Issue 7 - July 2008

Wombat Forestcare Newsletter

Hello everyone and hello winter. Yes, it's chilly, but that's part of the charm at this time of the year, and we can dress up, go out into the forest and look for fungi. Alison Pouliot's article gives you a clue as to what you might see. If you decide to stay indoors, there is plenty of fine reading in this issue with an extra two pages, thanks to our new and regular contributors. It's also time for our AGM again, so there's more about that and other important news on the back page, but read on first... and see you out in the forest... Tibor Hegedis *(editor)*

Tanya's Goshawk Suprise!

By Tanya Loo

One morning in May, the peace and quiet of my little household was shattered at 7am by an enormous crashing sound. "What was that?" I asked Chris sleepily; and intrepid husband went downstairs to check it out. "There is glass everywhere, but I can't see anything" Chris said.

I went downstairs, from our little loft bedroom. The dogs were, for once, in stunned silence and there on the couch was a large bird of prey! It looked like a Peregrine falcon and it had smashed through the living room window. He or she was hunched down low, quite flat on the couch, looking about with some alarm but without any obvious injuries. I believe it was a female on account of her size. Her long legs were an incredibly beautiful vivid yellow, as was the naked skin around the eyes. I though, "Ah this looks more like a Sparrowhawk".

"Quick, quick, quick get me a towel!" I commanded Chris while I made sure the dogs didn't get any closer to the bird. I wrapped the Sparrowhawk in a towel as quickly as I could. At times like these, it is really important to immobilise the bird and cover its head and eyes to reduce stress. Hawk in my arms, I left Chris picking up all the glass (thanks Chris!) while I set about finding a box to put the bird in. I left the hawk alone in the study in a box, away from dogs, people and noise. I was so sure it would die from the impact of hitting the glass!

After my usual tea, toast and tahini, I was very surprised to see that the Hawk was full of energy and trying to escape from its box when I lifted the lid to check how she was!

I called Jon Rowden of the Hepburn Wildlife Shelter for advice, and he kindly passed on Martin Scuffins' mobile number. Martin rehabilitates hawks, eagles, falcons out at his fantastic property in Garibaldi, aptly named Hawk Haven.

Martin said it sounded more like a Brown Goshawk, due to its size and fierce looking gaze. Martin's advice was to let the Goshawk out of the box, and if she flew away, great. If the bird hopped about unable to fly, or just sat there, I was to put her back in the box and give Martin another call.

A close encounter with a Goshawk *(photo by Tanya Loos)*

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By this time, my friends Peter and Paul had arrived for a visit, and they got to watch as I opened the box and the Goshawk flew up to the nearest tree, did a poo, then zoomed off into the bush. Hooray!

Happily, I managed to get a great photo of the lovely lady. These birds of prey are forest and woodland specialists, and hunt for birds such as pigeons, darting and weaving through the trees in pursuit of their prey. My guess is that she was in full hunting mode when she smashed through our window, whose reflection looked just like the surrounding bush. Her neck did not break because my window was the cheapest thinnest glass you can have in a window. When all my windows are replaced by double glazing later this year, I will be hanging little mirror mobiles and other such warnings so as to avoid any deaths by collision. This was my first sighting of Brown Goshawk in Porcupine Ridge, and indeed the whole Wombat Forest.

I was so excited by the whole experience or the rest of the day. Chris thought it was funny because I didn't seem to care about the window getting smashed and having to replace the glass at all! It is a rare gift to come that close to our magnificent and proud birds of prey. ■

Colourful *Cortinarius* of the Wombat Forest

By Alison Pouliot

The Wombat Forest, especially during autumn and early winter, is a fungi forager's paradise. The diversity of flora, soils and microclimates are reflected in an amazing accompanying diversity of fungi. Among some of the most colourful and conspicuous are members of the genus, *Cortinarius*. This is believed to be the largest genus of gilled fungi, with over 2000 species described, in seven sub-genera, worldwide.

Cortinarius archeri (photo by Alison Pouliot)

It's often quite easy to recognise members of the genus *Cortinarius*, although identifying them to species level can present a challenge even to experienced mycologists. One of the more obvious characteristics of the genus is bright colouration. For example, the brilliant purple, endemic species, *Cortinarius archeri*, can be found throughout the Wombat.

The species grows in association with eucalypts, often in areas that have been previously burnt, usually in late June and July. It is recognised by its purple viscid stipe and cap (which turns brown with age) and the presence of a membrane-like veil.

