Issue 33 - September 2015

Wombat Forestcare Newsletter

Spring is on the way and the weather is warming. The Welcome Swallows have arrived from northern Australia and are building their nests. Soon Rufous Fantails, Satin Flycatchers and Sacred Kingfishers will visit to breed and raise their young. Explore some of the beautiful gullies in the Wombat and you may be fortunate to see the elusive Rose Robin nesting in Musk Daisy Bushes.

Gayle Osborne (editor) and **Angela Halpin** (design)

Dead But Not Redundant

Words and images by Alison Pouliot

I am sitting with an elderly log in the upper reaches of the Werribee River. It's an old friend. We've been hanging out together for over a decade and admittedly we're both showing our age. A light drizzle softens the forest and all its smells seem to circumfuse in the log. I breathe it in, admire its elegant repose, sculpted by weather and the industry of cryptic inhabitants.

Old wood refers to dead trees or their parts. Old wood also exists in living trees in the form of hollows, dead limbs and decay columns. It's odd to think that someone who is unproductive or redundant in the workplace is referred to as *dead wood*. The idiom is as inappropriate as dead wood (or rather, *old wood*, as wood is technically already dead) is highly productive. To be dead, in the case of wood in the Wombat, is certainly not to be redundant. Old wood is highly dynamic and the storehouse of the Wombat's excess energy (silly *Homo sapiens*, I hear the log sigh....). Whether a dead tree remains standing as a stag or falls to the forest floor, it will be slowly dismantled through a series of mechanical, biological, chemical and often cultural processes, releasing its locked-up nutrients, perpetuating forest life.

Natural processes and 'forest management' keep the composition of the Wombat's vegetation in endless flux. However, one worrying change in recent decades is the decline of old wood. Old wood underpins forest health by stabilising soils, sheltering seedlings, cycling nutrients, releasing nitrogen, storing carbon and providing habitat for a multitude of organisms. However, these vital processes are often overlooked

The clandestine actions of fungi, including lichens, underpin forest health.

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by some fire managers who regard it only as fuel. Fortunately, not everyone thinks like that.

It is often said that a dead tree supports more life than a living one. Hollows in dead trees shelter numerous forest inhabitants including gliders, possums, phascogales, bats, lizards, owls, parrots, treecreepers, kookaburras and kingfishers. Hollow formation is a slow process and large hollows in trees such as messmates and stringybarks can take hundreds of years to form. Countless spineless inhabitants also call old wood home. Many of these rely on fungi and bryophytes that also inhabit and rely on old wood.

Over the years I've watched the log transition through successional stages of decomposition. Ever-changing entourages of bacteria, fungi and invertebrates form intimate alliances, performing diverse ecological roles in dismantling the log or each other. Wood-boring and bark beetles are among the early colonisers. Their tunnels allow moisture and spore-laden air currents to enter the wood. Wefts of fungal mycelia penetrate the inner layers, releasing powerful enzymes that modify its structure and forge entry points for further invertebrates. Slugs in turn feast on fungal fruitbodies. Armies of ants embark on labyrinthine explorations. Lichens commence their gradual creep. Over time predators, parasites and scavengers such as spiders, pseudoscorpions and ichneumonid wasps each claim their territory.

During the mid-successional stages mites, millipedes, centipedes and hoverflies investigate their new terrains. Fungi such as inkcaps (Coprinus spp.) adorn the log with thousands of ephemeral fruitbodies. While fungi can degrade pretty much any organic material containing carbon, among the two most significant are cellulose and lignin. Together they form the major structural and strengthening components of wood. Bacteria and invertebrates also contribute to decomposition processes, but only fungi can dismantle lignin. Some fungi are generalists deconstructing a variety of compounds while others are specialists. White-rot fungi metabolise lignin, brown-rot fungi break down cellulose and hemicellulose, while soft-rot fungi have a shot at rotting them all. These first decompositional stages may take decades, depending on the type of wood, the amount of rain and other environmental conditions. In the final decompositional stages soil organisms like earthworms replace saproxylic insects. Amphibians, reptiles, birds and small mammals might also set up camp. Fungi such as the species-rich genus *Mycena* move in toward the end of the decomposition process. This enterprising menagerie of largely unseen creatures are the forest's engineers, creating new niches and driving forest processes.

