



LAND FOR WILDLIFE NEWS



Newsletter of the LAND FOR WILDLIFE scheme

Land For Wildlife celebrates the second annual Open Property Scheme & its 21st Birthday!

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Inside



Felicity Nicholls (Statewide LFW Coordinator - on leave) cutting the LFW 21st birthday cake at the Rumbelow's property 'Tajarawong' in Yandoit.

Photo: Melissa Donaldson



Editorial	2
Letters to the Editor	3
Practicalities	4
What to consider when fencing	
Latham Warin - a place of our own	4
Bush Detective	5
A grass-carrier wasp	
Did you know?	5
A nesting fish?	
Practicalities	6
Bringing back the bush	
Property Profile	6
Uptopotpon - teeming with life	
What does that green sign mean?	7
Land for Wildlife Open Property Scheme	
in the North West	7
Wanted Platypus Carer!	8
Property Profile	9
Bringing back the bush	
Eltham Copper Butterflies	10
Research	11
Woodland networks of the Euroa	
Plains	
Economic Benefits of Biodiversity	12
Shelterbelts - they're great value!	
TreeProject	13
Recent Publications	14
Properties for sale	15
Courses/Field Days	16
Contact List	16



Land for Wildlife
News
Vol. 5, No.3
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Editorial

Dear Land for Wildlifers,

I bring you wonderfully happy news, with the arrival of Hamish George Johnson in late November, weighing in at 9 pounds 9 ounces, with lots of red hair! Felicity and family are all doing well and getting used to a little less sleep.



I will be filling Felicity's shoes for the next year or so and look forward to my time as part of the Land for Wildlife team.

Before taking leave, Felicity wrote an article on the successful second annual Open Property Scheme held in September (page 7).

With the recent government election, there have been some changes in roles and responsibilities of Departments. The Department of Natural Resources and Environment no longer exists. There are three new departments that have taken on particular roles of NRE; the Department of Primary Industries (DPI), the Department of Sustainability and Environment (DSE),

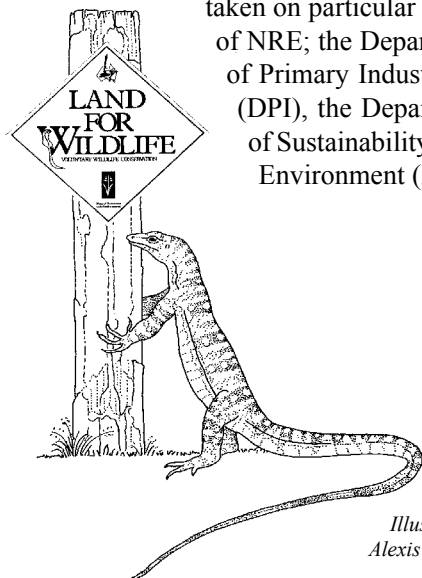


Illustration:
Alexis Beckett

DSE/DPI Customer Service Centre

Phone the freecall number if you have any questions relating to natural resources and the environment
136 186.

DSE/DPI Information Centre

Books, Posters, Info, Maps, etc.
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Fax: (03) 9637 8150
Email: publication.sales@nre.vic.gov.au
10% discount is available to all Land for Wildlife members. Please have your Land for Wildlife property number available.

Website

Go to www.nre.vic.gov.au and enter via plants and animals, native plants and animals and then Land for Wildlife

www.nre.vic.gov.au/notes/

Statewide Coordinator and Editor,
Pam Clunie
Department of
Primary Industries
Box 3100,
Bendigo Delivery
Centre,
Bendigo, 3554.
Tel: (03) 5430 4363
Fax: (03) 5448 4982
Email:
pam.clunie@nre.vic.gov.au

See page 16 for a list of where Land for Wildlife Extension Officers and Contacts can be found.

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and the Department of Victorian Communities (DVC). From the point of view of Land for Wildlife, there will be no change in service and the same field staff remain as your first point of call.

I hope your festive season was happy and relaxing. The Land for Wildlife team looks forward to the challenges ahead in 2003 and hopes to help you in achieving your conservation goals.

Pam Clunie
Statewide Coordinator
Land for Wildlife Victoria

Visit the Land for Wildlife Web site at
www.nre.vic.gov.au

and enter via 'plants and animals', 'native plants and animals' and then 'Land for Wildlife'

LFW MEMBERSHIP	PROPERTY AREA	RETAINED HABITAT	HABITAT UNDER RESTORATION	NEW PROPERTIES SINCE LAST EDITION
5831	566,395 ha	133,141 ha	23,027 ha	186

Figures include reductions to areas due to de-registrations of properties. Current at 1st January 2003.

Letters to the Editor

Dear Editor,

I took the attached photo in my ramshackle shed where I store supplies for my chooks. It appears that two Echidnas had come in, pulled over a bag of sawdust and were using it as a nest. They stayed in the bag for about a week. I have surprised one in straw in the corner of the shed before, but never seen two together like this.

Can you tell me anything about the mating habits of Echnidas?

