Issue 36 - June 2016

Wombat Forestcare Newsletter

Welcome to winter in the Wombat. Winter is the breeding season for Wedge-tailed Eagles and Powerful Owls. Our largest raptors commence their breeding in April and chicks are born in September. The forest floors and fallen logs are carpeted with fungi, mosses and lichens. Enjoy your walks.
Gayle Osborne (editor) and **Angela Halpin** (design)

Yellow-tailed Black Cockatoos

By Trevor Speirs

One day in October 1978 a very fortunate birdwatcher observed a flock of about 300 Yellow-tailed Black Cockatoos *Calyptorhynchus funereus* near Linton, west of Ballarat.[1]

Fourteen years earlier, in November 1964, a mind-boggling flock of around 5000 Yellow-tailed Black Cockatoos were seen in South Australia.[2]

Sadly these numbers now seem to be a thing of the past.

Known by Aboriginals as Wylah, and the early Europeans as the Funereal Cockatoo, the 2015 State of Australian Birds report has revealed a significant decline of the species throughout SE Australia in recent decades.

As well as ripping bark off trees in search of wood borer larvae, seeds from native plants such as Casuarinas and Banksias make up a large part of their diet. These trees were once prevalent on the lower slopes of our region, but have been greatly reduced since European settlement.

Indigenous habitat fragmentation is considered to be one of the main reasons for the decline of this species.

Yellow-tailed Black Cockatoos have obviously adapted to introduced pines, as those aforementioned large flocks were seen in pine plantations. A very small, isolated population on the Eyre Peninsula in South Australia has even become dependent on the Aleppo Pine, a noxious weed in Australia, which has created a quandary for land management groups.

Male Cockatoo, with distinctive red eye, attracted to recent native planting in Trentham. Photography © Gayle Osborne

Revegetation projects carried out by Landcare and like-minded groups will provide a future food source. Home gardens, with plantings of *Banksia marginata* and *Hakea nodosa* (amongst others) will definitely attract the cockatoos.

continued next page ...

Pairs, family trios and small flocks of 10 to 20 birds are still seen in our district, but the concern is that many of these are older birds. Cockatoos are long livers, and breeding rates are steadily dropping.

Being Australia's largest cockatoo, they require large hollows for their lengthy breeding season.

The Yellow-tailed Black Cockatoos' wailing call can be heard in the Wombat over the warmer months, especially in the parts of the forest with tall, hollow bearing trees.

Loss of, and competition for, these critically important breeding trees over their range, is believed to be another main reason for the species predicament.

Of the many woodland bird species in decline the "hollow nesters" are one group that are faring particularly badly, therefore it is vitally important to protect habitats such as the Wombat Forest. ■

References

1. Thomas, R. & Wheeler, J. (1983) *Birds of the Ballarat Region.* Roger Thomas, Linton, Victoria.
2. Glover, B. et. al. (1964) Bird Report, 1964 *The S.A. Ornithologist* Vol 24 pg 63, accessed at http://www.birdssa.asn.au/images/saopdfs/Volume24/1965V24P055.pdf

Female Yellow-tailed Black Cockatoo in Lerderderg State Park. Photography © Gayle Osborne

What Feather is That?

By Gayle Osborne

The mystery bird feathers puzzle featured in the March newsletter was eventually solved. It appears that the deceased bird was a Cockatiel *Nymphicus hollandicus* and, sadly, probably someone's escaped pet.

They are the smallest member of the cockatoo family and normally inhabit inland regions.

Although Cockatiels in the wild are grey in colour, aviary raised birds are bred in in a range of colours and patterns. The mystery feathers point to a captive bred bird.

We have been directed to a Facebook page *Australian Bird Identification* for assistance with any further bird identification queries.

Flying Dinosaurs: How fearsome reptiles became birds by John Pickrell

Reviewed by Tanya Loos

"As you read this, an estimated 400 billion individual feathered dinosaurs, of 10,000 species, can be found on earth, in almost every habitable environment. You need only step outside and look up into the trees and the wide blue skies to find them."

John Pickrell is the editor of Australian Geographic and an accomplished journalist who has followed the last exciting decade or two in palaeontology very closely. Flying Dinosaurs is a culmination of this passion.