Old wood also provides habitat within the Wombat's watery environments. Old wood in rivers and creeks creates diverse flows, pools and sheltered areas. Leaf litter accumulates in slow-flowing areas supplying shelter and food for invertebrates and fish. Sediments retained in pools and backwaters provide safe places for frogs, fish and other aquatic life to rest and spawn. Diverse streambed topography creates microhabitats and ideal hiding places. Protruding limbs provide roosting sites and vantage points for fishing birds.

The Wombat's thousands of old wood-dependent species each has particular needs. Many occupy very specialist niches and are likely to be rare. Without their woody old homes they could disappear altogether. Every forest needs old wood of various sizes, age and quality. It is not just fuel. Re-conceptualising the log as an ark of extraordinary and exceptional lives could open up more plural and inclusive concepts of old wood, of the Wombat, of nature. All it requires is an imaginative shift in the frames of reference that shape our perceptions.

Henry Miller said, "I have always looked upon decay as being just as wonderful and rich expression of life as growth". Miller was referring to art, but the sentiment is equally apt for the astonishing artform of the elderly log. ■

Fungi and wood become one in the transformative recycling process.

Cinderella, Dressed in Yella

Words and images by John Walter

Well I guess by now you might be thinking that I have lost the plot, perhaps even gone a little mad. After reading the title above and seeing the Correa images accompanying the article you could rightfully present an argument that the correas are far from belonging to the Cinderella plants as I have previously defined them. They certainly are not small or inconspicuous or forgotten and have become common plants in our gardens; even finding their way into the gardens of those who dislike a "native" garden.

I have decided to include our local Correa species in the Cinderella series for a completely different reason, and it is simply that they remind me of Cinderella all dressed up and ready for a night at the ball. Their long floral tube resembles an evening gown and it is a gown specifically designed to attract a beau. The "prince" in this story is the Eastern Spinebill *Acanthorhynchus tenuirostris* and his relatives, the honeyeaters. The long gown protects the nectar of the Correa from usurpers and the golden slippers dust pollen onto the Spinebill's head when he arrives with his long and intimate bill. I regularly find Spinebills in attendance when correas are flowering but am not quick enough to capture their image however.

We have three Correa species in the Wombat Forest and the flowers of them all are (like the children's skipping rhyme) "dressed in yella". *Correa lawrenceana* var. *latrobeana* is the model Cinderella, slender with long legs extending well below the gown. It forms a large open shrub in the very wettest parts of the Wombat. *Correa reflexa* var. *reflexa* is a smaller plant from the drier forest in the northern Wombat, Fryers Ranges and the Lerderderg. Here we find Cinderella still on her way to the ball, all wrapped up in her green shawl to protect her from the cold winter air. The third species, *Correa glabra* is the outdoors Cinderella, found clinging to the rock faces left by volcanic flows from 1.5 to 6 million years ago. This beauty loves to look out over our wild river gorges and you can find her overlooking Sailors Creek near the Blowhole and in several locations on the Loddon north of Glenlyon.

While some correas are known to put on lipstick to help attract their "prince", none of our local forms have been seen wearing the red flush found on their sisters in the nearby Brisbane Ranges and at Enfield. I don't mind and it seems that neither do the princes who revel in the nectar of these beautiful Cinderellas. ■

Acknowledgement
Many thanks are due to Les Peters who captured the image of Model Cindy and her prince in his garden south east of Adelaide and the Birdlife Australia website for promoting beautiful images of our feathered princes.

The Eastern Spinebill receives a dusting when he demonstrates his intimacy with *Correa lawrenceana*

Model Cinderella *C. lawrenceana* on the left with Cindy in her shawl *C. reflexa*

Our "outdoors" girl on left *C. glabra* and *C. reflexa* dressed up in "lippy" in the Brisbane Ranges on the right

Land Planarians

By Gayle Osborne

Following my article in our last issue I was contacted by Dr Leigh Winsor, whose field of expertise is land planarians. They were the subjects of his Masters and PhD theses at James Cook University. He is now retired although continues there as an Adjunct Research Fellow in the College of Marine and Environmental Sciences and finally has time to actively pursue taxonomic research on the land planarians.