All species of the *Cortinarius*, as the name suggests, have a cortina - a web of tiny fine fibres, stretching between the cap and the stipe. The cortina is believed to be an adaptation for the protection of the developing gills.

Young specimens are also covered in a veil that encloses the entire fruiting body, the remnants of which can often be seen in older specimens on the base of the stipe and edge of the cap.

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Cortinarius sinapicolor (photo by Alison Pouliot)

All species are terrestrial and have rusty-brown to brownish-red coloured spores (and if you place the spores under the microscope you'll discover their amazing wart-like ornamentation!).

Cortinarius species form mutually beneficial relationships with plants known as mycorrhizal associations and play an important role in the nutrient economy of the Wombat Forest's tree species. The fungus mycelia (the vegetative part consisting of a mass of threadlike hyphae) envelop and increase the surface area of the tree's root system, improving its mineral absorption capacity. The mycelia are much smaller than the trees roots, allowing them to penetrate greater volumes of soil than the tree roots alone, which is especially beneficial to trees living in Australia's typically nutrient-poor soils. The tree returns the favour to the fungus by supplying it with carbohydrates produced through photosynthesis. Every species of eucalypt requires a mycorrhizal fungal partner to survive and vice versa.

The bright yellow and extremely glutinous, *Cortinarius sinapicolor* (erroneously identified as *Cortinarius ochraceus* in Fuhrer 1984; 1995) is another ubiquitous and easily recognisable species growing under *Eucalyptus* and *Leptospermum* in the wetter parts of the Wombat. The species name, '*sinapicolor*' comes from the Latin 'sinapis', for 'mustard' reflecting the yellow colouration of the cap and stipe. The cap can grow up to 70mm and the stipe is usually stout. They sometimes have a strong peppery odour and they grow either singly or gregariously.

But despite their extreme beauty and colours, remember that the presence of colour in nature has often evolved for very good reason and some species within the *Cortinarius* are known to be poisonous. European species, such as *Cortinarius orellanus*, contain the neprhrotoxin, orellanine which can cause irreversible renal failure and can be lethal. It is not known whether orellanine occurs in Australian *Cortinarius* species, but some species also contain other related nephrotoxins known as cortinarines, from which non-lethal poisonings have occurred. One should therefore never consume wild fungi unless it has been 100% positively identified on the basis of biological characteristics and edibility has been confirmed by a reliable source.

Cortinarius also contains important indicator species which are especially sensitive to environmental change and have been used in pollution monitoring programs in several countries. Scientists in Finland studied the structure and composition of fungal communities along an urban pollution gradient. Significant differences were shown in fungal community structure with a decline in diversity of *Cortinarius* species close to sources of pollution emission. However research into the molecular systematics of *Cortinarius* is only in its infancy. Little is known of the ecology and distribution of *Cortinarius* in the Wombat Forest or in Australia in general. Many species are undoubtedly yet to be described. What is known is that *Cortinarius* and fungi in general play a crucial role in the maintenance of forest health. Disturbance to forest soils though activities such as logging, inappropriate fire regimes and other causes of habitat loss, inevitably jeopardise the livelihood of fungi, associated tree species and overall forest health. Protection of the Wombat Forest against these impacts is the only way to ensure the preservation of our remarkable fungal diversity. ■

Alison Pouliot is a photographer & ecologist who spends much of her time crawling around the Wombat Forest in search of fungi & other creatures. www.alisonpouliot.com

Changes In Our Landscape

By Anne Dobbs

"A Successful Failure – the Aborigines and the Early Settlers – a Trilogy" edited by Geoff Morrison is a carefully researched, detailed and entertaining book which was first published in three separate parts by Edgar Morrison between 1965 and 1971. It covers that little known period of our local history when age-old ways of life came into conflict with an influx of Europeans and their very different beliefs.

The first book deals with life and work of Edgar Stone Parker, the assistant Protector assigned to act as a buffer between the settlers and those whom they had replaced. He supervised the Protectorate at Franklinford from 1840 to 1849 after which it was closed by the Government.

In the second book we meet some of the participants in the ensuing period of conflict – settlers, Aborigines and again the hard working Mr. Parker. Book three draws on the writings and reminiscences of others to describe the culture and way of life of the traditional owners of this area.

As I searched through this book for a picture of our landscape as it was before settlement and the gold rush changed it forever, there seemed to be only a few tantalising glimpses of "Australia Felix".

A native bee collecting pollen from a Showy Daisy Bush *(Oleria lirata)*. Honey from native bees was used as a food source by local aboriginals *(photo by Murray Ralph)*

However, one can gather some of these pieces of information together to form at least an idea of the country that was home to the Djadjawurrong people.