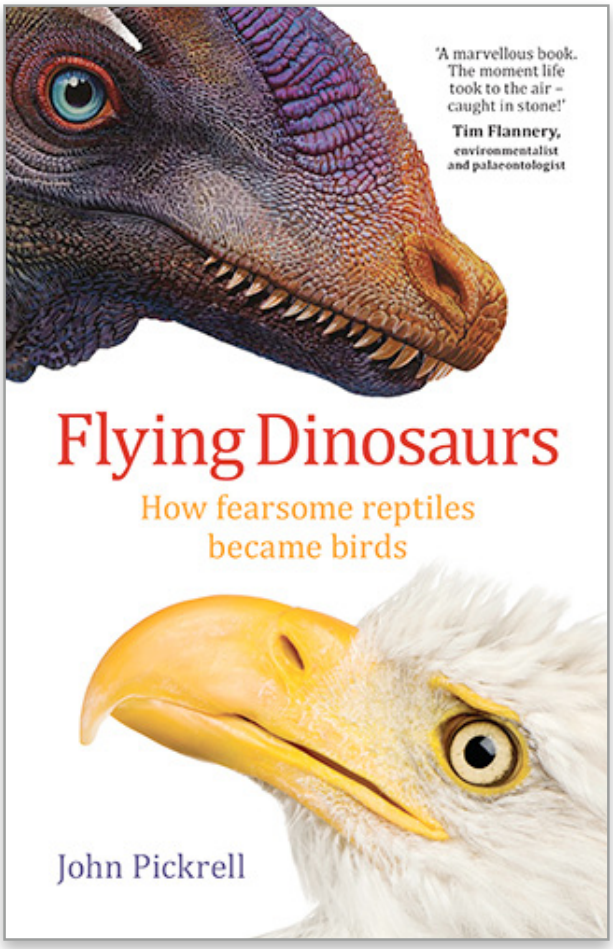
Since the first dinosaurs with feathers started coming out of China in the late 1990s, I have been aware of the thrilling notion that there are virtually no differences between today's birds and the feathered theropod dinosaurs of millions of years ago, but this immensely readable book painted a picture for me like never before. The author describes birds as "simply small, specialised, mostly flight-capable forms of dinosaur". Small, feathered flying dinosaurs (birds) were around at the same time as the huge predators like *Tyrannosaurus rex*. And these large dinosaurs were covered in feathers.

Their co-existence was long – for a period of some 85 million years there was a diverse assemblage of dinosaurs and birds. There are some fantastic artworks in the centre of the book illustrating all the new advances in what we know about feathered dinosaurs – and one of these depicts a large feathered carnivorous dinosaur with small feathered dinosaurs perched on his head – much like oxpeckers on a giraffe today.

In a warm and conversational tone, "Flying dinosaurs" covers a wide range of topics such as the evolution of feathers for flight and display, dinosaur sounds (very unlike any bird!), dinosaur sex, and more.

For a long period of time, feathered dinosaurs tried out the four-winged method of flying – dinosaurs such as *Microraptor*, a small raven-sized dinosaur, had winged forearms and winged legs – capable of flapping flight. The wings on the feathers were true wings, with the feathers aerodynamically shaped asymmetrically like modern feathers to provide lift.

The book detailed discoveries of pigments that show that *Microraptor* was black, an iridescent blue - black similar to ravens – and this was 130 million years ago!



The book is not all about the science and ecology of feathered dinosaurs – it also describes the burgeoning trade in fossils and fake fossils! Fossils can be faked in a number of ways: sometimes they are created by sticking together many disparate bones from separate individuals, or they may be combined from separate species to create what looks like a new species. Fossils are also manipulated or enhanced and sometimes even painstakingly created from scratch with excellent craftsmanship.

If you have any interest at all in dinosaurs or birds, this book is highly recommended – an easy read through a veritable tsunami of new discoveries; which still continue! In fact the Feathered Dinosaur blog has a recent discovery that takes the cake for weirdness... Yi qi, meaning "strange wing" was discovered in 2015. Yi qi was a small pigeon-sized dinosaur with long tail feathers for display, a body covering of feathery fluff coupled with special long fingers and forearms covered with membranous skin like a bat! And they believed it flew! Clearly dinosaur diversity is only just beginning to be grasped. ■

http://flyingdinosaurs.net/blog/

Pickrell, John 2014, *Flying Dinosaurs: how fearsome reptiles became birds.* NewSouth Publishing, Sydney.