Dr Winsor praised our newsletter, identified the photographed species and gently corrected a couple of points. Dr Winsor informed me that "One is that the mucus secreted by land planarians is primarily used to restrain and possibly stun their prey. The mucus is extremely sticky and gums up the appendages on arthropods very effectively, and in some species the mucus may contain enzymes and toxins that are especially effective against soft-bodied prey such as earthworms and molluscs. I am not too comfortable with the idea that the mucus actually drowns the prey, though at times it looks certainly looks like it could!"

"The other thing is that land planarians contain their embryos within a tough cocoon. When laid, the cocoon is soft and a bright yellowish colour. Over the next 24 hours the colour of the cocoon darkens through a process called quinnone-tanning. The resulting tanned protein shell is hard and resists desiccation until the juvenile land planarians hatch two or more weeks later on. Land planarians do not lay their eggs in gelatinous masses under logs and in soil - slugs and snails do that."

Being in contact with someone who could identify planarian was so exciting that I went out and searched for more. Eventually I found a red planarian that I have occasionally seen and sent a photo to Dr Winsor.

He responded: "The red land planarian is - for the moment - *Australoplana alba*, though that said it is one of a species complex that I am presently attempting to resolve. The problem is that as you know, apart from colour, pattern and eyes, there are few external features on land planarians to assist in identifying them - internal morphological characters and more recently DNA are used to positively identify or describe them." "The colour in this species can vary considerably from a cream almost white colour (hence its name "*alba*") through to a red colour. This variation in colour is in part much of the cause of confusion with the identity of species in this complex. The colour depends to a certain extent upon whether or not it has had a recent feed on an earthworm."

Terrestial nemertine, *Argonemertes australiensis* with everted proboscis. Photography © Leigh Winsor

Probably a land planarian *Australoplana alba*. We are waiting for verification from a DNA test. Photography © Gayle Osborne

It was agreed that, with a preserving kit forwarded by Dr Winsor, I would forward a specimen. The planarian that I photographed was not to be found and I located another red worm. With help from Hadley Cole, who studied conservation biology at university, the sample was preserved in a phial and returned to Dr Winsor for DNA testing.

The email from Dr Winsor was a blow. "Big surprise - the specimen was *Argonemertes australiensis*, a terrestrial nemertine, complete with everted proboscis." By now I was completely out of my depth. However the good news was that the specimen was most welcome, as little comparative DNA work has been done on this group.

Terrestial nemertines or ribbon worms are unsegmented worms, unrelated to land planarians, with a proboscis or hollow tube that can be extended from within the length of the body and is used to capture prey or assist the worm to move by shooting out the proboscis adhering the tip to the ground and retracting it so that

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Hogg's planarian *Caenoplana hoggii*
Photography © Gayle Osborne

the worm moves forward. There are only four known species in Australia. Thirteen species are recorded for the world.

I now think that I have found a number of examples of the land planarian, *Australoplana alba*. Another preserving kit is on the way and we will see what eventuates.

A photo I took of a flatworm in 2006 has been identified by Dr Winsor as *Caenoplana hoggii* - Hogg's planarian. He says, "This attractive striped species was first described in 1891 from specimens collected by Mr H.R.Hogg, the spider specialist after whom the species is named, from his property at Macedon. Your photo is interesting as it shows the median dorsal stripes very well - typically they are a greenish colour tinged with indigo, but can vary from a grey or greenish grey colour through almost pale purplish (as in your specimen). The median paired stripes are broader than the paired dark brown to black lateral stripes, and this distinguishes it from a species with similar morphology, colour and stripe pattern, *Caenoplana sulphurea*, in which the lateral paired stripes are broader than the median pair. However like so many Australian land planarians, the more specimens I see of a particular species from various locations in Victoria, the less sure I am that the specimens are all necessarily the same species - rather they are members of a species complex."

I was very excited to find that we have four species of land planarian on our property and now am searching for "species of rhynchodeminid planarians under the blackened logs - these planarians are coloured dark grey - black, have only two eyes (unlike other common land planarians that have multiple eyes, generally contouring the anterior tip and crowding in multiple or single rows along the sides) and are hard to spot."

