LAND FOR VILDLIFE

voluntary wildlife conservation

Newsletter of The Land For Wildlife Program - December 2019



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Bushfire Response Information

If you see wildlife that appears to be injured or distressed as a result of the current bushfires, please contact your local DELWP office or the fire's Incident Control Centre.

Department of Environment, Land, Water & Planning, Victoria, Australia Land For Wildlife Victoria Website: https://www.wildlife.vic.gov.au/land-for-wildlife

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See last page for a list of Land For Wildlife Officers and Contacts.

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Provided in digital format to conserve wildlife habitat.

DELWP Customer Service

Phone the free-call number below if you have any questions relating to natural resources, wildlife and the environment.

136 186



Letter from the Editor

Dear LFW Member,

I sincerely hope that you and your family are safe and secure from the terrible fire situation in Victoria and interstate. If you need help or support, please contact The Department of Environment, Land, Water and Planning (DELWP) on 136 186 or the fire incident control centre nearest to you. The <u>last page</u> of this newsletter provides more information on how to help wildlife affected by bushfires.

DELWP is leading the management of injured wildlife in fire-zones. No independent rescuers are allowed on fire grounds unless they have the appropriate training and are then requested to attend by the local incident control centre.

For more information on other ways to help wildlife during and after the bushfires, or to donate <u>please click here</u>.

In this newsletter:

Restoring and protecting wildlife habitat are the two main areas members spend time on managing their property. Planning and implementing pest control is a also very high priority activity, with 85% of pest control activities either completed or underway. Restoring and protecting habitat by revegetating and fencing accounts for 57% of activities completed or underway. Fencing (page 14) is one of the most effective ways of protecting wildlife habitat.

Monitoring restoration and protection activities should also be a high priority activity. However, monitoring doesn't seem to rate very highly. To encourage and support members to do monitoring, two methods are presented in this edition of LFW News: on page <u>4</u> <u>Rapid Assessment Method (RAM)</u> and page <u>17</u> <u>Photopoint Monitoring</u>. When RAM is used with Photo-point Monitoring, it can be used to monitor changes in site condition over a period of time.

If you are interested in citizen science, <u>the article on page 8</u> invites you to become involved in a long-term monitoring program called WetMAP. Alternatively, the <u>article on page 9</u> invites you to become involved in monitoring Bogong Moths.

All the best and stay safe,

Peter Johnson Statewide Coordinator Land For Wildlife Victoria

Land for Wildlife Property Statistics

LFW Membership	Total Property Area	Habitat Being Retained	Habitat Under Restoration	Total Retained and Restored Habitat
4,800	525,550 ha	140,100 ha	22,257 ha	162,357 ha

Cover Images: Wildlife habitat restoration can be recorded using Photo-point Monitoring along with habitat assessment methods.

Read the article on page 4: Rapid Assessment Method Read the article on page 17: Photo-point Monitoring

Member Contributions

By, Ian, Vicki and Brett Hansen. Land For Wildlifers Since 1998

Peron's Tree Frog 14/01/19.

Wonderful surprise we received yesterday – despite the 41 deg. C in the shade!

We complained for years that no critter wanted to reside in a small box – purpose built for "Protected and Enhanced Environment"

There, sitting in the opening was a Peron's Tree Frog. Identification made possible by the crossed pupils, unique to this species apparently. The photo was taken from quite a distance away, so as not to disturb it. Ha!!

Vicki went out mid afternoon in the blistering heat to spray him. Do you think he appreciated it? Well, he moved closer to the opening. Quite amazing. This property always comes up with surprises.





Jim Kerr, Land For Wildlife member at Maryknoll

Early in the year, I came across a couple of unusual things - at least around here.

1. This is a ventilation 'chimney' from an under ground tunnel, built by Golden Back Honey Ants, one of the most common ant species ants here. It is almost in the middle in a wide clear patch of sand stony stuff at the house end of the 'drive', cunningly sited between where the car tracks are. It is only there in the hottest part of summer, and as shown is almost 50 mm tall - it lost a bit off the top due to heavy overnight rain. Cute bit of engineering. The two local Echidnas (one's a whopper) go after these ants every couple of months -place looks like a miniature battle of the Somme when they've finished.

2. Red Headed Spider Ant. Might see two or three a year. Did not know where their nest was until I found it early Winter 2018, about 60 metres from where this photo was taken. Have seen the odd one well over 100 metres away. This one was getting something from the edge of a new growth leaf on a Banksia Rose. I have seen several different types of ants, and some Yellow Lady Birds and their lava also messing about with these leaf margins - maybe some sort of sweet sap?