Bushrangers and Other Wild Men of the Woods

Words and images by John Walter

I find it interesting to note how the direction of an article or the telling of a story can change once you start writing or telling it. When I first thought about this second article on *Mycena* species of the Wombat Forest, I titled it "Bushrangers and Dark-skinned Woodsmen" and then, after considering the Aboriginal references the article would contain, I decided to change it in case someone misconstrued my intent. Now, rereading the title I settled on and promoted in the last newsletter, I am not sure I found a better solution. Names can be such tricky things!

The bit about dark-skinned woodsmen is an observation that all the Mycenas featured in this article have a dark brown cap and are found on dead wood, or at least on very decayed wood, however, they all have subtle differences that make it relatively easy to tell them apart in the field. There is no association between the Aboriginal references within this article and the Bushrangers of the title other than both references have been used when naming *Mycena* species. It seems that legend, mythology, misinterpretation and mistaken memories have all played a part in the naming of some of our most beautiful local Mycenas.

The stories told about our bushrangers reached folkloric status many decades ago and one of the best known in New South Wales was Frederick Ward, *alias* Captain Thunderbolt. He ranged across the north east of the state around Uralla and Tenterfield from 1863 to 1870 and a number of local features, even a highway, now carry the name of Captain Thunderbolt. Perhaps the most unusual name to be derived from the exploits of the once feared bushranger is the unusual *Mycena* species called *Mycena thunderboltensis*. The "Type" specimen was collected near Bald Rock at Tenterfield where Thunderbolt is said to once have had a hideout; the name clearly struck a chord with the collector.[1] This is the only known Australian *Mycena* to exude a white latex from both its stem and cap when damaged and its gills have a dark coloured edge (marginate). The combination of the latex and marginate gills should make this an easy species to identify in the field but it has not been recorded since the original collection near Tenterfield. I found a group in Blue Gully in 2011 that had these characteristics along with all the other listed macro features and am confident they are *Mycena thunderboltensis*. I have searched for it regularly since, but did not find any specimens that sufficiently matched all the features until I discovered another group

Mycena thunderboltensis in situ showing latex droplets on the caps.

The colours of the stem and the hairy base are important identifying features.

The marginate gills and latex droplet on the stem confirm the identity. The white spots on the cap are not scales as you would see on *Mycena nargan* but dried droplets of latex.

in 2014 off Cooper Road but I am not entirely convinced the second find is the same species even though it appears to have the latex and marginate gills. Now that I recognise the rarity of records for this species, I will attempt to make a formal collection for the herbarium and confirm the identity microscopically.

The naming of the second species also has its origin in legend and mythology, and like Thunderbolt who was transformed into the "Gentleman Bushranger", *Mycena nargan* has also been the subject of misinterpretation. Grgurinovic reports that nargan was a field or "Tag" name and is based on a Victorian Aboriginal word for a "cave that a spirit dwells in". She gives her reference for this meaning as AW Reed's 1990 publication *Aboriginal Place Name*s, but I have heard a couple of different versions of this story so I wanted to uncover the true history behind the naming of the species.

continued next page ...

The first record I can find in European literature for the Nargun (note the spelling difference) is Alfred Howitt's account in 1876. This is the same Howitt who lead the rescue mission for Burke and Wills, locating and returning from the Cooper with the one survivor, John King. (Many argue that Howitt should have been put in charge of the expedition to cross Australia, not the inexperienced Burke.) Howitt traced the route of the Mitchell River in Gippsland with the aid of two local Aboriginal guides in 1875 and came upon the site now known as the Den of Nargun. The guides variously described the site as being the haunt of a Nargun "ngrung a narguna" on one hand, and for the other, it was an ideal location to steal away to with a young woman.[2]

Howitt's description of the Nargun as told to him by his guides was "... it is like a rock (wallung), and is said to be all stone except the breast and the arms and hands. They say it inhabits caverns, into which it drags unwary passers-by. If you throw a spear or fire at it with a bullet, they say the spear or bullet will turn back on you and wound you." Brough Smyth reproduced this story in *Aborigines of Victoria* in 1878 and the description of the Nargun remains largely the same to this day although current understanding lists the spirit as a female spirit, and the Den as a site of cultural significance for the Gurnai women.[3]

