Issue 47 - March 2019

Wombat Forestcare Newsletter

Autumn is here and the migratory birds are on their way to warmer climes. It is the onset of the Powerful Owl breeding season and pairs of birds in the Wombat have started calling. Listen for the distinctive double hoot (woo-hoo), particularly at dawn and dusk.
Gayle Osborne (editor) and **Angela Halpin** (design)

Laughing Kookaburra and young. Photography © Gayle Osborne

Kingfisher country

By Trevor Speirs

Towards the end of January, with the majority of spring/summer breeding finished, there is a noticeable drop in birdsong in the forest compared to the constant calling heard earlier in the season. The various cuckoos seem to have left, and other migratory birds like the Satin Flycatcher and the nomadic Golden and Rufous Whistlers, which are some of the loudest birds during breeding season, have quietened down considerably.

One species that has been vocal in the Wombat, particularly early in the season is the Sacred Kingfisher *Todiramphus sanctus*. It too will soon be leaving our region, if it hasn't already, and be making the journey north. *Sanctus* means sacred or holy in Latin and apparently this kingfisher, historically, was revered by the local people from some South-west Pacific Islands. While not as remarkable a traveller as some of Australia's wading birds (the Bar-tailed Godwit covers a distance of over 11,000 kms, one way, during its annual migration), some of the Wombat's Sacred Kingfishers could soon be spending this year's winter in some of those far away Pacific islands.

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The Sacred Kingfisher belongs to the Halcyonidae family, which has about 60 members worldwide and they are generally referred to as tree (or wood) kingfishers. The name kingfisher is actually a bit misleading, for this familys' members at least, as most don't fish. The term kingfisher was first coined in the mid-18th century when the Common or Eurasian Kingfisher was named, and was subsequently given to all members of the Halcyonidae family.[1]

Australia has ten resident kingfishers, eight from the Halcyonidae family and two from the Alcedinidae family, known as river kingfishers, and as the name suggests these birds are reliant on aquatic habitats. Interestingly there is a single record for one of these species, the Azure Kingfisher, in the nearby Lerderderg State Park thirty years ago. The other eight species belong to the previously mentioned tree kingfisher family, and apart from the Collared or Mangrove Kingfisher, are mainly found in forests and woodlands, often quite a distance from water. The Sacred Kingfisher and the Laughing Kookaburra *Dacelo novaeguineae* (one of the world's largest kingfishers) are the two members of the Halcyonidae family that will definitely be found in the Wombat. Both adopt the perch and wait strategy when it comes to hunting and have very similar diets, consisting mainly of invertebrates; grasshoppers, crickets, moths and spiders, along with some small vertebrates such as skinks and tree dragons.

Birdlife Australia's 2015 State of Australia's Birds report continued to show the decline, in recent decades, of a number of woodland bird species on the south-eastern mainland, particularly obligate hollow nesters like Southern Boobooks, Yellow-tailed Black Cockatoos and even Crimson Rosellas.[2]

However, some of this 'group', like Long-billed Corellas and Sulphur-crested Cockatoos, are doing very well (almost too well!). The data gathered is the result of many thousands of surveys that take place in different habitats and regions.

Land clearing, fragmentation and lack of connectivity in the landscape, drought, changes in water management, predation, increased nest competition, and a decrease in insect life are some of the main reasons scientists are suggesting as the cause of this crisis.

The much-loved Laughing Kookaburra, while not wholly dependent on tree hollows (they can occasionally use a tunnel in an arboreal termite nest, and even a haystack), is one of the species unfortunately showing a stronger decline than most. The report showed the Sacred Kingfisher to be in some decline, but much more gradual than its larger relative. Its breeding sites are similar to the Kookaburra's although it will also readily drill tunnels in earth banks. Whereas Kookaburras are sedentary and territorial, with pairs believed to bond for life, the Sacred Kingfisher, while

Sacred Kingfisher perched on a high branch.
Photography © Gayle Osborne

thought to form monogamous breeding pairs, can spend much of the year on its own. Kookaburras also differ in that parents have help during breeding from previous offspring.

