In this issue we focus on two of the special birds of the Wombat forest, the Square-tailed Kite and the Little Eagle. A great array of fungi will soon begin to emerge in the Wombat forest. Read about the weird and wonderful Stinkhorns. Gayle Osborne (editor) and Angela Halpin (design)

Square-tailed Kites

By Tanya Loos

This summer, a pair of Square-tailed Kites Lophoictinia isura nested in my local area for the first time since 2003. In these turbulent times, it has been a joy and a source of comfort to walk down to see the nest and gaze at the family, with binoculars, recording their daily behaviours and watching the two young transform from fluffy white chicks to sleek juveniles.

The Square-tailed Kite is one of our few birds of prey that are endemic to Australia, that is, found nowhere else in the world, and has been evolving in Australia for a very long time. Our other closely related endemic raptors include the Black-breasted Buzzard, of inland and northern Australia, and the Red Goshawk, which is our rarest bird of prey species.

Individuals have very long upswept wings. In flight they soar and sail effortlessly, with a very high wing loading similar to a Swamp Harrier. Seen from below, the wings are “stripy” or barred with distinctive pale “windows” or spots unlike any other raptors. When perched, these long wings are actually longer than the tail, another diagnostic feature.

Adult Square-tailed Kites have the most amazing white face with yellow eyes; they really remind me of a nice domestic chook! The young bird is a rich rufous colour, with a round fluffy head and a small fine beak and brown eyes.

Many birds of prey, such as Wedge-tailed Eagles or Brown Falcons will take a variety of prey items, from rabbits to insects to pigeons to carrion, such as road kill; the Square-tailed Kite is a specialised predator of nestling birds. They hunt slowly and efficiently, flying backwards and forwards, soaring and scanning the tree canopy for nests (this is known as quartering), then simply flying down, using their long legs and hooked talons to remove the baby bird or birds. The kites also eat insects. Not much is known about what kites eat in their non-breeding season.

The Square-tailed Kite is a spring-summer migrant to southern Australia, and is mostly absent from the tropics in the wet season. It is a summer breeding visitor to the Wombat forest region. In order to feed themselves, and their one to three young, we can assume that the kites will choose a nest site where there is a high diversity of birds, and also abundant populations...
of these birds. It is wonderful to think that our local kites may have overwintered as far away as the Kimberley ranges in Western Australia, and then flown all the way to these foothill forests to breed.

A look at Birdata shows that most records for the species occur around Castlemaine, Daylesford and Creswick area, rather than in the deep forests of the Wombat, although a pair of Square-tailed Kites nested in the forest near the Garden of St Erth, in the early 2000s.

The first nest site I observed here in Porcupine Ridge was back in 2003, with two healthy nestlings fledged. This nest was on public land, in grassy dry forest. Sadly, the pair did not use the nest the following year, or appear to nest again locally. However, they have been recorded using the area in the summer months over the years. In 2005-2007 my records show I often saw a Square-tailed Kite on summer evenings, between 5 and 8pm, either hunting or sitting on a favourite roost tree, its white face pointed towards the prevailing breezes. I was very relieved when I saw the mate.

Square-tailed Kites are monogamous and have high nest fidelity, so you can have a situation with one partner returning alone and not nesting, sometimes for years!

I discovered the 2019-2020 nest thanks to my friend and neighbour Paula Roozenburg. We went for a short walk, and there it was! A Square-tailed Kite nest, in the forked branches of a messmate, in thick regrowth forest on private land. The nest was visible from the road, and if you moved even slightly you lost sight of it, so I felt confident that the nest would be free from any disturbance. Paula only noticed the nest as she was lucky enough to witness one of the adult kites repeatedly flying at and trying to drive away a raven from the nest area.

My first nest observation was on 2nd November. I then walked past the nest nearly every day until mid-January, with binoculars in hand and the Birdata app on my phone. What a privilege! The first four weeks were characterised by a very resolute female brooding at the nest, through high wind, heavy rainfall and hot weather. I observed another adult bringing food to the brooding female, presumably the male with a small passerine bird of some kind, very likely a honeyeater. The food exchange was accompanied by thin, repeated screams from both sexes.