The Fungimap guide book *Fungi Downunder* advises that the name Nargan was adopted because the characteristic white scales found on the small mushroom's dark cap "glistened like the eyes of the Nargan" in the gloom. The trouble is, the Nargun's eyes are not mentioned in any of the historical literature describing this spirit nor are they described on the present-day Gunaikurnai Traditional Owner Land Management Board website.[4] You do find some clues, however, when you refer to the children's novel *The Nargun and the stars* written by Patricia Wrightson in 1973. Wrightson appropriated a number of Aboriginal spirits in her novel and her Nargun was stone and could turn around thrown objects, but instead of eyes it had dark cavities and was "watching with the empty darkness that might be its eye". While this clearly does not fit with the description provided in *Fungi Downunder*, there is another group of creatures featured in Wrightson's book called the Nyols who lived in the caves. When they were first encountered in the caves by the young boy in the story he found that "Now he could see a little: a shadowy space, a crowd of shadowy forms, and everywhere the crystal gleam of eyes." And later "rows of eyes gleamed in dark faces".[5] Now this sounds far more like the origins of the name than any of the details I had found regarding the Nargun. I put the proposition to one of the authors of the name and

Juvenile *Mycena nargan* look quite different to the adults, often darker coloured and with thickened stems.

The white scales on the cap that make this species so readily identifiable are sometimes wash off by rain making them impossible to identify.

This group clearly shows the glistening eyes, or should they be called stars.

received the response that yes, I was correct, they had definitely discussed the eyes of the nargun when coining the name, however they now realise that this was a case of conflated or confused childhood memories; perhaps rolling the Nyols and the Nargun into one over time or perhaps just confusing the title of the novel.

continued next page ...

While I can readily accept the conflated childhood memories that led to the naming of the species, I am less forgiving of Reed's definition of the Nargun as a "cave that a spirit dwells in". The term used by Howitt in his 1876 account was "ngrung a narguna" which was translated as the Den of the Nargun. Brough Smyth in 1878 listed ngrunga as a word of the tribes of the Mitchell River meaning hole,[6] hence "ngrung a narguna" is the hole of the nargun, or in more popular language, the den of the nargun. The Nargun is most definitely not the cave, but is instead the more-deadly inhabitant. Publications such as Reed's *Place Names of Australia* and *Aboriginal Place Names* do not list the sources for any of the meanings provided and I have found many dubious meanings therein. These books also list many names as having Aboriginal origins but never detail the clan or language group from whence the name came.

The third species also carries a name with Aboriginal origins and this time Grgurinovic advises the name is derived from SJ Endacott's 1987 edition of *Australian Aboriginal Words and Place Names and their Meanings*. I have not seen this edition but have copies of two earlier editions, both of which lack any clan or language group details for the Aboriginal words listed. While I have no reason to doubt the veracity of the words and meanings included, Endacott states the publication was produced to provide for the "commendable inclination to favour the use of musical native aboriginal names for their (the Australian public in the 1920s) homes".[7] He has selected words from throughout Australia with no suggestions as to their origins. "Mulawa" is listed as meaning "tree shadows" and that is certainly the habitat of *Mycena mulawaestris* which I have found on large fallen logs in the shady gullies of the Wombat Forest. This species is generally thickly covered with shiny glutinous slime but this can mostly dry up in sunny weather. It also has marginate gills. The combination of the gloop and marginate gills readily identify it in the field.

While these three species could all be considered drab to the untrained eye, their colourful names and special features such as latex, spots and gloop make them stand out from the crowd. There are a number of other dark brown species listed that grow on wood which are all but impossible to tell apart without resorting to a microscope. There is even consideration that some of the differently named species may in fact be identical. After all, names can be such tricky things! ■

The identifying gloop is clearly seen on this group of *Mycena mulawaestris.*

After some time in the sun the gloop can dry out.