Jan Lalor, LFWer, Beaufort



Photo: Jan Lalor, LFWer, Beaufort

Dear Jan,

It seems your local echidnas find your shed rather attractive.

Echidnas are found across much of the State, with their presence linked to adequate food supplies of ants and termites, and suitable shelter to sleep, suckle their young and avoid extreme temperatures and rain. Sheltering sites can be located in hollow logs, cavities in dense vegetation and litter and specially made tunnels. It is likely your shed provided an excellent sheltering site.

Echidnas are monotremes, meaning that they lay soft-shelled eggs and suckle their young through ducts on their abdomen.

While Echidnas spend most of their time alone, they come together during the breeding season (June to September). Sometimes they may form groups, with one female attracting a following of interested



Four Echidnas following a scent trail.

Photo: Geoff Nevill

males which are guided by a scent trail.

Another photo of an Echidna, this time swimming, was recently sent in. Echidnas are considered to be quite good swimmers. This Echidna may have needed to cool down or was simply taking the most direct route on his journey.

The Editor



Photo: John Dunlop, LFWer, Bullengarook

Dear Editor

I hope you will be prepared to put something in your newsletter about the importance of even small reserves and parks as resources for many creatures. I suggest all councils should be encouraged to plant native trees in streets to link the parks and reserves to create corridors. Graeme Pizzey said that many birds nest in street trees all over Australia.

I keep a birdlist from Warriem Reserve in Croydon and amongst many more common species, Cuckoo-shrikes and Olive-backed Orioles from the north breed there, Tawny Frogmouths appear (though I have never found a nest) and Grey Fantails and Golden Whistlers and flocks of Striated Thornbills, which are not common in the suburbs.

Ellen McCulloch

Dear Ellen

Suburban environments, from parks and reserves, golf courses, private gardens to street trees can certainly provide important habitat for native wildlife. They can act as corridors of habitat in a largely inhospitable environment. There are many ways we can improve the value of these areas - planting a range of native plants (from ground covers, small, medium and large shrubs and trees), using leaf litter and twigs as mulch, controlling weeds, providing nest boxes, creating ponds for frogs and providing bird baths safe from cats. The presence of native wildlife can also help reduce the need for chemicals, by acting as predators of garden pests.

The Editor

What to consider when fencing

Fencing is a common and effective way of protecting bush - both remnants and revegetation sites. If you're thinking of fencing, it's worth asking yourself a few important questions before you get started. The following information may help you, but always remember that each situation is likely to be slightly different, depending on local conditions.

What are you trying to exclude? There are different types of fences that are effective at excluding different types of animals. For example, to exclude rabbits and hares, you'll need wire netting fence. For cattle and sheep it is generally recommended to use fabricated wire, which is seven line, 90 cm high and 30 cm vertical wire spacings. Star posts can be spaced about 10 m apart for sheep, while for horses and cattle you should space them closer, at about 6 m apart. To prevent horses from running into fences, it is important to mark the top wire to make it clearly visible.

How long do you want the fence to last? If you build a good quality fence, it could last for over 30 years. You may only want to fence off an area for a few years until the vegetation is high enough to allow grazing animals back in. It is worth, however, putting the time and effort into erecting a good quality fence. Even if it's temporary, this will make it easier to recover the wire later.

What materials should I use? Fences are generally made of either wood posts or metal star posts. Star posts are often used because they are quick to erect, effective and relatively cheap. You'll need to consider how many end assemblies are required - these are erected at the corners and changes in direction. It's important to construct them well since they are the fence's foundation - they need to be buried deep enough and the soil around them packed down tightly.

What access will I need? You may need to include a gate within your design to provide for access. There are fabricated gates that you can buy or you may improvise with a 'mallee' gate which is made of wire.

What equipment will I need? There are many tools needed for fencing - shovels and crow bars to dig the holes, wire strainers, wire cutters, wire spinners, wire rollers, safety glasses etc. If you are doing a big fencing job with a group, you may want to consider buying tools together to share the costs.

Where should I put the fence? Consider how much land you want to protect with fencing and what factors may influence the life of the fence. For example, if the fence is located along a streamside it may be washed away or damaged during flooding. Placing the fence further away from the water's edge will reduce this risk and also increase the width of the buffer to protect the stream.

Further information. Your local fencing distributor may have useful booklets to help you. You may choose to either put up the fence yourself, or get a local contractor to do the job.

Happy fencing!

Pam Chunie, Land for Wildlife Coordinator



A typical metal star post fence.

Photo: Kevin Moschetti

Latham Warin - A place of our own

On Wednesday, October 2, 2002, Michael Kopanica from the former NRE came to our 'Bush Block' to assess it for the Land for Wildlife Scheme. We were thrilled to be accepted into the scheme that same day.

Our place, 'Latham Warin' is a 10 acre block of natural bushland 15 minutes north-east of Mansfield. It is 970 metres above sea level so we sometimes have snow in the winter. Michael confirmed that we have Manna Gums and Peppermint Gums with an understorey of Silver Wattle. He also identified Blue Gums at the back of the property - an exciting surprise for us. We know that we have a healthy population of Wombats, Echidna, Grey Kangaroos and Wallabies. There is also a great deal of birdlife including Wrens, Rosellas and Kookaburras.