Then on 30th November, I changed the angle at which I observed the nest and two very white fluffy chicks were seen, and they were surprisingly large! I expect that the chicks were not visible when they were very tiny. By 5th December the young had started to develop Rufous coloured feathers among the white down, with one chick clearly larger and more developed than the other. I was lucky to observe the mother kite breaking off tiny morsels of a dead bird to feed to both chicks, a typical example of their solicitous and careful parenting. The father’s role involved a carefully executed flyby, manoeuvring those magnificent wings and then simply wafting down to drop prey into the nest and keep on flying.

By mid-December both chicks were fully feathered in this rich and simply gorgeous Rufous colour (see Ambika’s lovely photo). During this period the chicks could be seen perching on the edge of the nest, gazing at the sky and the canopy with much interest. Mum was increasingly away.

On 25th December, I could see the larger nestling pulling large fragments off an unidentified prey item in the nest. Both nestlings were standing tall and perched high near the nest edge. Then the younger continued next page...
nestling started eating as well, pulling on a portion of prey, further along from the older nestling. The older nestling looked on and wiped its beak on the nest edge. There was very little conflict observed, and many of the accounts I have read of this species emphasise the gentle, confiding nature of both adults and chicks.

On 1st January, I observed the next stage in the development of the young birds; the practice known as branching, when the chicks have not yet fledged but spend time perching away from the nest, returning to feed or rest. Branching allows them to practice perching on different surfaces, clambering in trees, and undertaking short flights while still in the protected area of the nest site.

Branching can go on for weeks, as well as post-fledging parental care such as feeding. I anticipated observing the young and parents in the area for some time during January and early February, but after a period of seeing either some or none of the family, I saw both young back in the nest on 20th January. Then, after that there were no more sightings! Perhaps the family found another area suitable for post-fledgeling care.

Like the Little Eagle reported in this newsletter, the Square-tailed Kite is a very important species in the Wombat forest.

The Square-tailed Kite is classified as widespread, but rare, and has suffered declines as a result of land clearing for agriculture and development, and degradation of habitat as a result of prescribed burning and logging. The Victorian population is estimated at between 20 and 50 pairs, although it is seen more frequently in western Victoria in recent years (Tzaros C., 2020, Garnett & Crowley 2000). The conservation status of the Square-tailed Kite was recently re-assessed from Vulnerable in 2013 (DSE 2013) to Critically Endangered in 2020 as part of the Victoria Government’s Conservation Status Assessment Project (DELWP 2020). Critically Endangered!!

This is interesting given the recent anecdotal reports of an increasing population in western Victoria, but this may be a case of better conditions in Victoria compared to SA, NSW and Queensland. As a top order predator, these birds need a healthy forest, with a full suite of insect life and eucalypt flowering to support the honeyeaters and other small birds that support the kites.

References

Resources
Video footage of an adult soaring low through the canopy, and adults at nest https://vimeo.com/148860951

Wild Mushrooming - A Guide for Foragers

Fungi are diverse, delicious and sometimes deadly. With interest in foraging for wild food on the rise, learning to accurately identify fungi reduces both poisoning risk to humans and harm to the environment.

This extensively illustrated guide takes a ‘slow mushrooming’ approach – providing the information to correctly identify a few edible species thoroughly, rather than many superficially. It models ‘ecological foraging’ – an approach based on care, conservation and a deep understanding of ecosystem dynamics.

Wild Mushrooming then takes us into the kitchen with cooking techniques and recipes from a variety of cuisines.

https://alisonpouliot.com/books/
In January 2021, yet another two species were officially recognised as Vulnerable to extinction under Victoria’s Flora and Fauna Guarantee Act 1988 (FFG Act). One of these species is the iconic Platypus Ornithorhynchus anatinus. The other is one of our not-so famous eagles, the Little Eagle Hieraaetus morphnoides. This species is already listed as threatened under legislation in South Australia, New South Wales and the ACT.

Most guidebooks will show that the Little Eagle is just one of two species of ‘booted’ eagle that call Australia their permanent home, the other being the much larger and readily recognisable Wedge-tailed Eagle Aquila audax. The ‘booted’ eagles feature powerful bills and feet and get their name from their heavily feathered or ‘booted’ legs.

The Little Eagle is stocky with a moderately long tail but quite small for an eagle, about the size of a Whistling Kite. Its long broad wings can still span more than a metre across.

The Little Eagle frequents and nests in Australia’s open forests, woodlands and open country, typically over rough, hilly terrain, and parts of the arid zone. It is less common in areas of high urbanisation, treeless farmland, rainforest and heavily timbered forest. It has not been recorded in Tasmania.