These dripping bonnets with marginate gills can only be *Mycena mulawaestris.*

References

1. Grgurinovic, C (2003) *The Genus Mycena in South Eastern Australia*
2. Howitt, A.W. (1876) Notes on the Devonian rocks of North Gippsland, *Geol. Surv. Vict. Prog. Rept.3* as reproduced in Seddon, G. (1989) *The Ballad of Bungil Bottle*
3. http://www.batalukculturaltrail.com.au/den_of_nargun.php
4. http://www.gunaikurnai.com.au/about/history
5. Wrightson, P. (1973) *The Nargun and the stars* pages 74, 110, 111 and 122
6. Smyth, Robert Brough (1878) *Aborigines of Victoria*, second volume page 49
7. Endacott, S.J., (1923) *Australian Aboriginal Words and their Meanings*

Cinderella has woolly underwear

Words and images by John Walter

When most of us think of daisies, we think of small herbs or perhaps a small or medium sized bush. Our next Cinderella is a member of the daisy family, but it grows into a small tree some 5 to 8 metres tall and is reported to reach up to 12 metres on occasions. This makes it taller than the much more common Musk Daisy-bush with which it is sometimes found, and it is the tallest member of the family in Australia that I have found in my reference books.

Its large dark-green leaves start off with short hairs on the upper surface but these drop off as the leaf grows, leaving a shiny leaf with deep valleys where the veins are placed. The leaves also remain extremely woolly underneath regardless of age, hence the title of this article and the common name of Blanket Leaf. It is officially known as *Bedfordia aborescens*, named after the sixth Duke of Bedford, John Russell, who apparently was a supporter of botanical pursuits, while aborescens is clearly a reference to its status as a tree.

There are three species of *Bedfordia* in Australia, the other two are only found in Tasmania, so you are not likely to confuse this with any other plant. Our species is found in the wetter gullies between Trentham and Blackwood and other wet parts of the Wombat but is easily overlooked if you are not paying attention to the foliage. Once you get your eyes adjusted to the leaf shape and the way the foliage sits on the plant, you might find that it is growing in a lot of places but you had not noticed it before. I have waited for three years to get my timing right to find it in flower and finally saw its beautiful golden flowers in mid-November last year. While the trees had masses of flowers, you really needed to stop the car, get out and scramble down the slopes into the gully to the tree to be able to enjoy them. After a few short weeks, the flowers fade and all that remains until next year, is this Cinderella's leaves in their woolly underwear. ■

Woolly underside of the leaf.

Group of young plants in a gully off Wild Dog Road.

Above: The flowers appear in clusters near the ends of the bracnches, note how the older leaves droop like they are water stressed.

Left: Flowers in detail.

Nature at Risk

Words and images by Gayle Osborne

The State Government has dropped the 5% planned burn target in favour of a risk reduction target. This would seem to be a very sensible approach as research has shown that large scale planned burns at large distances from rural population areas has little effect on protection of a person's home. The control of vegetation within 40 metres of a house can determine whether it will burn in a bushfire.[1]

It was quite a shock to find that the Wombat will continue to be extensively subjected to fuel reduction burns under the new risk approach. The government will use a risk reduction target to maintain bushfire risk at or below 70%, and the tool they use to measure this is PHOENIX RapidFire.

This computer program can simulate and predict where a bushfire will spread, and its intensity. The program can model the risk to towns and properties.

The risk referred to is for a bushfire on Code Red weather days such as Black Saturday. It is the risk on these days that the government is planning to ameliorate.

The state's bushfire management is governed by The C*ode of practice for bushfire management on public land* and has two primary objectives for bushfire management on public land. Firstly, " To minimise the impacts of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations."

A planned burn in 2008 in the sedgy riparian woodlands on Domino Road destroyed a number of Blackwoods. This area is listed for another burn.

The death of this once fabulous hollow-bearing tree was caused by a planned burn in 2007. The area is listed for another burn.

Secondly, "To maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products."

Combining the use of PHOENIX RapidFire and the undertaking to afford a priority for human life, the department has chosen to use planned burns to meet their objective.

This means that the Wombat Forest will be subjected to frequent planned burns regardless of the impacts on the flora and fauna and ecological process of the forest. Maintaining biodiversity and water quality in the sedgy riparian areas around Trentham will be overridden by this requirement to prioritise human life.