Regards, Jim





Rapid Assessment Method

Introducing the Rapid Assessment Method (RAM)

Ian Davidson Regeneration Solutions P/L

Ian has a LfW property on the edge of Wangaratta in NE Victoria and has developed a method of vegetation condition assessment that is used widely in NSW and may be applicable for landholders interested in understanding and monitoring the habitat on their property in Victoria. Ian managed the LfW scheme in the Goulburn-Murray Region between 1989-1996, when he worked with Greening Australia in southern NSW providing advice on habitat management for farmers from 1996-2002 and subsequently ran an independent environmental consultancy — Regeneration Solutions.

Ian recognized a need for land managers to understand the condition of their land as the first step in making land management decisions because using rules-based decisions from experts or literature often led to unwanted or negative outcomes, e.g. increased weeds or was inappropriate advice after a major disturbance, e.g. fire, drought or flood. The aim of empowering land mangers led to Ian developing the Rapid conservation Assessment Method (RAM).

RAM is a relatively simple method of vegetation condition assessment that is assessed and scored in the field. Other important information (non-scored) relevant to land management e.g. vegetation and habitat features and threats and disturbances are also recorded.

Why have the RAM?

The RAM enables land managers to assess the conservation value of one or many sites in a relatively short time frame and collate and compare with other sites. It was initially developed for use on Travelling Stock Routes in New South Wales.

The RAM coupled with establishing <u>photo monitoring points</u> (PMPs) can be used to monitor changes in site condition over a period of time (e.g. regeneration, weeds, grazing impacts) on selected sites. The basic competencies required are basic vegetation identification in the field e.g. main tree species and whether the ground layer is mostly native perennial grass or weedy.

RAM is not a flora or fauna survey, but rather a method to broadly categorise the vegetation condition of areas of native habitat. This helps inform basic management decisions based on the vegetation condition identified at the site.

Subsequent flora and fauna surveys of sites is recommended if resources permit, to determine floristic diversity and the presence or absence of particular species e.g. threatened plants.



Rapid Assessment Method

A simple assessment form is used for all assessments e.g. either naturally treed, shrubland/heathland or grassland and assesses values including Vegetation Structure, Large Trees, woody weeds and ground cover elements such as Weediness and Nativeness.

The field assessment score provides a vegetation condition rating at a point in time which can be, along with photo points, monitored over time to determine vegetation condition change. The condition assessment informs a modified Vegetation Assessment State and Transition (VAST) *based on <u>Thackway R. and Leslie</u> R. (2006) Reporting vegetation condition using the Vegetation Assets, States, and Transitions (VAST) framework. Ecological Management & Restoration 7(Suppl. 1), 53–62.*

The modified VAST model is used because it summarises the degree of change that has occurred to native vegetation relative to its estimated undisturbed condition. It is a useful model for land managers because it also incorporates an estimate of the regenerative capacity of modified native vegetation and the likely viability of revegetation actions.

For those interested in obtaining further information, see the Travelling Stock Route Rapid Assessment Method at <u>https://www.lls.nsw.gov.au/livestock/stock-routes/conservation-of-tsrs</u>, and for those wishing to be involved in a field day on the subject contact the LfW coordinator to determine the level of interest. (Ed. Note: Ian is currently developing a mobile app for the RAM which should be available early 2020.)

	Diagnosti c Criteria	High quality			Moderate quality		Low quality
3	RESIDUA O Native v commur natural	RESIDUAL	MODIFIED A	REPLACED	TRANSFORMED A	TRANSFORMED B	REPLACED
		Native vegetation community near natural	Native vegetation community intact	Native vegetation replaced	Native vegetation community significantly altered	Native vegetation community significantly altered	Native vegetation replaced
	Regeneration potential	Excellent potential for natural regeneration	Good potential for natural regeneration	No potential for natural regeration	Some potential for natural regeneration	Little potential for natural regeneration	No potential for natural regeneration
	Trees and shrubs	All vegetation layers (stratum) present	Most vegetation layers present	Natural vegetation layers absent	Overstorey vegetation mostly present	Dominant overstorey patchy	Natural vegetation layers absent
VAST	Ground layer	Ground layer has high species diversity	Ground layer has mostly high species diversity	Native species absent-sparse	Ground layer has low species diversity	Ground layer has few native species. Most groundlayer species are absent	Native species absent-sparse
	Attributes	Very rare, only small fragments remain	Best examples of local native vegetation. Few weeds are present	Native species absent-sparse	Moderate examples of local native vegetation. Up to half the groundlayer are weeds	Poor examples of local native vegetation. More than half the groundlayer consists of weeds	Native species absent-sparse
			ŝ.	Groundlayer dominated by weeds	S. S		Groundlayer dominated by weeds

Southern Brown Bandicoots

By Catherine and Clive, Land For Wildlife Members at Fyans Creek

What follows describes how we made the exciting discovery that we have a population of Southern Brown Bandicoots (SBB) on our property. We purchased our property in 2013, moving there permanently in 2016, with the view to managing it for biodiversity values, joining Land for Wildlife in 2013.