In early summer, in the Wombat, listen for Sacred Kingfishers calling from dead branches alongside gullies and exposed creek beds. As they are strongly territorial during breeding and a fierce defender of breeding sites, this could indicate a nearby nest or a warning to any potential rivals. ■

References

1. Fraser, Ian and Gray, Jenny (2013). *Australian bird names; a complete guide*. CSIRO Publishing,
2. BirdLife Australia (2015). *The state of Australia's birds 2015: headline trends for terrestrial birds*, Birdlife Australia, Sydney.

Slime oozin' out from my TV set

Words and images by John Walter

Now who would have thought they would find some Frank Zappa references lurking within this Wombat Forestcare newsletter. It's even a surprise to me. After watching the second episode of *The Magical Land of Oz* on ABC TV, I knew I had my theme for a short article on our amazing Slime Moulds.

This program included a short segment on fungi, something almost unheard of in Australian television. While the focus was on some of the more unusually shaped fungi from the Phallaceae family, (yes, there is a reason why that word sounds a lot like phallus and it has nothing to do with Zappa), the commentary was built around fungi being the original recycler and the feeder of the forest. The recycler then became the recycled as a voracious slime mould swept across the fungal spore bodies reducing them to nutrients and food. The program used time-lapse imagery produced by Steve Axford who pioneered using this technique to present fungi to a wider audience.

Unfortunately, we did not see the transformation of the 'vile and pernicious' slimy plasmodium into the tiny but beautiful spore bodies. Some watchers may have considered the segment's subjects as 'gross and perverted' and many still see lovers of fungi as 'obsessed 'n deranged', but I am certainly one who was thrilled to see this particular 'slime oozin' out from your TV set'.

The two species presented here are in their more attractive spore body phase and both were found in the wet forest below the Garden of St. Erth. Perhaps, like me, you are hoping that this sudden presentation of fungi (and slime moulds) on our TV is the beginning of something more lasting, and is not just an 'Over-Nite Sensation' that just as quickly falls back into obscurity. ■

Notes

The article title and the quotes all come from a Frank Zappa song titled *I'm the Slime*, which appears on the 1973 LP, *Over-Nite Sensation*. You do not have to like Zappa's music to appreciate the lyrics of this song and you can readily find them on Google.

These suspended orange drops are *Badhamia utricularis*, a species that is known to consume fungi when in its slimy plasmodium phase.

This species looks very much like *Elaeomyxa cerifera*, and it might well be an early stage of that species' spore bodies. I would be happier with that ID if the stem was a little darker and the creamy section below the brown collar was more yellow.

Egg and Bacon 9
The last of the series

Words and images by John Walter

What a relief to have finally made it to the last article in this series. Along the way we have looked at how the flower shape can be an indicator of the genus and then saw how to use the leaves to determine the individual species. We then discovered some of the finer details such as the stipules, bracts and bracteoles and how they are used in combination with the leaf and flower shape for identification. The calyx with its tube and five lobes was also mentioned, as was the peduncle and pedicel (stalk) of the flowers and the petiole (stalk) of the leaves.

I hope the series has helped some readers gain a better understanding of the language of botany and the details used in species identification. Perhaps you might even stop and take a closer look when you next find an Egg and Bacon plant and try to identify the genus and species of these beautiful plants.

Our penultimate genus is *Podolobium*, and we only have one species in this district, *P. procumbens*. The procumbent, or near prostrate habit of this species, coupled with the lime-green foliage and apricot coloured flowers, makes this an easy species to recognise. It also flowers in mid-November which is later than most of the other local species, although it does cross over with some of the *Pultenaea*. It is commonly called the Trailing Podolobium. The flowers do sometimes age to pink and I have even found populations that are entirely yellow.

The name *Podolobium* comes from the Greek words *podion*, meaning a foot as in the foot of a vase and *lobos* which we discovered in the last issue, is the pod. This is a reference to the pod having a stalk, a feature that is shared with several genera in the Pea family. A little research was needed to confirm that the *Podolobium* species were initially thought to belong to the genus *Oxylobium* which has pods with no stalks. Finding a short stalk on the pod was therefore a distinguishing feature of such importance to Robert Brown, that he used it as the basis for the new genus he established to accommodate these plants. Not all botanists agreed with Brown and his Podolobiums were known as Oxylobiums for many decades before the name was re-established. You will have to look closely to see the foot on the pod however, as it is short and hidden by the calyx.[1]

Robert Brown was a major contributor to Australian botany and is also noted for his work with a microscope and discovery of the nucleus of cells and the phenomenon known as Brownian Motion. An associate of Joseph Banks, he inherited Bank's library and plant collection as well as a permanent residence. He departed for Australia with Matthew Flinders in 1801 and after circumnavigating this continent, he stayed on until 1805, greatly adding to his extensive plant collection. Peter Good was also on the voyage with Brown and Flinders, and while Brown was collecting herbarium specimens for study, Good was collecting live plants and seeds for propagation at Kew Royal Gardens.