We have created this problem; our region has an expanding number of people seeking isolated lifestyle properties and there are large populations close to forested areas. The losers will be the wildlife and the natural environment will be irreparably altered. We need to look at other ways to make people safe; rapid response to fires has proved very effective and fuel reduction measures need to be moved closer to homes.

The sedgy riparian woodlands near Trentham will be

continued next page ...

subjected to repeated fuel reduction burns. The north side of Domino Road has been classified as an 'Asset Protection Zone' and the *Code of practice for bushfire management on public land states*, " Using intensive fuel treatment, the Asset Protection Zone (APZ) aims to provide the highest level of localised protection to human life and property and key community assets."

The code also states "Achieving the objectives of this zone may have negative impacts. Where this is likely, the Department will seek to moderate the negative impact as far as practicable."

The negative impacts from repeatedly burning these sedgy riparian woodlands will include the loss of sphagnum moss that filters water running into the Coliban River, the loss of hollow-bearing trees and therefore the impacts on fauna that use these hollows and are the food source for the breeding pair of Powerful Owls that inhabit the area.

Many areas will be burnt every 5 – 10 years. Most of the sedgy riparian areas around Trentham have been burnt in the last 10 years and are back on the Fire Operations Plan for another burn.

These areas are rich in hollows that are critical for the survival of many species. Hollow-bearing trees are lost in planned burns and a recent study undertaken by DELWP found that a quarter of hollow bearing trees were destroyed during a fuel reduction burn and that this figure was consistent with other research.[2]

The Flora and Flora Guarantee Act 1988 lists the loss of hollow-bearing trees as a potentially threatening process due to the dependence of many vertebrate species, including rare species, on hollows for shelter and breeding. Inappropriate fire regimes causing disruption to sustainable ecosystem processes and resultant loss of biodiversity are also listed as a potentially threatening process.

It is hard to understand how there can be an Act of Parliament that has no influence on the protection of the species it was enacted to safeguard.

Representatives of the department argue that if there is an extreme bushfire in the Wombat Forest, there will be a catastrophic loss and that more recently burnt areas would not burn severely. However, with so much of the Wombat already burnt it would seem that the greatest risk is the continued fuel reduction burns.

Burning destroys the natural processes that break down litter, causes the disruption of soil moisture that assists decomposition, encourages fire tolerant plants and allows

Greater Gliders, a hollow dependent species, were recently listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* due to declining numbers. They have been listed as vulnerable under the *FFGA 1988* for some time.

for the introduction of flammable weeds that are usually left untreated. Burning is occurring at a frequency that many plants cannot tolerate and will be lost if fire regimes do not allow time to set viable seed.

Many species such as Spotted Quail-thrush *Cinclosoma punctatum* rely on long unburnt forest and little of the Wombat Forest remains in this state.

It is hard to articulate our frustration with the process. We are all aware of the risks associated with bushfires but believe that the constant burning of the forest will lead to a drier and more flammable forest for future generations, and that there will be irreversible ecosystem change.

For many years Wombat Forestcare has argued that removal of weed infestations around private property and townships should be a priority. Regional Integrated Fire Management Plans that cover all land tenures, including private land and township areas should be developed. A key focus of these plans should be to identify high risk areas close to assets, such as houses and towns, rather than broadscale fuel reduction in public forests. ■

References

1. Gibbons P, van Bommel L, Gill AM, Cary GJ, Driscoll DA, Bradstock RA, et al. (2012) *Land Management Practices Associated with House Loss in Wildfires*. PLoS ONE 7(1): e29212. doi:10.1371/journal.pone.0029212
2. Lucas Buff (2016) *Reducing the effect of planned burns on hollow-bearing trees*. Fire and adaptive management report no. 95

Six Short Lives

Words and images by Alison Pouliot

The Swedish taxonomist, Carl Linneaus, famous for his classification of plants and animals, regarded fungi less kindly, referring to them as 'thievish and voracious beggars'. Long before his time, Greek poet Nikandros of Kolophon (c. 185 BC) derided them as 'the evil ferment of the earth'.

Yet when these seemingly miraculous forms reveal themselves on the Wombat forest floor, one can only wonder why they attracted such contempt and scorn. For without fungi and the relationships they form with both animals and plants, there would be no Wombat Forest. ■