In 1836 Major Mitchell followed the Murray River from east to west and then veered south at Pyramid Hill because he had sighted what he described as an Eden of mountains, streams and green pastures. On his return journey he passed just to the West of our district, still writing of a "verdant plain" resembling an English Park, with woods on higher ground and streams flowing through it. It was the 29th of September and the previous season had been unusually wet.

A year later, the settlers who followed the Major's wheel tracks also found fertile valleys, abundant water and plenty of wildlife; oblivious to the fact that these were also the favourite hunting grounds of the Djadjawurrong people.

Joseph Parker and A. C. le Soeuf contributing to R. Brough Smyth's work "The Aborigines of Victoria", describe Aboriginal culture and way of life as it was before 1840. The traditional owners of the territory of which the North side of the Wombat Forest forms the Southern boundary were physically impressive people respected by their neighbours. This suggests there was an abundant food supply in the area. Reports of sparse population give us an insight into local climate and vegetation. Theirs was a way of life totally governed by seasonal variation and strict conservation of resources.

We are told that the damp, dark forests of the Dividing Range were avoided in winter, when groups stayed in the more open country of the Upper Loddon feasting on seasonally available foods such as emu's eggs, edible roots and native game and fish.

Murray Cod were found far up the rivers – Joseph Parker remembers "a ton of dried cod" coming from near the junction of Jim Crow Creek and the Loddon. There is frequent mention of springs and waterholes which yielded a plentiful supply of fish, wild fowl and edible plant life. To supplement their fairly harsh diet of ground grains, the Aborigines would gather honey from the native bees and sweet manna from the manna gum. Banksia flowers were not only used to sweeten water but also to filter it when scanty water supplies were less than palatable.

Other favourite berries were cranberry *(Astroloma humifusum)* honey cups (which may be honey-pots) *(Acrotriche serrulata)* and native cherry *(Exocarpos cupressiformis)*. Wattle gum mixed with ground mussel shells was used to attach stone heads to axes and spears, the stone being quarried from Mt William.

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The years following Mitchell's discovery were dry and the grass changed from green to yellow and the overstocked settlers cut down trees to grow more pasture.

Other clues to our early landscape are provided by John Chandler, a carter who travelled between Melbourne and the Yandoit area in 1855. He writes of she-oaks (*Casuarina*) covering the Keilor Plains (but not for long) and struggling through the dense scrub and forest of Clowes Forest in the Tylden Holcombe area. They finally reached a beautiful open plain studded with honeysuckle (Banksia) and wattle trees north of Daylesford.

In conclusion; then as now there were cycles of plenty and scarcity, illustrated by the careful conservation of resources by the native population. Waterways, flowing in a series of chains of ponds, were much more prolific in fish and aquatic life and the volcanic soils and valleys, rich in river silt, grew grasslands which fed animals and humans alike.

Silver Banksia *(Banksia marginata)* *(photo by Murray Ralph)*

Overlooking all were the great volcanic peaks and brooding hills of the Great Divide, thickly forested with many varieties of timber, that had adapted to our challenging climate.

Quotes mentioned in this article are from:
Major Thomas Mitchell's Diary.
Edward Stone Parker – various writings.
Robert Brough Smyth "The Aborigines of Victoria" – contributions by A. C. le Soeuf and Joseph Parker.
John Chandler "Forty Years in the Wilderness"

"A Successful Failure" is published by Graffiti Publications for the publisher Geoff Morrison and is available from the Daylesford Museum, price $55.

It is printed in hardback and contains far more information than this article would indicate. There are also a number of very interesting maps and photos. ■

Ecological Vegetation Classes of the Wombat Forest

By Murray Ralph

The types of native vegetation that occur across Victoria vary significantly. This variation reflects differences in geology, soil type, aspect, climate, altitude and position in the landscape. Depending on these environmental conditions, particular plant species and groups of plants will tend to grow together. These distinct native vegetation types are called Ecological Vegetation Classes (EVCs).

Within the Wombat Forest approximately 30 different EVCs have been mapped. In this newsletter we look at Damp Forest, a relatively uncommon EVC in the area.

Damp Forest (EVC 29)

In the Wombat State Forest, damp forest occurs in the higher rainfall areas where annual rainfall is between 950-1200mm per annum. It is usually restricted to sheltered gullies on alluvial soils, often in association with Shrubby Foothill Forest.

The tall overstorey (to 35m) is dominated by Messmate *(Eucalyptus obliqua)* with a lower tree layer of Blackwood *(Acacia melanoxylon)* to 20m.