We named our property Latham Warin. Latham is our family name and Warin is the local Aboriginal for Wombat (we think).

We love our place and we love sharing it with all the native wildlife and plants.

Tim, David, Robert, Stephen and Diane Latham, LFfers from Mansfield.



Tim proudly accepts a sign from Land for Wildlife Extension Officer, Mike Kopanica. Photo: Di Latham

Bush Detective Who made this? Who did this?



Photo: Ian Faithfull

What is this strange tuft of grass doing in the trunk of a dead Black Wattle?

This is a nest of a 'grass-carrier' (*Isodontia*) wasp. Nests are built in tree cavities (in Victoria usually in the trunks of eucalypts and wattles). Grass is used to close up the entrance and to construct cells within the nest. Sometimes you may see a nest tree with dozens of these grass tufts, particularly in hot dry years when the wasp's food source (including crickets and grasshoppers) is abundant.

Did you know.....?

Did you know that Freshwater Catfish make nests when they breed? Breeding occurs once water temperatures reach about 24°C in spring and summer. The male builds a nest from pebbles and stones, or sometimes simply in a small depression. Nests can be up to 2 m in diameter. Once the female deposits the eggs, the male keeps the nest immaculate, fanning and protecting the eggs. In about 3 weeks the larvae move away from the nest. The same nest may be used many times in a season, by more than one fish. This species, now rare in Victoria, can thrive in farm dams. It occurs naturally in the Murray-Darling Basin.

Practicalities

Bringing back the bush

Don and Meg MacMillan's revegetation project (see page 9) has been a real learning experience for them. The two biggest lessons they've learnt are to 1) minimise the edges you create and 2) thoroughly prepare each site for two years before planting into it. These approaches will help reduce future follow-up weed control.

They have tried two approaches to revegetate their paddock areas. The first was to spray out and mulch large teardrop-shaped areas, prior to planting trees, shrubs, grasses and groundcovers. This section has been incredibly successful, particularly as the ground storey established well very early on. However the spaces in between the mulched areas became problematic, providing a source of weed infestation, so they were eventually mulched up and planted too. Don and Meg feel the best approach would have been to mulch and plant the whole area from the start, but of course this would have increased the expense and the initial outlay of labour!

The second approach was to spray out and mulch small circles, then plant each one with a tree, a shrub and a grass. Don kept the pasture grass slashed between the circles until the tractor couldn't fit in amongst the branches anymore, then he kept it whipper-snipped to prevent it from seeding. Competition from the trees has weakened the pasture grass, and this year Don has sprayed it out and plans to re-establish native understorey species. An approach they might try is to direct seed Bidgee-Widgee (which has formed a wonderful groundcover under the first plantings), allow it to colonise the area, control any pasture grasses that emerge through it with a grass-specific herbicide, and then plant other understorey species when the soil-stored seed bank of pasture grass has been completely exhausted.

Whatever you do, when planting into weedy areas, Don and Meg say one spray is not enough. They recently prepared a new grassland area by spraying twice, but they say that even that is not enough. Effective weed control is especially important where you aim to establish native grasses, as weeding the exotic grasses out of these areas can become a real nightmare! They also mulch as they weed, so as not to leave bare ground which is vulnerable to fresh crops of weeds.

Kate Mackie, Land for Wildlife Extension Officer, Frankston

Creating wildlife habitat with trees, shrubs, grasses and groundcovers.

Photo: Don and Meg MacMillan



Property Profile

Upotipotpon - Teeming with Life

If someone had told us that in 12 years the 67 acre block of land pictured below would be teeming with wildlife, eucalypts and wildflowers we would have laughed. In fact if we had seen it 1989, we wouldn't have even considered buying it. However, nature has ensured that today it is teeming with life, just by doing little other than waiting. Originally sown to Phalaris for

Before



grazing, sheep were later removed and the land was left to regenerate. While there were initially few Grey Box, today the eucalypts have regenerated with a vengeance, some 20 feet high, along with swathes of Golden Wattle.

The first day we looked at the land, we recorded 25 bird species, which swayed our decision to buy it in 1999! There were huge patches inhospitable to anything other than Phalaris, which still grows in some areas. A large 2.5

After



acre stand of Tree Lucerne (*Tagasaste* sp.), planted in the early nineties, had very little birdlife other than the occasional White-plumed Honeyeater and Common Bronzewing feeding on the seeds underneath. The roadsides around the block have good, wide vegetation and the adjoining land was

the most promising area to start revegetating with scattered Grey Box, Golden and Gold-dust Wattle. Here we've recorded Hooded Robin, breeding Diamond Firetails, Crested Shrike-tit, Brown and White-throated Treecreepers, Red-capped and Scarlet Robins, amongst others.

