Issue 23 - March 2013

Wombat Forestcare Newsletter

Autumn is here and our migratory summer birds are on their way to other habitats. It has been the hottest summer on record for Australia with below average rainfall for Victoria. What will this mean for our fungi season in the Wombat? Is it an explanation for some unusual bird sightings? As always, we encourage our readers to explore our wonderful forest.

Gayle Osborne (editor) & Angela Halpin (design)

Hope and conservation – environmental engagement in the Wombat

By Alison Pouliot

It is indeed a tough time to be fighting for the Wombat. For those who value the forest for its biodiversity and the myriad reasons it enriches our lives, the State government's attempts to unravel decades of conservation through suggestions to re-introduce timber extraction while defunding biodiversity officer positions are both incomprehensible and disheartening. However, such actions are all the more reason to fight harder than ever for the Wombat.

Hope is about recognising future possibilities.
Photography © Alison Pouliot

Conservation efforts to protect the forest from exploitation are usually driven largely, if not wholly, by the pluck and mettle of volunteers. Such folk proceed with incredible determination to conserve the integrity of this valuable island of biodiversity for the benefit of all. However, they are also seriously at risk of burnout. When years of tireless work to protect vital habitat can be overturned by the fatuous junk science follies of the State government's recently skedaddled leader, or under the misnomers of 'development' or 'under-utilisation', possibilities for feeling disillusioned and hopeless can easily prevail. In these challenging times we need to rekindle an often overlooked factor in biodiversity conservation - the importance of hope.

We rarely hear about the importance of hope in conservation, especially in how it relates to engagement and pro-environmental behaviour. Hope as a concept can be rather hard to grasp. It has been variously defined as an emotion, a cognitive attitude, a particular disposition, a process or a unifying and grounding force of human agency.[1] Hope emanates from both head and heart. Vaclav Havel differentiates hope as a state of mind, not a state of the world; an orientation of the spirit and heart that transcends the world that is immediately experienced.[2] He asserts that the more unpropitious the situation in which we demonstrate hope, the deeper it becomes. Despite the State government's convenient amnesia regarding its legal obligations under state, national and global agreements

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to manage Victoria's biodiversity, we must not get disheartened. It is more critical than ever to hang on to hope.

In the early 1990's while working as a government scientist, I remember feeling utterly disillusioned with the government's handling of environmental issues and consequently my capacity to genuinely contribute to conservation. Fortunately I crossed paths with the inspirational environmentalist, Leonarda Camacho, also known as the 'Queen of Garbage' for her incredible work in transforming the rubbish problem in Manila. While discussing the enormous challenges of tackling environmental problems, she paused and sagely said, "But to be disillusioned is a cop-out". The words of this insightful luminary were so germane in reminding me that hope very much underpins conservation.

Hope is about persevering despite adversity. Photography © Alison Pouliot

The importance of hope in fuelling conservation efforts is well documented. Given the conflicting interests in the Wombat along with the predicted impacts of climate change, conservation requires the collective effort of the public to catalyse hope. Cooperative effort can foster feelings of agency in the value of individual contributions. In turn these evoke satisfaction in the achievement of smaller milestones on the way toward a larger goal. Thinking positively, approaching problems with hope, in turn reinforces engagement. People with high levels of hope have a greater capacity to not only comprehend information, but also to constructively transfer it into action. They are also less likely to succumb to disillusionment. Through the ability to deal with a situation despite uncertainties and unknowns, hopeful people are more likely to achieve conservation goals. While recognising that artificial hope can also stem from denial or wishful thinking, when coupled with a proper understanding of the issues, hope is a powerful motivational force.

For many people, the media are the main source of information on environmental issues. However, through the media's effort to increase the 'news-worthiness' of environmental stories, it is often the more catastrophic environmental events that receive attention. While it is vital to convey the magnitude and severity of environmental issues, such grim reportage can also be counterproductive to conservation by perpetuating a sense of despondency in our ability to overcome them. A typical defence mechanism for dealing with the scale and pervasiveness of environmental issues is denial or suppression, which in turn magnify the problem. But it is not all bleak. The more connected we are with 'natural' environments, the greater the possibility for genuine understanding of the issues, but also for hope and meaningful contribution to conservation. Furthermore, we can provide compelling narratives and imagery to the media that insert hope into the portrayal of environmental issues.

