the chance to have fungi included. This special issue of the Wombat Forest Newsletter is a tiny effort toward recognising the importance of fungi. For without fungi, there would be no Wombat Forest.

We invite your impressions of fungi that you have encountered in the Wombat Forest. You might like to contribute an anecdote about an experience with a beautiful or bizarre fungus. Or perhaps a photograph or sketch of a favourite species, a short story, a poem, an impression of some sort – anything that represents your encounter with fungi in the Wombat.

We're hoping to include lots of representations, so the shorter the better. Submissions of around 250 words or less have the greatest chance for publication.

Please send your ideas to Alison at alison@alisonpouliot.com by 15 April 2014.

The Beautiful, Bizarre and Beguiling
Seeking the Wombat's Most Alluring Mushroom

Words and images by Alison Pouliot

Autumn is just around the corner and the Wombat will soon be flush with fungi. Appearing in every imaginable colour and form, each has its own special niche and role in contributing to the forest's resilience.

But which is the most alluring of all? Which appeals to you, the reader, as the most interesting or attractive? Which one most captures your imagination or appeals to you in some other way?

The conservation of biodiversity is very much driven by public perception of the worth and appeal of particular species. Charismatic flora and fauna have been a focus of many conservation efforts. But charisma is not just about attractiveness. It can also be about 'otherness' – the offbeat, the unconventional, the bizarre. So which are the most charismatic fungi?

We'd love to know which of the fungi in this collage appeals to you most and why. By letting us know your thoughts, you will be contributing to research that aims to increase the recognition of fungi in biodiversity conservation. Understanding public perceptions of fungi is a vital part of the process.

Some of the Wombat's best contestants are pictured below. All you need to do is tell us the number of your favourite and why you made that choice. Or if there's another fungus you've spotted in the Wombat that you find even more special, tell us about that one and perhaps send a photo or drawing.

We can't wait to hear your impressions and find out the Wombat's winning fungal contestant!

Please send your thoughts to Alison by 15th April at alison@alisonpouliot.com

Wombat Forestcare Membership

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, phone 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**