To find out more about planaria visit Dr Winsor's page on BowerBird or add your photos to the site.
http://www.bowerbird.org.au/users/3943 ■

Wildlife Conservation through Education

Words and image by Gayle Osborne

Friends of Cornish Hill ran a planting session with students from the Daylesford Secondary College and this year engaged Black Snake Productions for a presentation of wildlife conservation through interactive education. This involved showing the students a range of species including reptiles, birds, and young mammals, many of which the students could handle.

The Murray-Darling Carpet Python was a great success.

Baby Spotted-tailed Quoll *Dasyurus maculatus*

All the creatures in the presentation have been bred in captivity and are used to educate the community about the importance of habitat.

The big surprise was a baby Spotted-tailed Quoll *Dasyurus maculatus,* a species that may still be present in the Wombat Forest.

There is a 1992 record on the Victorian Biodiversity Atlas for a Spotted-tailed Quoll in the eastern section of the Wombat Forest. We are ever hopeful of a sighting from our motion sensing cameras. ■

Honeysuckle Horror Stories

Words and images by John Walter

The Honeysuckle is one plant that touches me in ways that that I find difficult to explain. It's like I have an unspoken and unseen bond with the species that reaches into my heart and just makes me feel good to be alive. The Yellow-tailed Black Cockatoo *Calyptohrynchus funereus* affects me in the same way and has done so for as long as I can remember, but my affair with the Honeysuckle began around twenty years ago. I am referring of course to the tree form of *Banksia marginata.*

I was involved in some small scale revegetation projects around Melton and Bacchus Marsh in the mid 1990's and discovered that one of the few "tree" species found in that dry volcanic plains country was the Honeysuckle. Not the open shrubby form of the plant I was familiar with from the Brisbane Ranges, but tall, chunky, fat-trunked trees that grew mostly on the stream banks. I ensured that some Banksia seedlings from one of the last known populations in that district found their way into the plantings and was horrified one year later when one Council changed plans and removed all of the revegetation project plantings. The other site (in a neighbouring shire) was still in place when I last visited it a few years ago.

After relocating to this district in 2001, we were delighted to find a small remnant stand of Honeysuckle near Springhill in June 2005; this was later visited and written up by Wombat Forestcare in 2007. I recently learned of another remnant near Glenlyon and there are also several populations in the Barfold area north from Kyneton. I am now involved in a small Landcare revegetation project on volcanic soil in Malmsbury and my thoughts naturally turned to the Honeysuckle and how I could include it in the project.

Several visits to the Springhill site indicated that the main plant on that site readily flowered, but, in recent years at least, did not seem to be able to set seed. The Glenlyon population has a good mix of ages including a decrepit matriarch but also showed no signs of setting seed recently. Fortunately providence intervened and while repositioning a couple of leaves so I could photograph a flower on a young tree at Glenlyon, I accidentally broke off the flower spike. Not wanting to completely waste the energy of the plant spent producing the flower, I carried it with me to the next tree and used it as a brush on a well formed flower spike there.

My timing was good as when I returned some weeks later, I found beautiful woody follicles developing on the flower spike I had "pollinated". I should state here that I do not recommend that you head out and attempt hand pollination of the local Banksia remnants. I was very lucky and capitalised on the unfortunate event of breaking off the flower. Doing this in an uncontrolled manner could easily lead to a shortage of flowers that season and reduce the