Effective biodiversity conservation relies on knowing what species exist, where they exist and what processes compromise their existence. Hence, species inventories are a major conservation tool. However, conservation is also about managing the interaction between people and the environment. This includes convincing people of the value of conserving biodiversity. While increasing public knowledge about the importance of biodiversity and the implications of its loss are essential to conservation, we need to question whether knowledge alone is enough. According to various sociological studies, education on its own does not necessarily lead to increased awareness that automatically flows on to pro-environmental behaviour.[3] In addition to knowledge, environmental empathy that involves personal feelings toward the environment is fundamental to developing an environmental ethic. This means reconnecting people with the Wombat through direct sensate experience. While this is common sense and hardly surprising,

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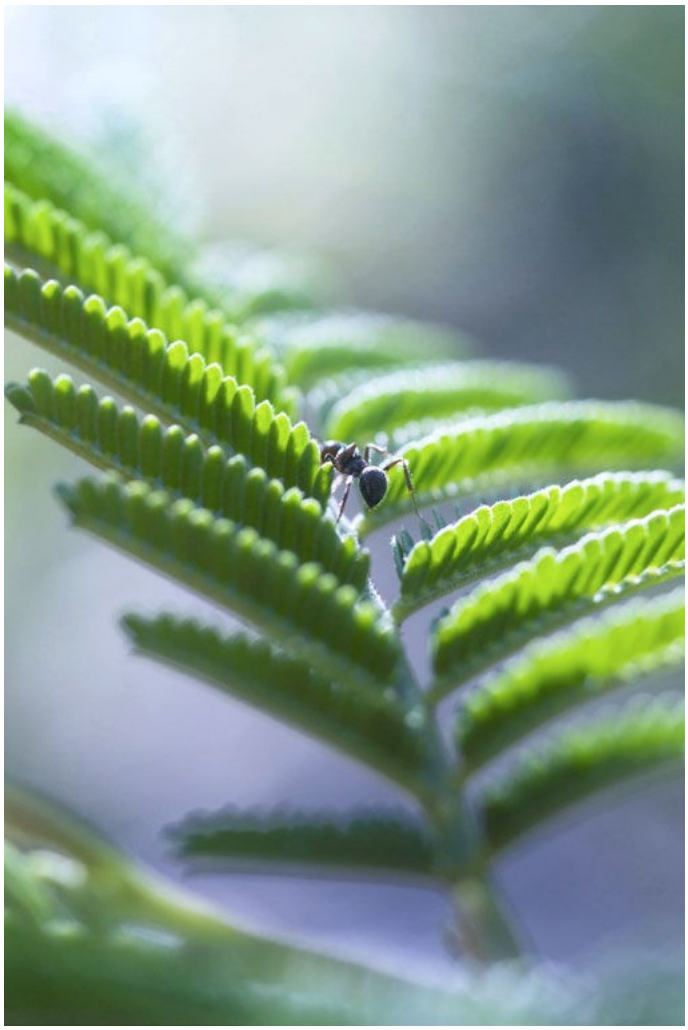
we sometimes forget the value and joy of a forest wander and engaging with 'nature'. It is through in situ experience, when 'knowing' moves from a disconnected intellectual entity, to a more connected and insightful way of 'knowing', that environmental hope can truly flourish.



Hope is about navigating an unseen path.
Photography © Alison Pouliot

Those striving to protect the Wombat have achieved tremendous conservation successes. These need to be kept firmly in sight. Resolving conflicts about how the Wombat is valued is exceedingly difficult given the often entrenched positions of stakeholders compounded by the lack of transparency and scientific integrity in the State government's attempts to dilute environmental policy. This is all the more reason to keep hope at the fore in the ongoing battle to conserve the Wombat. Certainly keep the outrage, but also maintain the hope.