The understorey is characterised by a dense small tree layer dominated by Musk Daisy-bush *(Olearia argophylla)*, Shrub species that may be present include Prickly Moses *(Acacia verticillata)*, Prickly Currant-bush *(Coprosma quadrifida)*, Hop Goodenia *(Goodenia ovata)* and Hazel Pomaderris *(Pomaderris aspera).*

The ground flora consists of a variety of ferns, native herbs and grasses. The most common fern is usually Fishbone Water-fern *(Blechnum nudum),* but other species such as Mother Shield-fern (*Polystichum proliferum)* and Hard Water Fern *(Blechnum wattsii)* are also present. Rough Tree Fern *(Cyathea australis)* would have once been very common in this EVC, but now tends to be less commonly found.

Native herbs include Tasman Flax-lily *(Dianella tasmanica),* Bidgee Widgee *(Aceana novae-zealandiae)* and Turquoise Berry *(Drymophila cyanocarpa)*. Grasses include Forest Wire Grass *(Tetratheca juncea)*. Red-fruited Saw-sedge *(Gahnia sieberiana)* can also be present.

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An example of remaining Damp Forest EVC in a sheltered gully near Nolans Creek Track *(photo by Tibor Hegedis)*

All EVC are assigned a conservation significance based on the extent to which they have been cleared from their former range. Damp forest is classified as being vulnerable. The main current threats to this EVC in the Wombat State Forest include climate change, altered fire regimes, loss of hollow bearing trees, weed invasion and altered hydrology. ■

Wombat Wildlife Carers

By Tibor Hegedis

I was recently driving back to Daylesford late at night with Angela Halpin after attending the birthday party of a good friend. We were nearing Blackwood and we passed a large wombat in the middle of the road that had been hit by a car. We carefully turned around at the first opportunity and drove back to pull it off the road, see if it was still alive and to check if it was a female carrying an infant in its pouch.

As we approached the wombat, we initially thought it was just stunned, but still breathing. We pulled it off to the side of road but unfortunately she was dead. The movement we had seen was from the baby wombat that had survived the trauma in its mother's pouch. A tiny pink ear stuck out and a few little claws were wriggling around. It looked very small.

I then called the Hepburn Wildlife Shelter for further advice and spoke with Gayle Chappell. She suggested we bring the wombats to the Shelter for assessment and treatment. The dead adult mother, with the infant still in the pouch was quite heavy, but Angela helped get them into a large cardboard box and into my van.

I dropped Angela off at her home, then proceeded to the Hepburn Wildlife Shelter, arriving just after midnight. Gayle and her partner Jon Rowdon, were there to help get the wombats out of the van when I arrived. Gayle then carefully removed the baby wombat from the pouch, took it inside to get it warm and examine it.

In the mean time, there was no resting for Jon. He was preparing feeding bottles for the six or seven orphaned kangaroos that were hungry and ready to be fed. Jon explained that there are 60 to 70 animals in their care at any one time. That means looking after wombats, kangaroos, wallabies, possums, koalas, various birds and reptiles that all need ongoing care. I left just after 1am. I was ready for some sleep, but Jon and Gayle would still be up for some time yet.

I called Gayle the next day to check on the little wombat. She said it looked as if the baby wombat, now named "Basalt", had sustained some injury but there was a good chance that he would survive. She said it was always worth stopping to check for infants in the pouch of injured or dead mammals, as they often survive even if their mother does not. Basalt is a prime example. I'll follow his progress in the months ahead.

You may never need to stop for injured wildlife, but you can still help them by supporting Gayle and Jon's work. More information at www.hepburnwildlifeshelter.com ■

An injured baby wombat like "Basalt" requires much care and attention from a carer if it is to survive *(photo by Gayle Chappell)*

For orphaned or injured animals, please call the 24 Hour Wildlife Emergency Number on **13 000 WILDLIFE** (that's **13 000 94535**) or Hepburn Wildlife Shelter on **03 5348 3932**

Fire Ecology Program

By Gayle Osborne

The Fire Ecology Program is a joint initiative of the Department of Sustainability and Environment, Parks Vic and the Country Fire Authority, and has been in place for a number of years. This program has a science and research component aiming to provide fire managers with information to ensure that prescribed burning can be conducted while minimising ecological impacts. Although the aim is to use fire to achieve both biodiversity and asset protection it is not clear how this will affect the Fuel Reduction Burns in Zones 1 and 2 which require frequent burning and intensive fuel management .