We cleared the Tree Lucerne and planted an understorey to expand the available bird habitat and widen the road corridor. Clearing the Tree Lucerne took 18 months, well worth it when suddenly the place was filled with Superb Fairy-wrens, foraging in the piles of dead branches. The increased access for foraging has proved popular with many birds as well as Echidnas, four species of lizards and Blue Tongues.

In 2001, we planted about 1400 trees,

shrubs and flowers, all species that would have previously occurred in the area. These included small numbers of Grey Box, White Box, Green Mallee and Buloke. We planted five species of Wattles, Water-bush, Sweet Bursaria, Dogwood and several species of native pea. Flowers and herbs included Austral Indigo, Flax-lily, Diggers Speedwell, Grey Everlasting and Chocolate Lilies.

Ripping the area before planting enabled a high survival rate in dry conditions. Natural regeneration of Wattles and Rice-flowers also occurred in the rip lines. There was even regeneration of Gorse Bitter-pea, far from the nearest naturally occurring plants.

We had intended planting some understorey amongst the lightly scattered Grey Box, but decided against it after flushing a pair of Bush Stone-curlew; this was a warning for us to consider the needs of a range of species when revegetating. These ground dwelling birds need a clear view around them. We have also been controlling feral cats and foxes to protect the birds.

Now we are concentrating on thinning some of the Grey Box stands where there is little hope of understorey establishing. Red-capped Robins move in after thinning to take advantage of additional habitat. We've also undertaken Rabbit and Hare control.

Occasionally we are able to just wander around and see what is coming up naturally. Large groups of Creamy Candles, Early Nancies, Sticky and Common Everlastings, assorted Buttons, Showy Podolepis, Bluebells, Sundews and three species of Lilies have reappeared in the last three years. A highlight was finding a group of rare Leafy Templetonia, growing through stands of Wallaby Grass.

There's plenty to do, who knows, we may even build our house one day! We feel extremely privileged to be able to do our bit to improve the local biodiversity and provide a home for species becoming increasingly dependent on roadsides.

Debbie Colbourne, LFW Extension Officer, Benalla

*Before: The block in 1989 sown to Phalaris for sheep grazing.
Photo: Peter Adam*

*After: The block in 2001 after regeneration and planting in the same area.
Photo: Debbie Colbourne*

What does that green sign mean?

Over 600 visitors increased their understanding of the Land for Wildlife Program during Biodiversity Month (September) at the 2nd annual Land for Wildlife Open Property Scheme. Once again, the event was successful and this year, many cakes were cut to celebrate the program's 21st birthday.

Eighteen Land for Wildlife properties were opened over September, each representing a different habitat type, land use and an array of wonderful conservation activities carried out by landholders. Properties ranged from small hobby blocks, cottage accommodation, grazing properties, vineyards and urban properties.



*Above: Guest speaker Susie Duncan talked about woodland ecology at a LFW open property in Violet town.
Photo: Kate Stothers*

Visitors got to walk through large remnants of box woodlands, rainforest, wetlands areas and huge areas set aside for revegetation. There were guided tours, raptor demonstrations, birdwatching, BBQs, guest speakers, spotlighting, displays, dinner supplied and of course, cake cutting!

Thank you to the landholders who opened up their properties. They provided the opportunity for like-minded people to be in contact and to share in their ideas and experiences. I hope the hosts had as much fun as the visitors and the Land for Wildlife Extension Officers.

*Felicity Nicholls, LFW Coordinator
(on leave)*

Below:

Visitors admiring the flora at an open property in the south west.

Photo: Tanya Wood



Land for Wildlife Open Properties in the North West

During the recent Land for Wildlife Open Property Scheme that was held in the North West, I was approached by a number of Land for Wildlifers who were interested in allowing other members to visit their property if they were passing through that particular area - as long as some notice was given.

I believe that this is a very good chance to allow interaction between members, to share thoughts and ideas, and see what other Land for Wildlifers are doing to

encourage wildlife on their properties.

If anyone in the North West is interested in putting their name down or would like further details, please don't hesitate in contacting me on 5430 4368 or 0427 32 4113

*Shaun Burke, Land for Wildlife
Extension Officer, Bendigo*

Wanted - Platypus Carers!

Platypus Care is a new community-based program, co-ordinated by the Australian Platypus Conservancy in partnership with Melbourne Water and the Victorian Catchment Management Authorities. By collecting public sightings of the animals, *Platypus Care* aims to map where Platypus occur across Victoria – providing the first reliable basis for identifying where conservation actions are most urgently needed to protect small or declining populations.

If you live on a Land for Wildlife property containing potential Platypus habitat, you can assist *Platypus Care* enormously by completing the form below. In terms of building up a valid picture of Platypus distribution, it is just as important that we receive negative reports (i.e. no platypus ever seen) as positive sightings reports, especially from persons who have lived on a property for a few years or otherwise feel they know their area well. By the same token, we are keen to receive information about all types of permanent waterways (including small streams) as well as waterways which may stop flowing in summer.