As Emily Dickinson reminds us, *Hope is the thing with feathers that perches in the soul and sings the tune without the words and never stops at all.*[4] ■

Words and images www.alisonpouliot.com

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3. For example, Hungerford., H. and Volk, T. (1990). Changing learning behaviour through environmental education. *The Journal of Environmental Education* 21: 8-21.

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Black Rock Skink (*Egernia saxatilis intermedia)*

A beautiful large, robust lizard with well developed limbs and digits, which grows to about 20cm and prefers rock formations for sheltering in crevices. Photographed near Glenlyon.

Photography © Gayle Osborne

True Confessions of a Leaf Lifter

Words and images by John Walter

There is something about the ferns that appeals to the deeper parts of the human psyche. Something that reaches across the boundaries of disinterest that many of our kind have for the beauty of nature and makes us feel good when we see a ferny glade or walk through a fern gully. Some have conjectured that this is because it reminds us of the Garden of Eden; others make reference to the ancient lineage of the ferns dating back 360 million years and predating flowering plants by some 200 million years. I believe we associate ferns with places of both beauty and refuge. Ferns love shady places that generally have abundant water; two of the things we seek when faced with the trials of living in harsher environments.

But there is more to it than just that. Ferns are very tactile and it is quite normal for walkers to reach out and "touch" a fern frond with their fingers as they wander past. This is further demonstrated by many of the common names we have given different species. Soft Tree-fern, Hard Water-fern and Rasp-ferns come to mind as do fragile looking species like Maidenhair and Necklace Fern. Even people with no botanical knowledge can generally point out the ferns from a group of plants in the bush, while the same group would struggle to separate a moss from lichen even though the last two come from different Kingdoms.

This love of ferns reached a peak in the mid nineteenth century when Pteridomania swept through the British Isles and then on to America and Australia. Ferns were hunted from the wild by enthusiastic collectors to stock their greenhouses and Wardian cases and many nurseries had collectors who took large numbers of plants from natural areas that were doomed to die due to lack of care or a dislike of transplanting. In southern Australia the Soft Tree-fern, *Dicksonia antarctica* was popular as it could be simply cut off at ground level and replanted; even very large plants survived when placed in a suitable location.

Edward Pescott wrote in 1914 that "if the rest of our vegetation were all insignificant and unimportant, we would have enough glory, enough beauty and enough of variation to talk about and be proud of in our ferns.

The Soft Tree-fern, *Dicksonia antarctica* with the Soft Water-fern, *Blechnum minus* in the foreground on the bank of the Coliban River near Trentham

What can compare with an Australian fern gully – its majesty and gracefulness, its coolness and joy, its refreshment and charm?"[1]

It seems, however, that one fern had achieved pariah status at a very early stage and when the Victorian Government first introduced the *Wild Flowers and Native Plants Protection Act 1930*, the list of protected species included the *Filicales* or "Ferns, all species except bracken".[2] Our most common fern was perhaps a little too common for some. The popular practice of returning from bush picnics laden with armfuls of ferns and wildflowers was seriously damaging the flora in frequently visited locations such as Ferntree Gully and ultimately lead to the introduction of this legislation.

The Wombat Forest no doubt suffered its share of

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Prothallus – The generally heart-shaped prothallus looks similar to a liverwort but the deep narrow notch, visible on some of the plants here, distinguishes them. The tiny moss in the background is a Fissidens species.

Underleaf views
Each curved sorus of the Common Maidenhair, *Adiantum aethiopicum* (top) is covered by a flap of the leaf distinguishing the species from the Necklace Fern, *Asplenium flabellifolium* (centre) with its numerous membrane covered linear sori. The crowded sporangia of the Austral King-fern, *Todea barbara* (bottom) do not have a membrane covering but develop a beautiful colour when ripe.

degradation from pickers and additional losses were experienced in conjunction with the saw milling operations right up until recent times. Nevertheless, it is our Garden of Eden, and the Viridans 2009 Flora Information System Biological Database list 30 species of fern for the Wombat Forest region. I have been lucky enough to locate 22 of them in my wanderings through the forest.[3]

I'll restrain myself and not attempt to show you all 22 species here but I will include enough species to demonstrate the beauty and diversity to be found within the Wombat Forest of this ancient group of plants.