Epicormic growth on the stems of trees *(Eucalyptus spp.)* is characteristic after being burnt *(photo by Tibor Hegedis)*

We recently attended a Fire Ecology Symposium where the program was explained in detail. The information provided to fire managers is based on the biology of flora and fauna, and is called "vital attributes". For flora they include longevity, the length of time the plant takes to set seed and the conditions in which it needs to grow. Faunal "vital attributes" are based on habitat requirements, diet and reproductive cycles.

Dr David Cheal, the scientist in charge of the flora vital attributes has grouped Ecological Vegetation Classes (EVCs) with similar structure and fire behaviour. He has produced a minimum and maximum time between fires to maintain the EVC. For example, Shrubby Foothill Forest, the most common EVC in the Wombat was said to be "fire dependent" and was assigned a minimum 15 to 25 year cycle, depending on the severity of the fire and a maximum of 100 years. I am concerned that this could lead to prescribed burning on minimum cycles. Dr David Cameron (DSE) asked whether "we will lose long unburnt samples under this model".

Dr Peter Menkhorst, a scientist of great repute explained that current ecological burning was based almost solely on the needs of flora and that for fauna they plan to establish a number of "Key Fire Response Species" for each group of EVCs. These are fauna species most likely to be adversely affected by fire. There is also the need to understand unburnt patch size and patchiness required in a burn for population survival. This section of the program is proving difficult and taking some time to complete.

The importance of invertebrates was acknowledged as they drive ecological processes but it appears that they will not be included in the program at this stage.

A paper was also presented on the need for monitoring and for fire managers to use this information to learn and adapt (adaptive management). A number of fire ecologists have been trained to work within DSE and Parks Vic and the process is continuing. There are also processes being put in place for regular forums for community engagement and communication.

In his introduction, Dr Gordon Friend said that the Flora and Fauna Guarantee Act cites inappropriate fire regimes as a potentially threatening process. I naively believed this meant that too much burning is occurring and was shocked to later find that the Fire Ecology Group actually consider the threat to biodiversity to be an under exposure to fire, i.e. fire frequency is considered too low.

Dr Menkhorst said that this program is a "paradigm shift in government policy towards using planned fire as an ecological management tool". However, there were mixed messages at the symposium. We were told by a DSE Manager that not enough fuel reduction burning is taking place, and the 2007 fires occurred as a result of this. He also said that "doing nothing in the face of insufficient information is not acceptable".

Although the program is a step in the right direction there remains the concern that this will result in more prescribed fire in our landscape based on "scientific" parameters. Will we see more frequent burning based on the minimum cycles for flora and minimum tolerances for fauna? ■

Hakea fruit opening after fire *(photo by Tibor Hegedis)*

Back Page Report

By Tibor Hegedis

Annual General Meeting

This year our AGM will be held at the Mechanics Institute, Trentham, on Sunday 24th August, 2pm-4pm.

Come along and participate. Celebrate our second year of Wombat Forestcare. Let's get together, meet other members and listen to our guest speaker.

The business to be transacted at the AGM is:

(1) financial reports and other reports
(2) to elect Committee Members
(3) to consider any item of business previously notified in accordance with the rules
(4) to determine the new annual subscription

There will be seven committee member positions available for election. We encourage you to consider becoming a committee member, so please come and see how you can become a more active member of Wombat Forestcare.

Nominations for the Committee shall be accepted in writing before the Annual General Meeting or verbally from those members present, and election shall be decided by a show of hands unless a secret ballot is requested, in which case the ballot shall he conducted in such usual and proper manner as the Chairman shall direct.

For further details on the AGM or for a copy of the Constitution (if you do not already have one), please contact Gayle Osborne, phone: 03 5348 7558 or email: info@wombatforestcare.org.au ■

Thank you to all our members, contributors and supporters. Our group only works with your input.

Now I'm Listening...

It's fabulous to announce that we have our website up and running. It's still a work in progress, but we're getting there. Many thanks to Miles and Juliet Summers for their effort, advice and encouragement. We aim to make the website a great resource for all our members. Our web address is **www.wombatforestcare.org.au**

Newsletter articles (and suggestions) are always most welcome. Please limit articles to about 500-800 words and send a selection of photos if it's appropriate for the article. The newsletter is published quarterly in January, April, July and October, with articles and photos due by the middle of the preceding month. For more information please contact **Tibor Hegedis** by emailing to **newsletter@wombatforestcare.org.au**

Wombat Forestcare (Inc.) 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. It will monitor activities affecting the forest and will work with government departments and their officers to improve or correct procedures which may impact on it. 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 $10 Single and $15 Family.