Adult breeding Little Eagles appear to form monogamous long-term bonds and reside in permanent home ranges for several years, while juveniles and individuals are known to be dispersive, travelling up to 2900 kilometres. Some adults known to breed in the ACT have reportedly migrated to winter in the tropics 3000 kilometres away, although more commonly they are recorded within 200 kilometres of their birthplace (Debus, 2017).

Interestingly last year (2020), (perhaps because I had a little more “COVID” time around the garden?), I recorded Little Eagle sightings around Kangaroo Hill, Denver, in January, from April through to July, often for several days in a row, and then nothing until late January and again into February 2021. I’m hoping one day I’ll be able to determine if I’m seeing the same individual frequenting the Wombat forest and Kangaroo Hill.

As with many other Australian raptors, one of the favoured food sources for the Little Eagle in Victoria is young rabbits, although they will also feed on birds, reptiles and large insects. Prey is generally taken from the ground following surveillance from a high perch or while soaring at very high altitude. With such a plentiful food source in Victoria’s bunny population, one has to ask how this magnificent raptor could become a threatened species in this state.

According to the Flora and Fauna Guarantee - Scientific Advisory Committee’s assessment of July 2020, the main threats to Little Eagles are clearing and degradation of its foraging and breeding habitat. The Committee’s assessment specifically quotes the following statement from Bradshaw (2012) as a reflection on the loss of eagle breeding habitat and nests sites in Victorian forests:

‘According to the Victorian Government, ~66% of the state’s native vegetation has been cleared since European colonization (DSE 2011), leaving 34% of the state’s land area covered by native forests. According to Lindenmayer (2007), this makes Victoria the most heavily cleared state in the country.’

It’s interesting to note that the Committee’s July 2020 assessment is relying on the department’s native vegetation data that is now 10 years old. I discovered that it’s not that easy to find reliable data on current state of native vegetation cover in Victoria. Needless to say I suspect that the figures would not be any better than those quoted for 2011. With ever-increasing loss of and disturbance to breeding habitat and nests sites by urbanisation, high density rural subdivision, agriculture and removal of mature...
native trees, protection of remaining native woodlands, remnant trees and grassland is critical in providing adequate foraging and breeding habitat for this species.

The assessment goes further to state that loss of breeding sites may bring the Little Eagle into increasing interspecific competition with the larger, dominant Wedge-tailed Eagle.

Secondary poisoning from anticoagulant rodenticides such as pindone and, less likely, 1080, used to control rabbits is also listed as a possible threat to Little Eagles. The Committee’s Assessment is not conclusive on this point, on the basis that Little Eagles prey mainly on juvenile rabbits, and that rabbit control is preferably deployed in the season when juvenile rabbits are not present. This highlights the importance of ensuring that any pest control measures are deployed with full consideration of broader potential ecological consequences.

As discussed in previous editions of this newsletter Issue 43 (March 2018) and Issue 53 (September 2020), my sightings of the Little Eagle just north of the Wombat Forest at Kangaroo Hill have been prompted by its whistling calls while soaring high on thermals over the hill, or the raucous calls of the magpies and ravens harassing it either in flight or while it’s perched quietly in one of the old Manna Gums. Without these calls or the disturbance from the other birds, sightings of the Little Eagle could easily be missed.

Without greater protections for remnant mature native trees, forests, woodlands and grasslands, the Little Eagle could sadly be gone forever.

References


Greater Glider populations at risk?

By Gayle Osborne

The State of Victoria continues to add to its long list of threatened species; recently the Platypus and the Little Eagle, and with the 2019-20 fires, the need to reassess the vulnerable status of the Greater Glider *Petauroides volans*. Should they now be considered Endangered or even Critically Endangered?

We know that there is an important population of Greater Gliders in the Wombat forest, but do we know if this population is secure? The Department of Environment, Land, Water and Planning (DELWP) have set up a long-term Greater Glider monitoring project. This is important as it has the potential to provide an understanding of the viability of the glider population, as well as evidence on which to make broader environmental decisions. This project will include the monitoring of glider populations in some of the planned burn sites.

Although we understand the value of research into the effects of these burns on Greater Gliders, there is the risk that the burns could cause the loss of the population from those sites. It is our opinion that sections with gliders should be excluded from the burn area. Scientists from the Arthur Rylah Institute for Environmental Research have set up plots in northern Victoria to assess the short-term impacts of planned burning and the effectiveness of mitigation measures for Greater Gliders, and therefore DELWP should wait for their report before experimenting with the Wombat population.