The language used by botanists is very precise but can be confusing to those unaccustomed to the seemingly endless list of terms used to describe a plant, or group of plants or a part of a plant. One such term is Cryptograms which is not commonly used nowadays but it groups together the Ferns with the Mosses, Liverworts, Algae, Lichens and Fungi. The common theme among this very diverse group is the production of spores but there is little else to connect them and the term Cryptogram refers to the hidden nature of the reproductive organs and processes. The reproductive method is readily seen on the flowering (seed producing) plants which are also known as Phanerograms.[4]

The ferns are vascular plants unlike the mosses and liverworts (see Newsletter 18 December 2011) but there is another major difference. The mosses we see and recognise are the gametophyte phase and contain the generally unseen sexual organs, frequently on separate male and female plants. The mosses' short-lived capsules are the sporophyte phase and these produce the spores that disperse on the wind to germinate and produce another generation of gametophytes. The parent gametophytes live on for many more years and continue to produce new sporophytes when the seasons are suitable. The long-lived fern we all know and recognise however, is the sporophyte phase and is not capable of sexual reproduction. The spores it releases germinate into a tiny prothallus or gametophyte which reproduces similarly to the liverworts and grows a new sporophyte. Once the sporophyte's roots are established the prothallus shrivels and dies.

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It is virtually impossible to separate the different species of fern at the gametophyte stage but the sporophytes vary greatly and the location of the fern's sporangia is critical to accurate identification. The sporangia (small sacks that contain the spores) are frequently grouped together into a sorus and covered by a membrane. They form distinctive shapes and are located on the underside of the leaf or frond. To see them, you must develop the habit of leaf lifting.

The Austral King-fern is one of my favourites. It is a large species similar to a tree fern with a barrel-like trunk and I have found it growing next to another favourite, the Silky Fan-fern, *Sticherus tener.*

One of the most exciting finds for me however was the discovery of a single Clubmoss plant near Blackwood. This was surpassed by the later discovery of a fertile plant at Lyonville. The Clubmosses are not true ferns but are closely related and are generally described as a fern ally. Their lineage is even more ancient than the true ferns, reaching into the Devonian period some 400 million years ago and peaking in the Carboniferous period when much of the planet's coal was laid down. The success of the flowering plants has seen a reduction in the diversity of these fascinating plants that produce their sporangia in cone-like structures at the tips of the branches. The so called Tassel-ferns found in the tropics are probably the best known species and here in the Wombat Forest we have a single species called the Bushy Clubmoss, *Lycopodium deuterodensum*. It has two different leaf forms which could cause you to think they were different species; both leaf types are pictured here.

Both Bushy Clubmoss plants I have found are close to the edge of a road and at risk from grading; the Blackwood plant survived a recent roadside cleanup by little more than a metre and a dose of good luck.

We haven't mentioned the Coral Fern or the Lady Fern, nor the Mother Shield Fern and Comb Fern or even the Blanket Fern and the Screw Fern. How could I leave out Gael's Hot Rock Fern at Trentham? To see these and many more species I recommend a walk in our own Garden of Eden combined with a little personal leaf lifting. Who knows, you might even find your own Hot Rock Fern. ■

Top – The Bushy Clubmoss, *Lycopodium deuterodensum* sends up its bushy shoots from an underground rhizome.
Above – Some stems produce the narrow spore-bearing cones.

Top – The upper leaf surface of the Austral King-fern, *Todea barbara* with its beautiful venation.
Above – Silky Fan-fern, *Sticherus tener.*

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References

1. Pescott, Edward Edgar *The Native Flowers of Victoria* (1914) p. 95

2. *Victorian Government Gazette* June 10 1931 p. 1739

3. One species, *Pellaea calidirupium* was located by Gael Elliot from Trentham who shared her discovery with me.

4. From the Greek *kryptos*, meaning "hidden," and *gamos*, meaning "marriage", also Greek *phaneros*, meaning "visible."

The sporangia of the Hot Rock Fern, *Pellaea calidirupium* run all around the tip of the leaf. It has been previously confused with another species *P. falcata* where the sporangia do not meet at the tip.