Sightings records obtained through *Platypus Care* are entered into a secure database and used

for genuine conservation purposes only. Sharing your knowledge of Platypus will not cause any problems for the animals concerned. Indeed, the biggest problem facing Platypus conservation is human ignorance – starting with the fact that people are often completely unaware that their actions can have a major impact on animals living nearby.

To report Platypus sightings for non-LFW locations, please pick up copies of the standard *Platypus Care* reporting form from public libraries or the nearest CMA office. Platypus sightings can also be registered online by visiting the *Platypus Care* website (www.platypus.asn.au)



PLATYPUS CARE - Land for Wildlife Platypus Status Report

1. Contact details for the person providing this report (Please print clearly).

Name _____ Phone number _____

2. Land for Wildlife Property No. OR your property's name/address _____

3. Have platypus been seen in a waterway on your property? Yes _____ No _____

	2000-now	1990-1999	before 1990
Seen one time only in:	_____	_____	_____
Seen occasionally in:	_____	_____	_____
Seen often/regularly in:	_____	_____	_____

4. What is the name of the waterway? _____

5. How reliably does the waterway flow on your property? Always flows _____

Dries to pools (in more than 50% of years) _____ Dries to pools (in less than 50% of years) _____

Other pattern (describe): _____

6. Tick here if you would like your name (first initial and surname) to be included on the list of persons thanked on the *Platypus Care* website: _____

Please return your completed form to:

Australian Platypus Conservancy, PO Box 84, Whittlesea VIC 3757 (Fax 03 9716 1664)

Property Profile

Bringing back the bush

As part of Land For Wildlife's Open Property Scheme last year, about 65 people visited Don and Meg MacMillan's 7 acre property in Red Hill to marvel at their astonishing achievements in the last five years. This property was featured in Land for Wildlife News in September 1988 (Vol. 4, No.1), a year after the first major revegetation works had commenced on the property, and the MacMillans have never looked back! No matter how often I go there, I'm always amazed both by the energy and enthusiasm of Don and Meg who are constantly tackling new areas and trying different techniques, but also by the success of the project itself.

In June 1997 Don and Meg planted 2500 plants (trees, shrubs and groundcovers) into the lower section of their 3.7 acre orchard-turned-cow paddock, having been inspired by the success of smaller indigenous plantings at the top of the property near their house. This major undertaking involved spraying out the pasture grass and mulching about 1.5 acres, but the plants boomed in the rich moist basalt soil and thick mulch, so they started on another area - and then another, and another. To date about 5 acres of the property has been revegetated, and the first major planting at the front has been linked up to remnant vegetation on the disused railway reserve to the rear of the property. A small wetland provides frog habitat and attracts water-loving birds such as White-faced Herons, and the whole property is now a haven for many native birds, Swamp Rats and a regularly visiting Koala. Most of the gardens around the house and shed have now been converted to indigenous gardens, including a wonderful Weeping Grass lawn.

Ecologist Jeff Yugovic, our guest speaker at the open day in September, talked about planning a successful revegetation project, and introduced the term 'dynamic revegetation'. This is where plantings are managed so they become self-regenerating and self-sustaining, and the MacMillan's property is a perfect example of this! In fact one of the most exciting things about the habitat that they have created is that it is continually evolving and transforming - every time you go there it seems like a new experience.

This process of self-regeneration started early, as a dozen Kangaroo Apples planted in that first season seeded prolifically and became a primary coloniser, growing rapidly over the whole area and providing protection for other species. After several years these had become very woody and straggly, so Don and Meg cut them back and broke up the branches, which formed a wonderful mulch. Of course they continue to come up all over the property, but they are 'managed' by keeping them cut back hard and letting the foliage form mulch.

This first 'successionary stage' prepared Don and Meg for what would be constant changes in the environment they had created - from one year to the next the whole structure of the habitat changes as different



*What a difference five years can make - A paddock becomes wildlife habitat.
Photo: Don and Meg MacMillan*

species thrive and senesce. They are also now starting to see the first suite of seedlings naturally regenerating amongst the plantings - Eucalypts, Dogwoods, Snowy Daisy Bush, Senecios, Lomandras and of course grasses, and they keenly await the time when Wattles and Peas start to germinate too. Meg says "you have to wait until the soil is ready - when the conditions have become right the soil will receive the seeds and they will grow".

They have certainly learnt that the bush (even newly planted bush) is a force of its own, and they see their role as assisting the natural processes and enjoying the changes that develop naturally. They have carefully protected and weeded any patches of remnant vegetation on the property, and have been rewarded with the sight of natural regeneration of many species. Several grassland areas on the property have been planted and direct seeded - these areas were strategically designed to preserve sea glimpses, but are now turning into forest, with tree and shrub seedlings popping up through them. Meg shrugs and says "well you just can't hold back the bush".

And it would seem that there is no holding back Don and Meg either! They have put in a phenomenal amount of work over the years - planting, mulching, propagating plants (Meg now grows most of the plants they need), and of course countless hours of weeding. But the rewards have been great, and the progress they have seen along the way has kept them inspired to keep going. This couple are truly testament to the fact that we can recreate wildlife habitat wherever we are - with some hard work, even a cow paddock can become a thriving diverse habitat in a short period of time.