As well as the glider research project, there is a fire research project into the ecological effects of repeated low-intensity fire in a mixed eucalypt foothill forest in the Wombat forest. The sites are known as Fire Effects Study Areas (FESAs) and we are particularly concerned about the repeated burning of the sites that have glider populations.

The study areas were established in 1984 by the Department of Forest and Ecosystem Science, University of Melbourne, Creswick as a 30-year research project. “The aim of the study was to determine the impacts of repeated low-intensity prescribed fire on fauna, flora, soils, fuels, tree growth and defect development in foothill forests.”

There are five research sites, each site containing five plots of approximately 15 hectares. Two plots are subjected to 3-5 year spring and autumn burns, two are burnt every 10 years in spring and autumn and one plot is an unburnt control site.

Although an aim of the study was to investigate the impacts of repeated burning on fauna, incredibly, arboreal mammals were not included in the study. Therefore, the presence or absence of Greater Gliders on these sites was not recorded, meaning that the impacts of multiple burns on their populations could not be measured.

As far as we can establish, there are only published reports for the research on these sites for the period 1984 - 1999. It is not clear what research was carried out after 1999, however the sites continued to be regularly burnt. The FESA project was to conclude in 2014, however the burning of these sites has continued to the present time; with two burns carried out in February this year.

Wombat Forestcare has expressed its opposition to the further burning of these sites due to the populations of Greater Gliders on four of the sites and the threat to their continued existence on these sites. It should be noted that these sites are not within the Asset Protection Zones that are subjected to frequent burning to protect life and property.

The DELWP fire management team is adamant that the burns will continue, stating, “DELWP remains committed to continuing with the FESA program. The value of continuing to conduct burning and associated research in these sites cannot be understated. The knowledge gained about the effects of fire on forest health, fuel accumulation rates, and species presence and absence over time, will guide the design of our broader planned burning program into the future.”

continued next page ...
• Has DELWP carried out pre-burn fauna surveys, if so what did they find?

Wombat Forestcare is required to have an animal ethics permit to survey with motion-sensing cameras that use an attracting bait-station, as well as for our Greater Glider spotlighting project. There are rigorous conditions applied to our permit and we have to report annually.

We consider that the FESA burns clearly have the potential to impact on a matter of National environment significance being an EPBC-listed Vulnerable species. We believe this impact could be considered to be significant according to “significant impact criteria” as defined in the Australian Government Publication “Matters of National Environmental Significance – Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999” in that there is a real chance or possibility that it will:

• “lead to a long-term decrease in the size of an important population of a species”
• “reduce the area of occupancy of an important population”
• “adversely affect habitat critical to the survival of a species”
• “disrupt the breeding cycle of an important population”
• “modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline”.

Greater Gliders are a listed species and should be a focus of conservation and forest management, not the subject of a research project that could jeopardise their future. DELWP has a responsibility to ensure the ongoing survival of these gliders, all biodiversity and the resilience of the forest.

Note


References

Department of the Environment (Australia) (2013). Matters of national environmental significance significant impact guidelines 1.1


Aussies creating a stink in far away places

By John Walter

We talk a lot in this country about aliens and invaders from faraway places. One of our most common terms for them is that most derisive of words, weeds, and we spread the word around to cover any plant that does not conform to our sense of usefulness almost as liberally as we spread these invasive (or colonising) plants themselves. We have also been rather good at spreading our own species across the planet to invade the other continents and perhaps the most alien of them all have been our members of the Phallaceae or Stinkhorn family.

Bizarre, disgusting, grotesque and repulsive are all commonly used words to describe members of the stinkhorn family of fungi but everyone with more than a passing interest in fungi looks forward to the day they discover their first stinkhorn emerging from the decomposing plant matter, moss or soil before them. None of these words were recorded by the French naturalist Jacques Labillardière when he described his reaction upon sighting a specimen in 1792 of what he later named Aseroe rubra. Instead, Labillardière later wrote:

‘Je fus agréablement surpris de la forme singulière d’un nouveau genre de champignon qui sortoit du milieu des mousses dont la terre étoit couverte. La disposition de ses rayons me l’a fait nommer aseroe.’