The property is situated between Halls Gap and Stawell at the foot of the Mt Difficult range, to the West it abuts the Grampians National Park. Much of the 145-ha property would have been grazed since the 1870's. It comprises partially cleared, but now fast-regenerating red gum flood plain (with many very large trees), yellow box/red gum woodland, and heathy woodland. An area of around 70 ha of mixed yellow box/red gum woodland has a medium to very dense bracken understory with glades of native grasses. There is a seasonal creek and an extensive associated seasonal wetland.

We started playing with trail cameras in 2013. This involved attaching cameras to trees either on our access road or obvious animal pads. We quickly discovered a few things:

- Animals know the cameras are there many images of kangaroo eye balls and possum whiskers.
- Cheap cameras don't last, the main problem for us was poor sealing which allowed small ants to get into the electronics with terminal results for the cameras, we don't know about the ants!
- Used in this way cameras are very useful for "catching" the larger fauna both native (kangaroos, wallabies, emus, magpies, choughs) and feral (fox, cat, deer, rabbits, hares).
- Depending on how long the cameras are left out you end up with hundreds or even thousands of captures. One can reduce the number of captures by playing with the camera settings, but this increases the likelihood of missing things. Videos take much longer to review than still photos.

In 2017 we started to experiment with baited camera traps to see if we could get pictures of smaller animals. We attached cameras to star droppers and aimed them at bait canisters (tea infusers baited with peanut butter, honey and oats) tethered to the ground.

The tea infusers were replaced with jam jars with perforated lids when we found that both brush-tailed possums and swamp wallabies broke the infusers open. Initial results were interesting but not exciting, lots of yellow-footed antechinus, brush-tailed possums, echidnas, wallabies (swamp and red necked), scrub wrens, blue wrens, babblers, and stumpy tails. Unfortunately, they also attracted the occasional fox or feral cat. We never seriously thought about SBBs because all available information suggested they were close to being regionally extinct.

Bandicoots are medium-sized, grounddwelling, largely nocturnal marsupials, with long-pointed snouts (image at right). These attractive little animals feed mainly on soil invertebrates which they burrow to obtain, leaving distinctive diggings. Sadly, SBBs have disappeared from most of their natural range in Victoria through a combination of habitat loss and predation by feral foxes and cats. SBB is Endangered nationally (EPBC) and Threatened in Victoria (FFGA).



Image: Southern Brown Bandicoot. Annette Rypalski, Mt Rothwell Biodiversity Interpretation Centre, Lara

Southern Brown Bandicoots

One morning I was trawling through images of wallabies, possums, antechinus, when there was something different. When I realised it was a SBB I almost fell of my chair! I scrolled back and forward through the captures to convince myself it was indeed an SBB (Image 2 below left). Independent SBB experts quickly confirmed that indeed it was an SBB.

Why all this excitement? Surveys conducted in 2011/2012 on the eastern and western fringes of the Grampians National Park found bandicoots at only one location near Pomonal. None were found in the Black Range which had previously supported a Bandicoot population. The newly discovered Fyans Creek bandicoots are therefore regionally very important, and possibly one of the most northerly populations in Victoria.

Once we realised there was at least one SBB on our property we wanted to get an idea of numbers and extent. Just from the vegetation type we realised there was a potential area of \sim 70ha on our property which was contiguous with \sim 40 ha of similar vegetation on crown land. So, we put out more cameras and started to move these progressively over the area (cameras were each left for 4 weeks).

We also started to look for SBB diggings. Typical SBB diggings (Image 3) are conical, being widest at the top and tapering to a point, unlike rabbit which do not taper. They are near vertical with one spoil mound placed between their hind legs. Size is very variable and depends on the soil type and moisture content, and the individual's size. They can range from 3-4 cm across and 6-10 cm deep, but can be more than 15 cm across and up to 15 cm deep.





To date we have recorded SBBs at most locations and estimate that they probably occur over an area of up to 70ha. We suspect that the dense bracken cover has allowed the Bandicoots to survive predation by foxes and cats. Our cameras capture images of foxes and cats in the open areas surrounding the dense bracken but we have yet to get a photo within the bracken itself. Probably the main threat to the newly discover population is fire, which would destroy the bracken cover and make the Bandicoots very vulnerable to predation.

So, maybe you have an undiscovered population of SBBs on your property? If you have an area of dense understory vegetation it would be worth looking for the characteristic diggings, installing some camera traps, or both. A good over view of Southern Brown Bandicoots in Victoria plus a video capture from one of the cameras at Fyans Creek can be viewed at:

https://www.swifft.net.au/cb_pages/sp_southern_brown_bandicoot.php

The Frogs Are Calling You

Are you interested in becoming a frog citizen scientist? You can help us find out how frogs respond to wetland watering in Victoria.