*Kate Mackie, LfW Extension Officer,
Frankston*

Eltham Copper Butterflies

Despite its common name, the Eltham Copper Butterfly is not restricted to this north-eastern suburb of Melbourne. Historically it has been found in several locations in western and central Victoria, and to the north and north-east of Melbourne. Increasing urbanisation and agriculture have seen a reduction in the range of this butterfly, and it is now only known from three main areas: outer north-eastern Melbourne (Eltham and Greensborough), Castlemaine, and Kiata.

The Eltham Copper Butterfly is protected under the Victorian *Flora and Fauna Guarantee Act 1988*. The soon to be released Butterfly Action Plan for Australian Butterflies recommends that it be listed Nationally as Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999*.

The adults have a wingspan of 25-27 mm. The wings are dark brown on the upper side with a shining yellow-copper central area, and the underside of the wings are a lighter shade of brown. The Eltham Copper Butterfly (*Paralucia pyrodiscus lucida*) only occurs in Victoria. It may be confused with the Bright Copper Butterfly (*Paralucia aurifera*) which can be found across southern Victoria, but this species is generally smaller in body size and the reddish-copper colours on the forewings are not as pronounced when compared to the yellow-copper wings of the Eltham Copper Butterfly.

Adults emerge in early summer, mate and lay eggs near the base of the caterpillar food plant, Sweet Bursaria (*Bursaria spinosa*). After they hatch, the caterpillars live underground in ant nests of the genus *Notoncus*. They come out to feed at night attended by the ants. Presumably the ants provide some form of protection to the

caterpillars. In return, it is believed that ants obtain food from the body secretions of the caterpillars. The caterpillars

develop through autumn to spring and pupate in late spring or early summer.

While Sweet Bursaria is widespread, the Eltham Copper Butterfly seems to only be found on Sweet Bursaria in dry eucalypt woodland with a more open understorey. Food plants are often stunted, and stripped of leaves by the caterpillars. Within a particular area where the Eltham Copper Butterfly is found, often not all suitable habitat is occupied. There tend to be localised patches, or local populations, of butterflies. Some may die out but this is balanced by new patches starting elsewhere. Hence a large area of habitat is required for long term survival because uncolonised habitats are required for colonisation. In most areas where the Eltham Copper Butterfly remains, there is inadequate surrounding land for colonisation, and so it survives in small numbers in remnant habitat. Habitats undergo succession, and as the understorey gets denser, the habitat becomes less suitable for the butterflies. In the past, natural wildfires would have opened up the woodland, and the butterfly would have survived because of new populations recolonising. This is harder now because of issues associated with burning small remnants with little or no adjacent suitable habitat.

Most Eltham Copper Butterfly populations occur on public land, but a few small populations are found on private land. Its long term survival relies on the appropriate management of public land (such as maintaining the open habitat, weed and pest control, and minimalisation of physical damage arising from recreation) and having potential habitat adjacent to reserves on private land.

The conservation of the Eltham Copper Butterfly has relied heavily upon volunteers. In Melbourne and Castlemaine this has involved Friends groups and field naturalists. Interested local residents and students have also assisted with monitoring the butterfly. Land for Wildlife members can also assist by remaining alert for this butterfly on their property, and if they own land within a few kilometres of known populations, by planting the local stock of Sweet Bursaria. If enough properties surrounding known populations have Sweet Bursaria, this may provide a life line for the Eltham Copper and increase its numbers.

Alan Yen, Invertebrate Ecologist

*An adult Eltham Copper Butterfly.
Photo: Alan Yen*



*Ants protecting caterpillars on a Sweet Bursaria.
Photo: NRE*



Woodland networks of the Euroa Plains

A fascinating aspect of wildlife research is how a surprising discovery can provide us with new insights. Recent research on the Brush-tailed Phascogale near Euroa in north-eastern Victoria is an example.

The Brush-tailed Phascogale is a small (up to approx. 250 g), mainly tree-dwelling carnivorous marsupial, which actively forages for spiders, large insects and other invertebrates, usually on the trunks and large limbs of trees. This distinctive native mammal, listed as threatened in Victoria under the *Flora and Fauna Guarantee Act 1988*, is sparsely distributed in dry woodlands and forests across central Victoria. Studies in extensive forest have shown that phascogales occupy very large home ranges for an animal of their size, with females foraging over 20-70 ha and males requiring more than 100 ha (see LFW News vol 1, No.10).

It was surprising then, to trap phascogales in roadside vegetation during a study of arboreal mammals on the plains west of Euroa. In this area less than 5% of tree cover exists, most occurring in a network of strips from 20 to 40 m wide along roadsides and streams. To understand how this species was living in the roadside network, nine phascogales (7 females, 2 males) were fitted with radio transmitters and their locations monitored for periods ranging from 5-15 weeks (March to July 1999).