Typical apricot flowers of the Trailing Podolobium, *P. procumbens*.

The stalk of the pod is visible on the upper pod where I have broken the dried calyx and the calyx of the lower pod still hides the stalk.

There is still a narrow band of apricot in this pink-toned flower.

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Our last Egg and Bacon, *Goodia lotifolia*, commemorates Peter Good who died in Sydney in 1803 from dysentery. Both the genus and this species were named by Richard Salisbury who did not know Good, but recorded that "… all the best and rarest plants from that country [Australia] now at Kew, have his name attached to them [Good]."[2] Salisbury also provided the common name Lotus-leaved Goodia which is the meaning of the name *lotifolia*, however it is currently known as the Golden-tip.

This is a tall shrub, reaching 4 metres when growing in ideal conditions, making it the tallest of our Egg and Bacon species. Its leaves are pinnately trifoliate, and this means each true leaf is made up of 3 smaller leaflets. This feature has led to the Golden-tip being mistaken for Cape Broom, a common local weed. You can readily separate them however, as each leaflet on Golden-tip has its own short stem whereas the leaflets on Cape Broom are stemless. The flowers on Golden-tip occur in a long raceme whereas on the Broom, the flowers are clustered together. Golden-tip is a graceful shrub that I have found in the gullies and wetter slopes of the Wombat Forest.

I should mention *Templetonia* and *Eutaxia* before I wrap up the Egg and Bacons. *Templetonia stenophylla* is a small plant that is found to both the north and south of our district but has not been reliably recorded within the area covered by these articles. *Eutaxia microphylla* is similarly found to the north and south and while you are unlikely to find it locally, there has been one observational record for it at Blackwood.

We have seen that the flower colour is not necessarily a reliable feature on which to base our identification of the Egg and Bacons, with several locally occurring species having different colour forms. There is also a large number of pea species whose flower colour excluded them from the Egg and Bacon series. These include the purple coloured *Hardenbergia, Hovea*, *Cullen, Indigofera, Glycine* and *Swainsona* species. There is also the pink *Desmodium*, the yellow *Gompholobium* and the red *Kennedia* to consider. Perhaps there will come a time when we can take a closer look at the "other" peas, but in the meantime, there is a host of Egg and Bacon species out there waiting to capture your attention when spring returns. ■

The wings of the *Goodia lotifolia* flowers are long and have a smoky patch near their base.

The short stalks of the leaflets are just visible in this image of the trifoliate leaf of *G. lotifolia*

You can see several long racemes of flowers on this plant from Tram Creek, near the Lerderderg River.

Notes

1. Brown R (1811) *Hortus kewensis, or, A catalogue of the plants cultivated in the Royal Botanic Garden at Kew* V3: 9
2. Salisbury R (1805) *The paradisus londinensis: or coloured figures of plants cultivated in the vicinity of the metropolis* V1-2: Tab 41 I have added the two words in brackets for clarity.

https://web.archive.org/web/20091014163204/http:/www.anu.edu.au/BoZo/Crisp/Mirbelieae/Podolobium.html

Paper wasps and other feared things from the forest

Words and images by John Walter

"Paper wasps" exclaimed Jack abruptly. We were sitting in the Falcon ute waiting for the third member of our survey team to return so we could head home after our day's work. He had just spotted Dave, the third team member, running wildly towards us down a bush track with both arms waving frantically above his head as though defending himself against some unseen monster. We wound up the windows and I waited until Dave was close to the car then quickly opened the door and slid across to the middle of the bench seat of the ute. As the youngest and shortest member of the team, the middle seat was the best position I could hope for on the drives from Mackay, Qld., to and from our various job sites. Dave threw himself into the passenger seat and slammed the door behind him. Once we determined he had not been stung, we had a good laugh at the sight he had made as he galloped down the track towards us, but if the truth be told, Jack and I were both relieved that it was Dave and not us who had had the misfortune to upset the famed paper wasps of the Queensland bush.