DELWP runs a large, long-term program called <u>WetMAP</u> (Wetland Monitoring and Assessment Program for environmental water) that monitors sites across Victoria, where water is delivered to wetlands to improve the health of frogs, fish, vegetation and birds. We are currently monitoring frogs and tadpoles and use automated recorders called AudioMoths to record frog calls.

Frogs are an important part of the natural world, but many types of frogs are in trouble and becoming threatened. Frogs are very sensitive, and act as early indicators of environment change and stress.

WetMAP is now incorporating a frog citizen science project, to help us investigate how frogs respond to water for the environment and their preferred water regime and habitat. We are seeking citizen scientists to visit wetlands across northern Victoria and record frog calls using the Australian Museum's free FrogID app which is available on iOS (iPhone) and Android phones. It is a fantastic tool that's easy to download and use. All you need to do is visit a wetland, take a recording, and press submit! The FrogID app will get back to you with details of what frogs were calling.

By working with citizen scientists, we will improve our scientific knowledge and increase awareness of water for the environment. This will also increase connections between WetMAP, scientists and those interested in frogs.

This new project is a collaboration between the Arthur Rylah Institute DELWP, Frogs Victoria, the University of Melbourne, the Australian Museum, Goulburn Broken Catchment Management Authority (CMA) and North Central CMA.

To sign up or for more information on how to register to be a WetMAP frog citizen scientist, head to <u>www.frogscalling.org</u>, or contact: lynette@frogsvic.org (Frog Citizen Science project lead, President of Frogs Victoria).





Frogs K. Victoria



Bogong Moth Tracker

The Bogong Moth is known as a significant food source for ancient aboriginal tribes traveling to alpine areas during summer. The Bogong moth is also a primary food source for the endangered Mountain Pygmy-possum during its breeding season. But in the spring of 2017, moth numbers crashed from around 8.8 billion in alpine areas to just a few individuals. This was observed again the following year.

The failure of moths to arrive in the highlands is very likely the cause of poor survival of pouch young for Victorian populations of Mountain Pygmy-possum over those two summers. The likely cause of this decline in Bogong moth numbers is a lack of rainfall due to winter drought and the effects of climate change impacting breeding grounds.

Released in mid-September 2019, Moth Tracker allows anyone, anywhere to geo-locate, photograph and log their moth sighting on any internet enabled device. The information gathered will provide open source data to the scientific community about Bogong moth numbers, locations and migration timing, assisting with bridging knowledge gaps and alerting the Mountain Pygmy-possum Recovery Team to early warning of possible failed migration in 2019. The be part of the Moth Tracker project, vicit the following website for more information: <u>https://www.swifft.net.au/mothtracker/</u>

One key difference between Bogong Moths (Agrotis infusa) and many other moths is a distinctive dark stripe that runs down each wing. You will also see a spot at the top of the stripe that is shaped like a circle. The spot at the bottom of the stripe is shaped like a kidney. Both dots are the same colour.



Nest Box Life-Span

Outcomes of decades long installation of nest boxes for arboreal mammals in southern Australia (Ross L. Goldingay Karen J. Thomas Devi Shanty)

Nest boxes are commonly installed to support hollow-using species where the abundance of hollowbearing trees is deficient. Recent studies have provided equivocal evidence about the effectiveness of nest box projects and have highlighted significant management costs associated with some projects.

We document the functionality of 303 nest boxes installed across five different community-led projects in southern Australia for periods of 10–25 years. As expected, we found that nest boxes lost functionality over time. However, 60% remained functional to support the Brush-tailed Phascogale (*Phascogale tapoatafa*) and the Sugar Glider (*Petaurus breviceps*) after almost 20 years. Years installed, method of nest box attachment and tree species influenced whether boxes remained functional.

Nest box construction material changed over time so could not be assessed specifically. When inspected in a single year, the Brush-tailed Phascogale occupied 9% of functional boxes and another 48% contained their nests. The Sugar Glider occupied 15% of functional boxes and another 22% contained their nests. These values suggest the nest box installations were highly effective for these species, although more detailed study is needed to understand what contribution these installations have made to support the local populations.

Maintenance of most nest boxes occurred twice a year in the first five years after installation, but many received no maintenance for periods of three years, and some 10–15 years, before our census. Our findings suggest that infrequent maintenance by community groups can sustain nest box projects over periods of several decades. Research into employing nest boxes as a management tool in Australia is still in its infancy. Further studies are needed to resolve factors that limit their effectiveness.

More reading (If reading online, click on the blue link provided or copy and paste the long link)

Bendigo Field Naturalists Club - nest box project

10

https://www.swifft.net.au/cb_pages/project_Bendigo_Field_Naturalists_Club-nestbox.php

Testing the effectiveness of nest boxes for threatened species

http://www.nespthreatenedspecies.edu.au/projects/testing-the-effectiveness-of-nest-boxes-for-threatened-species



Nest Box Life-Span

In 2015-2016 the Bendigo Field Naturalists Club undertook an audit of nest boxes placed in the forest since the 1990s. The audit and survey was undertaken to better understand the relevance of nest boxes for phascogale conservation in local forests and more generally their use by other hollow dependent species.