Banksia marginata clinging to the basalt rock face near Glenhope

Banksia marginata unopened flower spike

Banksia marginata old opened cone

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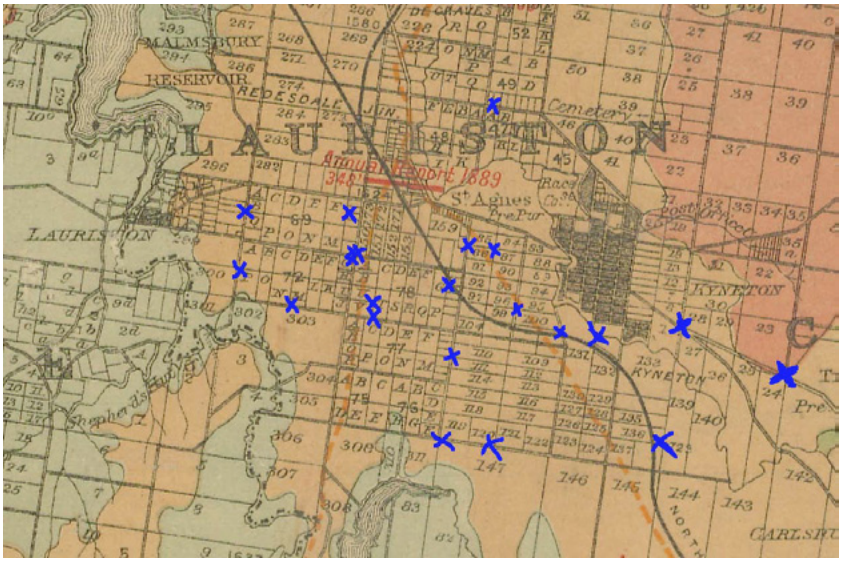
amount of seed that is set naturally, particularly if the timing was not exactly right. There is also research to show that self-fertilisation (done via hand pollination in the experiment) can result in a high seed set, but the resulting seed is smaller and produces smaller, weaker seedlings than open cross-pollinated seed. My hand pollination was between two different trees, but both were almost certainly daughters of the same matriarch and may lack genetic diversity.

After a long discussion with the landowner on seed collection and some careful use of stockings, I had my core seed stock for the revegetation project. I will bolster the genetics by including plants from the numerous populations near Barfold, and am confident a viable population can be established in Malmsbury. But I wondered how widespread the Honeysuckle was in this district before we intervened and changed the natural cycles and whether the two small remnant populations are able to sustain themselves without the introduction of additional genetic material.

I have not located a comprehensive flora survey for the district that dates back to the 19th century but we can find glimpses of the Honeysuckle in Major Mitchell's journal of his famous survey into Australia Felix in 1836 and Alexander Mollison's journal from 1837 and then in Thomas Walker's writings in 1838. There is even a somewhat vague distribution map of the key forest tree species of Victoria published in 1869 which records our Banksia among the list of species plotted. These sources all provide a useful background and relate largely to the granite country to the north of Malmsbury, but the real measure of the local population came to me in the form of old survey plans for the district.

The early surveyors used trees to help mark property boundaries, cutting shields or blazes through the bark and into the wood to identify property corners. These plans date from the early 1850's and abound with information around the type of tree used, frequently "stringybark" or "white gum", but sometimes more accurately with "Blackwood" or "Banksia" or "Honeysuckle" appearing in the lists. I plotted the records on an old geological survey map that included the property boundaries so I could identify any preferences in soil type. The results show a strong affinity between the tree form of *Banksia marginata* and the basalt soils. There were a reduced number of records on the granite country to the north and east. This does not indicate an absence of honeysuckle on granite; a different surveyor with a preference for blazing different trees could be enough to explain the difference and the Glenlyon remnant is on older Ordovician soils.

Not every survey included data on tree species and of the few that did, less than 5% of the trees were Banksias. Notwithstanding this, I still totalled up 46 Banksias on basalt between Malmsbury and Carlsruhe and north to Barfold with an additional eight on granite. This is by no means a complete distribution of the species but is does provide us with an indication of its former range locally. The local Baynton/Sidonia Landcare group have done a lot of work to preserve the populations on both granite and basalt in their area and it is time a serious effort was made to boost the genetic diversity at the two remnant sites on the fringe of the Wombat Forest before they too, become a Honeysuckle horror story. ■



Portion of the plan showing location of Honeysuckle trees on basalt near Kyneton

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Using Small Ponds to Survey Wildlife

By Gayle Osborne

It is always a great delight to see what our wildlife is doing when we are not around. Libby Woodward and Steve Syer, well known in our district for their local native seed production area at Denver, also have a property at Violet Town. They have only limited time when visiting and wanted to survey the property for fauna. They came up with the idea of putting small ponds and movement-sensing cameras in the dryer parts of the property that have diverse plants and creatures.

Most of their ponds have been up and running for over a year and there are also cameras on two dams. This has resulted in videos of 96 different species of native birds, 6 species of native reptiles and 15 species of native and introduced mammals.

The Common Bronzewing is a ground-feeding pidgeon

Visitors have included Lace Monitors and other reptiles

Libby says "Landholders might be more enthusiastic about doing environmental work if they know what they have and can easily see the difference that they make."