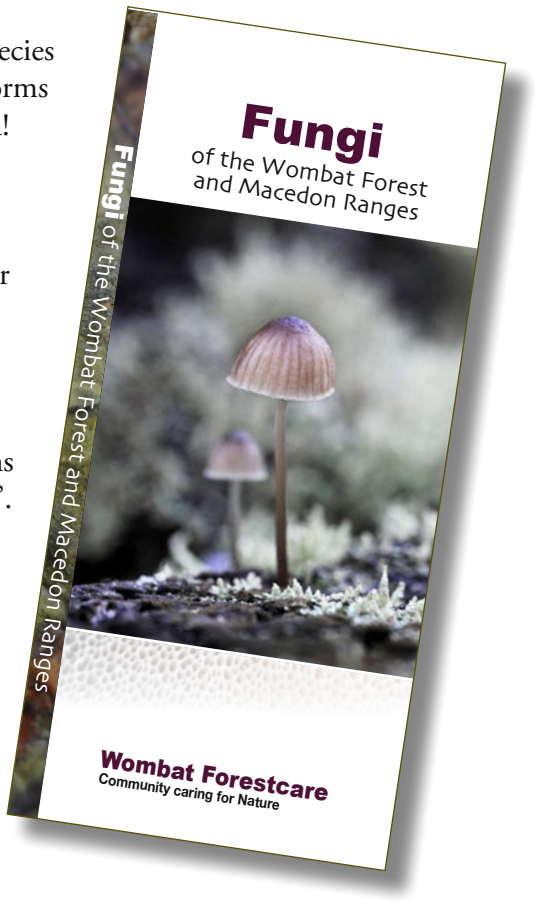
A new frond (called a fiddle-head or crozier) of the Bat's Wing Fern, *Histiopteris incisa.*

Wombat Forest and Macedon Ranges Fungi Guide

The Wombat Forest is a hotspot for the diversity of fungi. Hundreds of species have been documented from the familiar mushroom to the more bizarre forms of those shaped like corals, cups, clubs, jellies, lattice balls and even starfish! While numerous fungus species have been already been recorded, there are believed to be many more which are possibly not yet formally named.

Fungi play a vital role in maintaining the health of the forests through their underground associations with plants and by decomposing organic matter. They also make an autumn stroll through the forest more enjoyable with their bright colours and interesting forms.

Wombat Forestcare is promoting the importance of this group of organisms through a new guide – 'Fungi of the Wombat Forest and Macedon Ranges'. The guide has colour photographs of 108 of the more familiar local species as well as information about identification.



The guide will be launched on Thursday 18 April at 7pm at the Trentham Neighbourhood House followed by a seminar about fungi of the Wombat Forest by Alison Pouliot. Gold coin entry. Bookings essential info@wombatforestcare.org.au or Gayle Osborne on 5348 7558.

For more information about Alison Pouliot's autumn lecture series www.alisonpouliot.com