The audit aimed to establish how many of the previously installed nest boxes were still in place, their physical condition and repair needs, evidence of use by different species, and to collect baseline data to assist in future management and best practice decisions for land managers and stakeholders.

Key points from the decades long nest box study (relates to article on previous page):

- The study was conducted in sections of the Greater Bendigo National Park (One Tree Hill and Mandurang Blocks) and Bendigo Regional Park (Diamond Hill/Kangaroo Gully Sections), which are located south of Bendigo, Victoria. The study involved looking at the functionality of 303 nest boxes installed over 10–25 years. The nest boxes were spread across an area of approximately 4000 ha.
- A key fining from this study was that nest boxes could be used to support populations of the Brush-tailed Phascogale over many decades.
- 60% of nest boxes remained functional to support the Brush-tailed Phascogale, and the Sugar Glider after almost 20 years.
- Years installed, method of nest box attachment and tree species influenced whether boxes remained functional.
- Hanging boxes on a large nail was much more likely to be associated with functional nest boxes compared to boxes nailed through a backing board.
- In the Bendigo area attaching boxes to Red Ironbark trees had a much greater likelihood of remaining functional compared with Yellow Box.



Adapted from; (Goldingay, Thomas and Shanty 2018)

Wildlife Research Abstracts

High variation in camera trap-model sensitivity for surveying mammal species in northern Australia (Jaime Heiniger and Graeme Gillespie)

Wildlife Research 45(7) 578-585 Published: 30 October 2018

Full Text: http://www.publish.csiro.au/WR/fulltext/WR18078

Context: The use of camera traps as a wildlife survey tool has rapidly increased, and understanding the strengths and weaknesses of the technology is imperative to assess the degree to which research objectives are met.

Aims: We evaluated the differences in performance among three Reconyx camera-trap models, namely, a custom-modified high-sensitivity PC850, and unmodified PC850 and HC550.

Methods: We undertook a controlled field trial to compare the performance of the three models on Groote Eylandt, Northern Territory, by observing the ability of each model to detect the removal of a bait by native mammals. We compared variation in detecting the known event, trigger numbers, proportion of false triggers and the difference in detection probability of small to medium-sized mammals.

Key results: The high-sensitivity PC850 model detected bait take 75% of the time, as opposed to 33.3% and 20% for the respective unmodified models. The high-sensitivity model also increased the detection probability of the smallest mammal species from 0.09 to 0.34. However, there was no significant difference in detection probability for medium-sized mammals.

Conclusions: Despite the three Reconyx camera models having similar manufacturer-listed specifications, they varied substantially in their performance. The high-sensitivity model vastly improved the detection of known events and the detection probability of small mammals in northern Australia.

Implications: Failure to consider variation in camera-trap performance can lead to inaccurate conclusions when multiple camera models are used. Consequently, researchers should carefully consider the parameters and capabilities of camera models in study designs. Camera models and their configurations should be reported in methods, and variation in detection probabilities among different models and configurations should be incorporated into



Wildlife Research Abstracts

Physical and microclimate characteristics of Nyctophilus gouldi and Vespadelus vulturnus maternity-roost cavities

Niels Rueegger, Ross Goldingay A and Brad Law Wildlife Research 45(7) 611-619 Published: 5 November 2018 Full text: http://www.publish.csiro.au/WR/fulltext/WR18101

Context: Tree cavities suitable to rear young are a key resource in managed landscapes to support viable populations of tree cavity-roosting bats. Little is known about the selection of cavities for maternity roosts, presumably because of the difficulty in accessing such roosts.

Aims: Our study investigated physical and microclimate characteristics of maternity roosts of two species: Gould's Long-eared Bat (Nyctophilus gouldi) and Little Forest Bat (Vespadelus vulturnus).

Methods: Maternity-roost cavities were identified in a timber-production landscape in southeastern Australia. Roost trees (V. vulturnus n=5; N. gouldi n=9) and a subsample of available cavity -bearing trees (n=16) were climbed to obtain cavity characteristics.

Key results: V. vulturnus used tree hollows exclusively, whereas N. gouldi used both tree hollows and thick loose bark. No significant difference in roost-cavity characteristics was detected between the species. However, V. vulturnus selected significantly narrower cavity entrances (mean: $16\pm3mm$) than those of the available cavities. Long-term roost use may be influenced by the thermal property of a cavity.



Conclusions: Our study has provided the first detailed tree-cavity description of maternity roosts of N. gouldi and V. vulturnus. The nightly roost switching and the large variation of tree-cavity characteristics used by N. gouldi suggest that this species requires a high density of non-specific tree cavities that are large enough for colony formation, whereas preferred roost cavities for V. vulturnus are likely to be hollows comprising narrow entrances that facilitate long-term use.