Our work regularly took us into the rainforest, or the scrub or, more frequently, the huge *Lantana* patches that colonised the degraded areas left by man's uncaring approach to the land. These environments were full of plants and creatures that seem to love ripping or tearing or feasting on the bountiful flesh supplied by the survey team. Even the farmland could provide plenty of surprises for us with the introduced sensitive plant *Mimosa pudica* folding away its leaves to expose sharp thorns to scar our legs as we walked past. The March Flies, Mosquitoes, Green Ants, Ticks, Wait-a-while, Lawyer Vine, Tree Snakes and Pythons that sunned themselves on our survey lines were all a problem, but the three big concerns were the Gympie Bush, Scrub Itch and Paper Wasps.

The Gympie Bush *Dendrocnide moroides* was the most feared. It belongs in the nettle family and is renowned for having the most powerful sting of any plant in the world. You very quickly learn how to identify this plant's heart-shaped leaves, an essential lesson if you are to avoid a painful night in hospital and ongoing effects lasting several months. Scrub Itch is caused by the larvae of mites in the Trombiculidae family. The larvae brush onto your skin and gather in protected areas such as beneath the tops of your sock or in the pelvic area where they feed on the skin and produce large and seriously itchy welts that can have you scratching for a week or more. I soon discovered the virtues of wearing a sarong after work to reduce the rubbing of

Left: The Queen in profile on her recently established nest in December 2018. Note the small black support attaching the nest to the beam.

Right: The Queen in detail. Her wings are folded when resting, a characteristic of this group of wasps.

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The nest in March 2019 has swelled to over 30 individuals and has approximately 50 individuals pupating in the closed cells of the nest. The grub just left of centre is a larva, almost ready for the pupal stage. The most recent brood appear to all have black eyes which I suspect changes as they age.

fabric on the tender areas of the body.

But, to get back to the Paper Wasps. You also soon learned to recognise the large papery nests of the of the *Polistes* species and the string or ribbon-like nests of the *Ropalidia* species and took care to give them a wide berth. I did not realise that there are also Paper Wasp species that live in Victoria until a queen established a nest on a rafter above our covered deck in late November last year. This species is the Common Paper Wasp, *Polistes humilis* and is known to defend its nest and deliver a powerful sting. After watching things develop for a few days through the window, I decided to venture out with the camera and try and record the development of the colony. Fortunately for me, the queen and developing colony have not shown any signs of aggression towards me and I am now comfortable approaching within one metre in order to get my images. There is always the thought that this might suddenly change each time I go out, and one report I have read advises they become more aggressive in the autumn. Like their European cousins, the new queens will abandon the nest and find somewhere to overwinter while the workers will all die. Perhaps then I will be able to claim my covered deck back as a place of comfort as opposed to one that is tainted with the uncertainty a Paper Wasp nest introduces into your life. ■

Notes

I spent most of 1978 working as a Survey Chainman based in Mackay in Qld. The Paper Wasp incident occurred near The Leap, about 20 kilometres north west of Mackay.

Natural born killers

Words and images by Gayle Osborne

Female Banded Pupa Parasite Wasp (*Gotra* sp.)

Summer is a wonderful time to see a few of the more than 86,000 insect species that inhabit Australia. Insects should not be confused with spiders, mites, ticks, centipedes and millipedes, which means that there are even more small species inhabiting the land and waterways.

Many wasps are parasitoids, laying their eggs in living species that have been paralysed with venom from the female. It is quite common to see spider wasps dragging their spider prey to a nest burrow.

Female Spider Wasp

Spider Wasps are in the Pompilidae family, of which there are 231 species. They have strong, often black and orange colouring. The female drags the paralysed spider to a burrow and lays one egg that will hatch and the larvae will consume the live prey.

Another parasitoid wasp is the Banded Pupa Parasite Wasp (*Gotra* sp.), the female of which has a long black ovipositor (an external egg laying device) on her rear. She injects paralysing venom into the pupa when it is inside the cocoon and then lays her eggs.

The female Blue Ant Wasp is wingless and exclusively hunts mole crickets to paralyse and lay an egg.