Wombat impressions

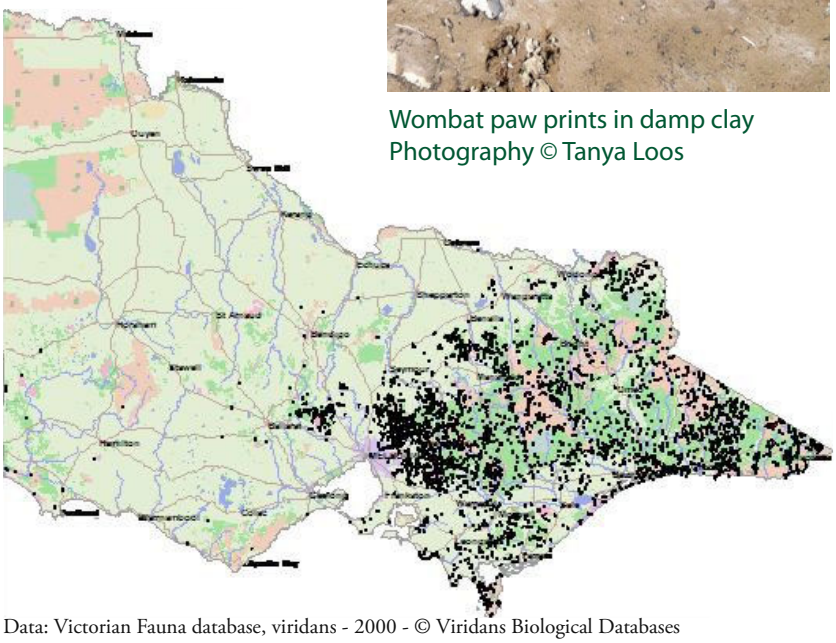
By Tanya Loos

Walking in the Hepburn Regional Park, I took this photograph of wombat tracks in damp sandy clay at Jim Crow Creek near the Blowhole. When I crossed the stream at 10am the tracks were not present, but at 1pm as I returned, there they were; truly magnificent impressions of the flat-footed gait of the Wombat, with the large digging claws clearly seen.

Sadly, this great photo opportunity may have a more ominous story. As described in Judy Weatherhead and Glenda Holmes' great wombat article in this newsletter in 2010, wombats prefer to hang out in their cool burrows during the heat of the day. If a wombat is out and about on a very hot, 30° C plus day – he or she could be terribly thirsty, starving, suffering from sarcoptic mange, or a combination of all three.

Here is hoping my wombat just nipped out for a cool drink at just after ten: then scurried back to the burrow. This got me thinking, and I decided to look more closely at the wombats in Wombat State Forest.

Wombat paw prints in damp clay
Photography © Tanya Loos



Data: Victorian Fauna database, viridans - 2000 - © Viridans Biological Databases

The Wombat State Forest was named for its thriving wombat population. Wombats used to live all over Victoria, and since Europeans came to Australia their range has contracted markedly.

Today, the Wombat State Forest is the last stronghold for wombats in western Victoria – most wombats live in Eastern Victoria (see Map). The wombats in the Wombat State forest are vulnerable and need our care for a number of reasons:

- Populations on the edge of an animals' range are vulnerable to local extinction or range contraction.
- The Wombat State Forest wombats may be isolated from the eastern wombats, making them vulnerable to genetic isolation.
- As more and more people move to the Wombat State Forest and surrounds – wombat threats such as dogs and cars also increase, which puts pressure on the population.
- The Common Wombat is not on any endangered species list – so there are few studies on the animal in the Wombat State Forest, and unlike the Powerful Owl or Brush-tailed Phascogale, wombats and their burrows are not protected by the Flora and Fauna Guarantee Act. This means they are vulnerable to the effects of logging and mining – activities that are permitted in State Forests in Victoria.
- The parasitic mite that causes sarcoptic mange is a killer of Wombats, and is present in the Wombat State Forest – if our wombats are stressed, this mange could wipe out the population. This mite can be harboured and spread by foxes, which are present in great numbers in the Wombat State Forest.

Two motion-sensing camera projects in the Wombat State Forest (VNPA's 'Caught on Camera' project and Wombat Forestcare's camera project) are gathering data that will include wombat distribution. Halting mining operations and car rallies in the forest will help our wombats. Because we all want to keep the wombat in Wombat State Forest! ■

A New Bird for the Wombat State Forest

By Ian Ashton

The bird life of the Wombat Forest is interesting in that although the number of species is not high it is the only place in the region for some less common species. These include the Powerful Owl, Olive Whistler, Rose Robin and Red-browed Treecreeper. It was while searching for the latter of these on the 16th January that we heard a call that was totally unexpected but also instantly recognisable, it was that of a Cicadabird.

Cicadabirds have their Victorian stronghold in East Gippsland and become increasingly rare the further west we travel. Only a few records exist west of Melbourne so this is a remarkable record in many ways.

The record of a Cicadabird in this area was exciting but we found not one but two, a male and a female. According to various field guides Cicadabirds only call at breeding times, this might lead us to think they have bred or are breeding in the area but alas we have no proof of this as they did not appear to interact and kept pretty much to themselves.