A modern Google translation of this is:

I was pleasantly surprised at the peculiar form of a new kind of mushroom, which emerged from among the mosses with which the earth was covered. The arrangement of its rays made me name it aseroe.

This discovery was made at what is now called Recherche Bay in Tasmania and Labillardière’s subsequent description was the first description of an Australian fungus by a European. Labillardière did not mention a smell nor any slimy spore mass on the central upper surface and the drawing that accompanied his description shows the roughened surface where the spore mass would have been, but not the spores. We can only assume that a shower of rain had cleansed the fungus before Labillardière stumbled upon it.
The Stinkhorns are named for the strong-smelling brownish spore mass known as gleba which attracts various species of fly who either eat some of the mass or perhaps have some of it stick to their body and later disperse the spores to other areas. The smell varies with species but has been compared to rotting meat or to faeces. Fortunately, I have not noticed any strong smell on the species I have found, but then again, I wasn’t trying too hard either.

The Transactions of the British Mycological Society Vol One reported a number of fungi that had appeared at the gardens at Kew including A. Rubra. Cunningham listed it in 1942 as from Australia, New Zealand, New Caledonia, Malay Archipelago, Ceylon and England. A check on its distribution today includes such diverse locations as Hawaii, Madagascar, southern Africa, eastern USA and Central and South America. It is difficult to imagine such a dramatic fungus escaping detection for so long in places like the USA and they are now considered to be introduced.

There is one record for this species on the Atlas of Living Australia (ALA) at Mount Macedon and one from near Nolan’s Picnic Ground in the Wombat. These are FungiMap records and are likely to have been verified. There are also two records from Mount Macedon which have been posted directly to this site with images, but examination of the images indicates these are the next species and not A. rubra.

Our second stinker is the similar looking Clathrus archeri. The specimen in my image has four simple tentacles but it can have more, and they can be divided much like the A. rubra above. So how do you tell them apart? The simplest way is to look at the position of the stink (or gleba). On A. rubra the gleba is located in the centre at the base of the tentacles whereas on the C. archeri it is spread along the length of the tentacles.

It is a frequenter of mulch like the last species and has also developed a reputation for spreading around the world. One research paper I located maps its advance on Poland, beginning in France in 1914 and reaching Poland in 1973. This paper discusses the possible link between precipitation levels and the location of this species in Poland, suggesting the fungus needs an annual rainfall in excess of 600mm to develop a sporophyte.

ALA has three FungiMap records and one herbarium collection for Clathrus archeri in the Mount Macedon region and there is one positive record from near Blackwood on iNaturalist. I should note that ALA uses the name Anthurus archeri for this species, but this is the only site using this version of the name that I have found.

My own record, as seen on this page, was photographed on one of our Landcare project sites at Lauriston, just to the north of the Wombat State Forest.

The third member of the Phallaceae family (so named on account of the shape of some species) is Pseudocolus
fusiformis, and it can have three or four arms that are joined at the tip. It is otherwise similar to the Clathrus with its gleba spread along the inner surface of the arms. In my image you can see the egg-like sac that all members of the Phallaceae arise from. I located this species in the Otways and it appears to be limited to the wetter places in that region and to the east of Melbourne. I suspect it is not wet enough in the Wombat forest for this stinkhorn but it has been collected in the Grampians and our Wombat Forest has thrown up many fungal surprises so it pays to keep a look out in the wettest parts of the Wombat.

Our final species is the one you are most likely to find in the Wombat; it also extends into dryer regions and I have recorded it on my property at Drummond and also further north near Fryerstown. Its name is a bit of a mouthful, Ileodictyon gracile, which I generally pronounce eye-lee-o-dick-tie-on but I welcome any suggestions that may correct my ways.

This species forms a white cage or lattice-like frame with the gleba on the inside of the cage. It has been recorded for the Wombat Forest but it is not clear if it is this species or Ileodictyon cibarium which has a chunkier more wrinkled appearance. Both these species and the Pseudocolus have found their way to international destinations and are now entertaining fungi enthusiasts in South Africa and USA. While these four members of the Phallaceae family may look a little alien, they are in danger of becoming very cosmopolitan, albeit with a little help from human induced movement of materials around our planet.

Notes
1. Labillardière’s description is recorded in Relation du voyage a la recherche de la Pérouse published in 1800. An English translation appeared the same year titled Voyage in search of la Pérouse.
4. iNaturalist-world map of selected species.