Implications: Our results highlighted the likely importance of narrow roost entrances for *V*. vulturnus, presumably for predator protection, and the conservation of tree cavities large enough for colonies to congregate. The formation of such hollows is likely to take many decades. Poor silvicultural practices, land clearing and inappropriate management of veteran trees have the potential to have an impact on this hollow resource.

Fencing Wildlife Habitat

This article provides advice on the erection and operation of fences as they relate to wildlife concerns. Fencing construction is well covered elsewhere, however, some suggestions are made for fencing in difficult situations and for reducing costs.

How do fences help wildlife and landholders?

Fencing habitat is one of the most effective steps that can be taken to protect native vegetation, the wildlife dependent on it and the benefits it offers to a farming property. It's of note that 25% of LFW properties are primary production properties, where fencing provides shade and shelter for livestock, and is useful in erosion prevention by preventing stock from entering waterways.

By excluding livestock, fences protect native vegetation and the soil surface from browsing and trampling respectively. Some of the effects livestock can have on native vegetation are removal of flowers and seed heads, compaction of soil, spread of weeds, destruction of leaf and twig litter and prevention of natural regeneration.

A fence around native bushland ensures that livestock dung remains in the paddock where it is useful as fertilizer. This prevents accumulation under shade trees in native vegetation which may contribute to tree dieback. Natural regeneration as a result of careful fence placement is the cheapest means of obtaining revegetation. Fences protect understorey plants which are vital to many insectivorous birds.



Fences serve many functions for land managers. They are used as a barrier to the movement of animals. They can be an effective barrier to livestock and may also be a barrier to the movement of other animals including vermin and wildlife. Fences are a basic tool in the effective management of a property.

Fences help to prevent erosion, allow controlled use of different land systems, protect vegetation used to shelter livestock, reduce the risk of livestock death in dangerous areas, and reduce the time spent on transfer of stock around a property.



Fencing Wildlife Habitat

Effective placement

Consideration must be given to the most effective use of fences to achieve the separation of different land classes (e.g. rocky areas vs alluvial flats), efficient livestock movement (laneways, paddock exits), control of livestock mating and land protection (gullies, rivers and streams, dams etc.) including vegetation protection (bush areas, areas for regeneration or planting). Design factors that reduce the cost of labour spent on supervision and mustering should be considered and evaluated.

The usual technique is to draw up a plan of the features and issues of the property and then compare the existing layout with an 'ideal' situation, with the aim of working toward the new layout over time as finances and labour permit. It is often best to draw up the ideal situation first before comparing it with the existing layout so that the plan for the future is free of pre-existing constraints.



New plantings and new wildlife corridors have a lower priority than consolidating remnants but are still important considerations. The fencing plan should allow for revegetation. Areas with potential for natural regeneration should be considered as these will be more costeffective than revegetating with tubestock. Opportunities for working in with neighbours should also be considered.

Aim to protect or create a system of habitat patches and corridors by protecting remnants and creating further habitat in areas where it will benefit the property and wildlife. If possible, allow for at least some large patches of habitat.

Priorities

In terms of wildlife habitat, priority should be given to protecting existing remnants of the original native vegetation (select those in the best condition based on the quality of understorey) or consolidating existing remnants through expansion of their area and connections to nearby remnants. Larger areas should be fenced before small isolated remnants which have lower long-term viability. Streams should also be given high priority, particularly areas with wide vegetation frontages. These, and other areas with fertile soils, will provide high-quality wildlife habitat.

Other priority areas may be sites of rare or locally uncommon species. The least well represented habitats in the area/on the property should also have a high priority. Wetlands and rocky areas are often unsuitable for agriculture but high in wildlife values and should be fenced. A stand of dead trees, which provide important wildlife breeding and roosting sites, may need to be protected by fencing.

Problems for wildlife

Fencing can have negative impacts on wildlife, if not properly designed. For example, on a large scale, wildlife exclusion fences can form a barrier to wildlife movement. (Continues on next page.)

Fencing Wildlife Habitat

Problems for wildlife (continued)

To avoid problems for wildlife, select wire spacings to avoid killing wildlife and to use plain wire wherever possible. Electric fencing has reduced the need to use barbed wire in fencing and is more effective at containing cattle. In the context of Land For Wildlife, large-scale fencing to exclude wildlife may be inappropriate and should consider the movement needs of wildlife. Movement is an essential part of maintaining the health of wildlife populations.

Electric fences may cause the death of wildlife. For example, kangaroos may become caught in the wires of an electric fence and be killed by the current. Electric fences with live wires placed low to the ground may kill animals, such as echidnas and snakes. The echidna responds to the electric shock by raising its quills and can remain stuck in the fence until killed by the current. Sugar Gliders may land on the top wire of an electric fence and steady themselves by holding on to the next wire down. When shocked they cling on tighter and may perish. A more frequent hazard for gliding possums and birds is getting snagged on barbed wire on conventional fences.