The seven females occupied home ranges from 2.3 to 8 ha (av. 5 ha), less than one-eighth the average size of home ranges previously known for this species! The two males couldn't be tracked for long enough to accurately measure home range, however, one covered more than 20 ha in 9 days of tracking. Since they were living in roadside strips their ranges were quite long and narrow (from 710 to 2670 m in length), but each individual also foraged in small patches or clumps of trees in adjacent farmland. Most of these were nearby but some animals moved up to 285 m across a cleared paddock to reach clumps of trees.

Phascogales forage at night, and take refuge in hollows in a nest tree during the day. Each female used many different nest trees (from 5 to 19 trees over the tracking period) spread throughout its range, and moved frequently between them. Most

of these were Grey Box, the dominant tree species of this woodland habitat, and typically they were very large trees with an average diameter of >80cm (i.e. trees probably greater than 200 years old!).

Brush-tailed Phascogales living in this woodland habitat were in good body condition, and females successfully gave birth and raised young. Earlier, in 1997, nine females were trapped with from 5-8 young in their pouch.

Why are the home ranges of phascogales at Euroa so small compared with that previously found in extensive forests in Victoria? We think it's due to the high quality habitats in this area.

The remnant Grey Box woodlands on the Euroa – Longwood plains occur on relatively fertile soils, likely to contribute to a higher abundance of invertebrates on tree foliage and trunks as a food source for phascogales. These woodlands have also been spared from clearing or timber harvesting, resulting in a high density of large old trees in the roadside strips, more than 10 times the average in heavily managed Box-Ironbark forests. The large old trees provide essential tree hollows for refuge and breeding and, compared with young trees, provide a much greater range of foraging microhabitats (e.g. larger limbs, dead branches, crevices, peeling bark) for phascogales and other animals. Further, although narrow and limited in overall extent, the woodland strips, along roadsides and creeks are well connected so they can function as a linked system of habitats rather than isolated fragments.

It is important to note that the high quality of woodland habitat in this study area (i.e. high density of large old trees) is not an artefact but was apparently typical of these woodlands prior to European settlement. It suggests that Brush-tailed Phascogales were once much more common in Victoria than they are now.

*Andrew Bennett and Rodney van der Ree
School of Ecology and Environment, Deakin
University*

References

- van der Ree, R. and Bennett, A. F., 2001. Woodland remnants along roadsides - a reflection of pre-European structure in temperate woodlands? *Ecological Management and Restoration* 2: 226-228.
- van der Ree, R., Soderquist, T.R. and Bennett, A.F. 2001. Home-range use by the brush-tailed phascogale (*Phascogale tapoatafa*) (Marsupialia) in high-quality, spatially limited habitat. *Wildlife Research* 28: 517-25.



*Illustration:
Dawn Harris*

Shelterbelts - They're Great Value!

Shelterbelts and windbreaks are a common sight in Victoria's rural landscape. While many shelterbelts are comprised of exotic species, there is an increasing trend to plant native trees and shrubs in these linear strips. Shelterbelts represent an important part of the rural environment combining benefits for agricultural production and wildlife, particularly in areas that are otherwise devoid of native vegetation.

Economic Benefits

Shelterbelts, as the name suggests, can provide shelter for stock, crops and pasture and this can translate into important economic benefits. Clearly the significance of financial benefits will depend on the particular site conditions and the location of shelterbelts in relation to these conditions, such as prevailing winds. Benefits may be greater where extremes in weather conditions are experienced, such as wind, rain and temperature.

A range of studies have been conducted that quantify the benefits of shelterbelts. Protecting stock from chilling winds may improve livestock health, increase their productivity, reduce feed bills and reduce stock losses. Cold stress can reduce liveweight gain in cattle by 31% over several weeks. Sheep in sheltered areas can show a 31% increase in wool production, a 21% increase in live weight, and a 50% reduction in lambing losses compared to those in unsheltered areas. Milk yields of unsheltered cows can be reduced both by cold and hot weather. That's not to mention the personal benefits of treating your animals with thoughtfulness. Sheltered pastures may use 12 mm of water less than open pastures during the spring growing season.

This protection can also reduce wind and

water erosion and create a moist, favourable microclimate for a crop. Wind can expose plant parts to windborne sand. Sand blasting of cereal crops at the seedling stage can lead to reduced growth through moisture stress and physical damage. Wind can affect fruit trees by increasing fruit fall, increasing insect damage, destroying blossoms before setting and damaging and discolouring fruit. Planting shelterbelts can reduce wind effects on crops and livestock over a horizontal distance many times more than the height of the trees. The height and porosity of a shelterbelt is likely to influence how it affects wind speed.

Wildlife species attracted to a shelterbelt, including birds, mammals and insects, can also assist in protecting a crop by controlling pest species, and thereby help reduce the use of pesticides. Insectivorous bats can consume up to half their body weight in a single night. Sugar Gliders have been estimated to eat 3.25 kg of insects each year. Magpies can feed on up to 40 scarabs (soil-dwelling beetle larvae) each day.