It is a fascinating world. ■

Female Blue Ant Wasp.

Having fun with the Fungi App.

Words and images by Gayle Osborne

The Wombat Forest has so many fungi, which appear in a multitude of shapes, forms and colours. There are in excess of 400 species in our forest, but where are they, how will we know if a species disappears?

While walking in the forest in autumn, entranced by the exquisite array of fungi, you could also contribute to a database.

Alison Pouliot writes, "Having a comprehensive understanding of fungi – their distribution, populations and reproduction – will be critical to understanding the threats to their conservation." [1]

We will have to leave fungal reproduction to the scientists, but we can assist with their distribution.

Last year FungiMap partnered with iNaturalist for a project to make logging our fungi sightings easy using a mobile phone App. I found this completely addictive and overwhelmed myself with images.

Identifying fungi can sometimes be difficult and people should start with a few species rather than trying to record everything as I did.

You do need a phone or camera that takes reasonable images and has a GPS. A small enlarging mirror assists with the view from below.

Take the photos in the field and on returning home, connect to your Wi-Fi, select your images and upload them to iNaturalist. This can be done using your phone, smart device or computer.

At this point you will be asked what you thought you saw and this is where it can be difficult for some of us. Luckily, iNaturalist has an image recognition algorithm that helps with suggestions of what you saw. For common fungi and good images it will often correctly identify to species level. However, if uncertain, try to identify to genus level e.g. *Mycena, Russula, Cortinarius* etc.

Members of iNaturalist, who are professional and amateur mycologists, examine the images and if two other members agree with the identification, this is called research grade and the Atlas of Living Australia accepts the record.

It is amazing how much you can increase your knowledge and identification skills. There are many resources to help; field guides, the Internet and there is a fungi Facebook page. The Victorian Field Naturalists Fungi Group conducts a field trip to Blackwood every year and members are incredibly generous with their knowledge.

Often it can be very frustrating, because fungi change as they mature and the photo in a field guide may not match your image. Also there are a very large number of fungi not named, and as with little brown birds (lbb) for birdwatchers, there are little brown fungi (lbf) that are too hard to identify in the field.

Wombat Forestcare is planning a few fungus forays this autumn for locals to start using the App. We will advertise the dates soon and keep the groups small. We are not mycologists, so expect to see many fungi we cannot identify as well as many we can. The Wombat is fungus heaven in autumn and winter, so please join us for a foray. ■

Unnamed *Cortinarius* species photographed at Blackwood

Psathyrella echinata photographed from above and below and submitted to iNaturalist. This species is a wood rotting fungus, which, when young has distinctive bundles of fibrillose spines. The name is derived from the Greek word for hedgehog, echinos.

Reference

1. https://www.australiangeographic.com.au/topics/science-environment/2019/02/the-conservation-crisis-facing-australias-fungi/
2. https://www.inaturalist.org/projects/fungimap-australia

Glenlyon Dam

Words and images by Gayle Osborne

One of the prettiest locations near the Wombat Forest is the spring-fed Glenlyon Dam, with trees and reeds reflected in the still water.

A pair of Hardheads *Aythya australis* often can be found on the dam. These diving ducks are listed as vulnerable in Victoria (that is vulnerable to extinction) and we are fortunate to be able to see these beautiful creatures at close range. As with most of the water birds on the dam, they have become accustomed to walkers.

It is a delight to watch them diving; they just lower their head and slip under the water. They can dive for as long as a minute seeking small aquatic creatures and waterweeds.

A Little Black Cormorant *Phalacrocorax sulcirostris* also inhabits the dam, perched on one of the old posts, from which it dives to catch fish and crustaceans. Surprisingly, Little Black Cormorants' feathers are not waterproof and they stretch their wings to dry them.

A pair of Hardheads *Aythya australis*.
The male has a distinctive white eye.

A Little Black Cormorant
Phalacrocorax sulcirostris

Wombat Forestcare

research • education • action

Wombat Forestcare Inc. is dedicated to preserving the biodiversity and amenity of the Wombat State Forest, Central Victoria, Australia, 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, (03) 5348 7558 or email info@wombatforestcare.org.au
Membership fees: $15 single and $20 family. Visit our website - www.wombatforestcare.org.au