Some specific suggestions for fence placement to permit regeneration and expand habitat areas, at minimal cost, are shown below:

- 1. Re-alignment of existing fences when they are due for replacement can offer scope to protect areas for rehabilitation with local native vegetation.
- 2. Double fencing is widely practiced in Victoria. It has the added advantage of eliminating the need to take down and dispose of the old fence in some situations. This method offers an opportunity to connect isolated patches of habitat with corridors. Particularly valuable when the adjacent area (e.g. roadside) has good remnants of the native flora which can be used as a source of



natural seed fall.

- 3. Fencing paddock corners, especially in areas with good roadside remnants of the native vegetation can be cheap and may substantially increase the size of a habitat patch. Dotted line = fence position.
- 4. A fence across the bend in a river offers protection to a large area, whilst requiring a minimum of fence. Note that, to reduce the risk of fence damage by floodwaters, fences should run in the direction of stream flow wherever possible (Dole, 1985).
- 5. The major advantage of a circular design is that it eliminates the need for strainer posts. Also, more habitat is away from the edge between pasture and bush than with linear designs, thus offering greater protection from the outside environment.
- 6. Fencing beside remnant trees, rather than beneath them (where seedlings may be suppressed), can allow for natural regeneration.

Photo-Point Monitoring

What is Photo-point Monitoring?

Photo-point monitoring is the process of undertaking periodical assessments or surveys, recording results, and periodically comparing and evaluating them to determine the effectiveness of actions or the progress of the projects.

Why should we monitor vegetation?

As land managers, it is necessary to understand how and why the land and its vegetation is behaving over time, and your memory is not as accurate as you like to think! Monitoring can help to:

- Record change over time
- Document the effect of management actions
- Document the extent and severity of (and then recovery after) extreme events eg flood or fire.
- Develop a benchmark against which future performance can be measured
- Use the information gained to determine management actions
- Show up a problem when it is still small

Photos are best used for monitoring relatively slow changes to vegetation. They build up into a valuable record to hand on to new owners, or to the next generation. What photos do not do is give exact details of species and sites, so each photo needs precise notes to go with it.

When to use Photo-points

Use photo-points to take the guesswork out of recalling how the country used to look. Use photopoints to monitor events such as:

- Fencing to remove stock
- Extreme events such as fire/flood/wind/hail/frost
- Pest plant (weeds) and animal control (eg rabbits)
- Revegetation both direct seeding and planting



Above images left to right: Sequence shows changes in dieback and revegetation improvement.

Setting up the Photo-point

The aim of doing Photo-point monitoring is to use the photographs as an easy method of comparison to record change over time so, when you take the initial photo, have it clear in your mind what change you expect, eg area revegetated, weeds replaced by native vegetation etc.

Your photo site needs to illustrate a distinct feature, for example:

- Exact location of Phytophthora Dieback front
- Boundary between burnt/unburnt vegetation
- Extent of salt/waterlogging/erosion/weed/rabbit affected area
- The growth and health of one particular representative plant
- Direct seeding of revegetation site

Related reading: <u>Thoona: 30 Years Later</u>. If reading this online, click on the blue text to see how Brendan O'Brien's property at Thoona looks like 30 years later, after 200 sheep were removed. The link takes you to the 2017 newsletter where there is a short article showing photos before and after.

Recent Publications



Illustrated descriptions of the 123 native, introduced and vagrant reptile species in the state.

Victoria's reptiles are not often encountered by urban dwellers, with many species now threatened. You may have glimpsed a skink darting into the undergrowth, a snake slithering along a walking path or a bluetongued lizard sunning itself near your garden shed.

Reptiles of Victoria is the first regional guide to all reptiles known to occur in Victoria. It contains keys and illustrated descriptions to allow identification of the 123 native, introduced and vagrant reptile species and describes their biology, ecology, distributions and the habitats in which they live. Natural history enthusiasts and professional and amateur herpetologists will find this an essential guide.

Available from CSIRO Publishing. <u>Click here for more information</u>. Or copy and paste the following website address into your internet browser: <u>http://www.publish.csiro.au/book/5260/</u>

An insight into the cognition, communication and social structure of this iconic Australian bird.

The Australian Magpie is one of our nation's most popular and iconic birds. It is loved for its impressive vocal abilities, propensity to play, excellent parenting and willingness to form enduring friendships with people.

Written by award-winning author Gisela Kaplan, a leading authority on animal behaviour and Australian birds, this second edition of Australian Magpie is a thoroughly updated and substantially expanded account of the behaviour of these birds. With new chapters on classification, cognition and caring for young, it reveals the extraordinary capabilities of the magpie, including its complex social behaviour.

The author, who has devoted more than 20 years to studying and interacting with magpies, brings together the latest research on the magpie's biology and behaviour, along with information on the origin of magpies, their development and health not published previously.