However, she points out that these small ponds can kill wildlife if not set-up correctly and advises anyone wanting to do this to carefully follow the instructions on their website: Using Ponds to Survey Wildlife http://www.victoriannativeseed.com.au/using-small-ponds-to-survey-wildlife/#more-1174

The images on the website are wonderful and it is also exciting that the videos have sound, enabling us to hear the bird

Short-beaked Echidnas are active both day and night and love to have a dip in water in the hot weather

The Brown Goshawk is an infrequent visitor

chatter. If we live on a bush block we need to recognise that it is a natural habitat and refuge for many species and this is a way to understand some of the ecology of our land. Libby and Steve have found that as they increased the diversity of their planting, the bird diversity also increased. This highlights the dependent relationships between native birds and indigenous plants.

The first European botanists to reach Australia, such as Joseph Banks and Jaques Labillardière, were amazed by the flora and avidly collected species new to science. Australians have a great fascination with gardening, but we seem to have lost the wonder for our native flora, much of which grows nowhere else on earth.

Setting up cameras could foster a greater understanding of how our properties are used by fauna and the importance of local native vegetation.

If you are interested in getting future updates regarding this project you can follow Libby and Steve on
https://twitter.com@victoriannative
https://www.facebook.com/pages/Victorian-Natives/867592356651038
Or subscribe to their Youtube Channel
https://www.youtube.com/channel/UChjbj4y_MroPLr47ckh6-8Q

Libby and Steve collect and sell local seed and there is some great information in the catalogue page of their website including pictures and germination rates.
http://www.victoriannativeseed.com.au/using-small-ponds-to-survey-wildlife/#more-1174 ■

Living with Wombats

By Glenda Dodd

Living in Bullengarook, either near or in the Wombat State Forest, we should expect some wombat encounters. One of our local residents has a large beautiful chook yard, which was well fortified against foxes with high solid fences that were electrified as well.

However, a Wombat decided that this fence was on its path to its favourite foraging grounds, and was continually rupturing the line of fortification. The worry was that a Fox would find its way through the weakened defences.

The handy man called to assist with this problem repaired the fence time and time again, installing huge rocks, cement etc., but to no avail, the Wombat barraged its way through again and again as soon as the hole was fixed.

So eventually the handyman decided to make a wombat gate, so that the Wombat could go through without harming the fence. A sturdy steel gate, hung from gateposts was placed in the path of use. This gate was heavy, too heavy for a fox to push, but no obstacle for the Wombat. ■

"Whats this?"

" Now I'm through! No trouble at all !"

Please come along and enjoy our next talk in the 'You, Me & Biodiversity' series:

Imperial Hairstreak *Jalmenus evagoras*

Butterflies of the Wombat

This presentation will focus on the role of butterflies in and around the Wombat Forest.

Julie Whitfield

Saturday 24th October 1.30 - 3.30pm
Trentham Neighbourhood Centre
Cnr. Market & High Street Trentham
Cost: Gold Coin donation

Trevor's Bird Page

By Trevor Speirs

White-winged Choughs

Garrulous, gregarious and highly excitable are some of the words used in guide books to describe the characteristics of the endemic White-winged Chough *Corcorax melanorhamphos*.

Autumn/Winter can see noisy flocks of 100 plus birds (different family groups) temporarily congregating where food is plentiful. Their constant calling and weird, mournful whistles fill the air of the woodlands and forests of South East Australia, making the the collective noun "a chattering of choughs" very appropriate.

As well as needing to drink water daily [2], it is also required for building their impressively strong mud

White-winged Choughs, *Corcorax melanorhamphos,* checking out their latest find. Photography © Gayle Osborne

Family groups, often from 4 to 10 birds, spend their days rollicking through the forest, always on the move, overturning bush litter in the search for insects, certain plant tubers and small vertebrates.

A promising find is greeted with great excitement (their red eyes intensify when aroused), with all the family rushing in to check out the latest discovery, sometimes falling over each other in their haste.

It's not all fun and games for Choughs though, the occasional bird becoming prey for raptors such as Barking and Powerful Owls.[1]

nests. The whole family is involved in the breeding process, which usually starts in August, from nest building to incubation and rearing.

The larger the family, the more successful the breeding outcome. ■

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1. Hollands, D. (2008). *Owls Frogmouths and Nightjars of Australia*.

2. Blakers et al . (1984). *The Atlas of Australian Birds*.