The story gets even more complex; on the 21st January a group of eight bird watchers including the original observers recorded two males at the same time some 100 meters apart!

Despite looking and listening by up to ten bird watchers, these birds could not be found again until they were heard at 9:30am on the 30th January by Amanda Ashton.

The Cicadabird has not been the only unexpected species in the district over the past few months. Others have included Satin Bowerbird, White-headed Pigeon and Eastern Koel in Ballarat and Scarlet Honeyeater in Beaufort. All these birds are found to the east of Melbourne apart from Satin Bowerbird that have a population in the Otway Ranges.

It might be we are seeing a change in the distribution of some species due to changes in climate. Certainly some of our woodland species such as Crested Bellbird are now only found in more northerly parts of our district.

Some photos have been taken of the Cicadabird but due to their habit of frequenting the high canopy they are not of a very high quality. All field guides have descriptions of Cicadabirds and you can Google both photos and the various calls that these birds make.

The BirdLife Ballarat bird watching area covers 40 kilometre radius from Ballarat. Ballarat Aerodrome is at the centre of this area and includes part of the Wombat State Forest around Spargo Creek. The sightings of Cicadabird have all been made along McGees Road.

The initial sighting and identification was made by Ian Ashton, Murray Grant and Helen O'Donnell. All are members of BirdLife Ballarat. ■

Migratory Birds

The Sacred Kingfisher *(Todiramphus sanctus)* is one of the Wombat's beautiful summer visitors, delighting us with a flash of torquoise. This kingfisher dries its wings after a bath.

Photography © Gayle Osborne

A brief glance at Migratory Birds

By Gayle Osborne


Rufous Fantail *(Rhipidura rufifrons)*
Photography © Jacinda Brown

Many bird species migrate to the Wombat State Forest to breed in spring and summer. The importance of this large area of habitat is obvious. Most of these species cannot nest and reproduce in farmland or urban situations as many require moist, densely vegetated gullies, possibly tall trees and possibly hollows.

The beautiful Rufous Fantail *(Rhipidura rufifrons)* travels from northern Australia to south-eastern Australia in the spring to breed. They can be seen in and around damp gullies in the Wombat Forest foraging on insects in the low to middle vegetation strata.

The Rufous Fantail is one of many birds listed as migratory under the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, which provides the legal framework for nationally threatened species protection.

Another migratory bird listed under the *EPBC Act* is the Satin Flycatcher *(Myiagra cyanoleuca)*, which prefers heavily vegetated gullies in tall forests and winters in northern Australia and New Guinea.

The Satin Flycatcher is very hard to distinguish from the more common, and migratory Leaden Flycatcher *(Myiagra rubecula)*, also found in similar habitat in the Wombat Forest.

Threats to populations of these migratory birds are habitat fragmentation on their route due to land clearing and urbanisation and loss of core moist forest breeding habitat.

A particularly striking spring visitor is the Sacred Kingfisher *(Todiramphus sanctus)*, which can migrate from as far away as New Guinea, the Solomon Islands and Indonesia. This specie is not listed under the *EPBC Act*. They may nest in a burrow on a riverbank, but usually in the Wombat will nest in a tree hollow. Despite being a kingfisher, their main diet in our forest is insects, small rodents and reptiles.

There are a number of types of migration and those discussed above are Latitudinal Migration. We also have examples of Altitudinal Migration in the Wombat of which the Olive Whistler, Gang Gang Cockatoo and Flame Robin are examples. These birds migrate seasonally; they spend summers in high-altitude areas, moving to warmer lowland areas in winter.

Many aspects of migration are poorly understood as not all birds of a species migrate; some Gang Gang Cockatoos remain in the Wombat throughout winter and as noted in the last issue, there are some Blue-winged Parrots all year round south of Blackwood.

When we think of National and State Parks, we look to the spectacular landscapes of the Grampians, the Otways, the Lerderderg or Wilson's Prom. The Wombat Forest is not recognised as an iconic landscape, but we are not seeing it through the eyes of those most dependent on it. The Rufous Fantail is more interested in a place to nest, insects to eat and just the right climate to raise its young. ■

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**