Available from CSIRO Publishing. <u>Click here for more information</u>. Or copy and paste the following website address into your internet browser: <u>http://www.publish.csiro.au/book/7677/</u>

Recent Publications



An illustrated introduction to the estimated 2000 species of Australian bees.

Bees are often thought of as yellow and black striped insects that live in hives and produce honey. However, Australia's abundant native bees are incredibly diverse in their appearance and habits. Some are yellow and black but others have blue stripes, are iridescent green or wasplike. Some are social but most are solitary. Some do build nests with wax but others use silk or plant material, burrow in soil or use holes in wood and even gumnuts!

A Guide to Native Bees of Australia provides a detailed introduction to the estimated 2000 species of Australian bees. Illustrated with stunning photographs, it describes the form and function of bees, their life-cycle stages, nest architecture, sociality and relationships with plants. It also contains systematic accounts of the five families and 58 genera of Australian bees.

Available from CSIRO Publishing. <u>Click here for more information</u>. Or copy and paste the following website address into your internet browser: <u>http://www.publish.csiro.au/book/7388/</u>

A fully revised, easy-to-read second edition providing the most comprehensive single study of tawny frogmouths.

The tawny frogmouth is one of Australia's most intriguing and endearing birds. Written by award-winning author Gisela Kaplan, one of Australia's leading authorities on animal behaviour and native birds, this second edition of Tawny Frogmouth presents an easy-to-read account of these unique nocturnal birds, which can be found across almost the entire continent.

Fully revised and updated throughout, this book combines 20 years of systematic observation with published research and information from regional surveys, and represents the most comprehensive single study ever conducted on tawny frogmouths.

This fascinating book has a wide appeal to bird lovers, amateur ornithologists and naturalists, as well as those with a scientific or professional interest in native birds, their communication, emotions and skills.



Available from CSIRO Publishing. <u>Click here for more information</u>. Or copy and paste the following website address into your internet browser: <u>http://www.publish.csiro.au/book/7762/</u>

Land for Wildlife Contacts

Land For Wildlife Extension Officers and Contacts are at the following Department of Environment, Land, Water & Planning Offices:

Alexandra, Benalla, Wangaratta, Wodonga & Upper Murray Areas

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Nigel Waterhouse 0428 395 639 nigel.waterhouse@delwp.vic.gov.au

East Gippsland, West, Central & South Gippsland

Kylie Singleton 0428 722 116 kylie.singleton@delwp.vic.gov.au

Ballarat, Bacchus Marsh, Ararat & Beaufort

Andrea Keleher 0409 018 910 andrea.keleher@delwp.vic.gov.au

Bendigo, Mildura And Swanhill

Peter Johnson 0429 260 760 peter.johnson@delwp.vic.gov.au

Heywood, Portland & Warrnambool, Geelong & Colac Areas

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Horsham & Grampians 0429 007 885 felicity.christian@delwp.vic.gov.au

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Bushfire Response Information

What you can do to help in the current fire situation

- Do not enter a fireground to look for injured wildlife. Even after a fire has passed, these should be considered as dangerous areas.
- If you see wildlife that appears to be injured or distressed as a result of the fire, please contact your local DELWP office or the fire's Incident Control Centre.
- Be careful in areas around the fireground wildlife will move away from the fire front and burnt areas. Motorists should be extra vigilant for animals along roadsides.
- Take care if you attempt to help injured or distress animals. Improper capture and handling techniques can cause further distress or injury to the animal and put the rescuer at risk.

All injured wildlife must be taken to:

- a vet; or
- an authorised wildlife shelter or foster carer.

You cannot care for wildlife at home unless you are authorised under the Wildlife Act 1975 or are a registered vet. Contact DELWP on 136 186 to find a wildlife shelter or foster carer near you.

If you see wildlife resting in your garden, you should keep people and pets away to allow the animal to rest and recover.

How to help wildlife impacted by the fires

During bushfires, local wildlife shelters can be inundated with enquiries from people wanting to help either directly or indirectly. Check on social media or community notice boards to see if there are any specific requests from shelters for items that they may (or may not) need.

To help wildlife around your home, leave out shallow bowls of water that wildlife can access – make sure to add some rocks or sticks in the bowl to allow smaller animals to escape should they fall in.

If you have a swimming pool and live near a fire-affected area, wildlife may seek water or refuge in your pool. Drape something over the edge of the pool so that animals can climb out should they fall in. Check your pool and the skimmer box for any trapped animals.

Help maintain safe access for wildlife migrating out of the fire area by keeping your dogs and cats contained and away from wildlife.

For more information on other ways to help wildlife during and after the bushfires, or to donate <u>please click here</u>.

Phone the Department of Environment, Land, Water & Planning on the following freecall number if you have any questions relating to natural resources and the environment: **136 186**