Some farmers may be concerned that shelterbelts take up valuable production land and compete with crops for water and nutrients. It is likely however that the improved yields will compensate for any lost production. Creating a shelterbelt of both trees and an understorey of shrubs is usually the most effective design. Understorey plants help create an even porous barrier that reduces the tunnel effects of wind if trees are used alone, reduce erosion and improve soil fertility. Creating a wider shelterbelt may also increase its effectiveness both in providing shelter and in providing valuable wildlife habitat.

Single rows of trees may be vulnerable to strong winds and seriously compromised by any tree loss.

In addition to the potential for improving productivity, shelterbelts can provide long term benefits through wood products. Since shelterbelts can decrease windspeed, they may play a role in protecting farm assets from fire. There are also the obvious aesthetic values of linear strips of trees and shrubs through the landscape.

Left: A storm damaged extensive areas of this wheat crop. An area of about 35 times the height of the shelterbelt was protected by a patch of remnant mallee vegetation (the lighter coloured area adjacent to the shelterbelt).

Photo: Rob Murphy



Tree Project - Helping Revegetate Victoria

Urban communities help tackle the workload

We all know that the large scale removal of native vegetation has caused serious problems such as soil erosion, salinity, loss of habitat and reduced biodiversity. While this continues to impact on the environment, it can also affect on farm income, lifestyle and amenity.

Landholders know that reversing this loss of native vegetation is expensive, time consuming and difficult to tackle. To make it worse, many of the problems we see today are a result of past land management practices that were considered appropriate at the time. We also know that today's landholders are contributing far more resources, both financial and in-kind, to revegetation than any other sector of society.

TreeProject is an urban based, community organisation that has been helping landholders revegetate their land for 13 years. Its underlying philosophy is that the entire community is responsible for protecting our rural landscapes that provide all of us with food and other benefits.

Through its Re-Tree Scheme, TreeProject recruits urban and regional volunteers to propagate and plant thousands of indigenous seedlings each year for rural revegetation projects. Since 1988 TreeProject volunteers have grown and planted out over 1.2 million trees, shrubs and grasses on farmland across Victoria.

It's a fairly simple idea. Farmers, Landcare groups and other landholders place orders with TreeProject to grow locally indigenous seedlings. To ensure the seed is locally indigenous, we prefer landholders to provide their own seed that has been collected from their area, although TreeProject will provide seed where necessary.

This seed is then packaged up and included in a 'growing kit' (potting mix, forestry tubes, fertiliser and mulch), that is taken home by a volunteer grower.

Growers set up their 'backyard nursery', propagating and caring for the seedlings until they are ready to be planted out. Volunteer growers are also given propagation training and a detailed instruction manual and can contact an experienced TreeProject grower for on-going advice.

Many of these growers follow the course of their seedlings by going out to the farm and planting them out. It gives many volunteers immense satisfaction to see the fruit of their labour take off in the field. TreeProject encourages volunteers to grow or plant for the same landholders year after year, so they can see the long term progress of the seedlings they so carefully tended.

TreeProject volunteers come from all walks of life - old, young, city, suburban and regional, schools, groups, abled and disabled. Their common thread is their willingness to do something tangible for the environment. Along the way they also get to learn about and be a part of a rural environmental project.

Participating landholders benefit by getting low cost seedlings and assistance to plant out. Time and money are always constraints to tackling revegetation, but the help of volunteers can make the job that much easier. They also get to see the support out there in the cities for the good work they are doing, building strong links between town and country people along the way.

TreeProject takes orders for indigenous seedlings until October each year. They are grown from November onwards, and are ready for planting the following autumn or spring. The minimum order of 500 seedlings costs \$80.00, which includes organising volunteer planters if needed. A surcharge applies if TreeProject supplies the seed. For more information contact TreeProject on ph. (03) 9659 9477 or info@treeproject.asn.au.

Nik Round, TreeProject



TreeProject

Continued from page 12

Environmental Benefits

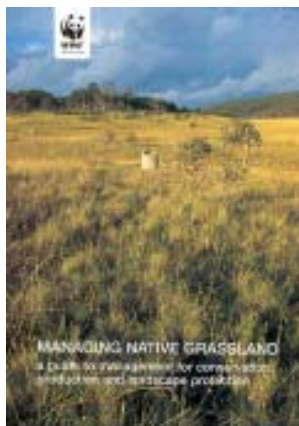
In a predominantly cleared environment, shelterbelts, along with roadsides and waterways, represent very important habitats for wildlife. Whilst larger patches are required to provide for the needs of area-limited species, shelterbelts can support a range of species. They can provide a link to larger patches of remnant vegetation such as state forest, national parks and reserves. Shelterbelts can act as a pathway for animal movement, either for annual or seasonal migrations, for dispersal or for food.

Please note the primary source of information for this article is the Living Systems Project [www.nre.vic.gov.au/ follow the prompts to Conservation and Environment, then Biodiversity, then Rural Landscapes].

DPI and DSE are currently working on a project 'Shelterbelts for enhancing biodiversity in intensive agricultural systems'. The results of this project will be reported in a future edition of the newsletter.

Pam Clunie, Land for Wildlife Coordinator

Recent Publications (see page 2 for member discount)



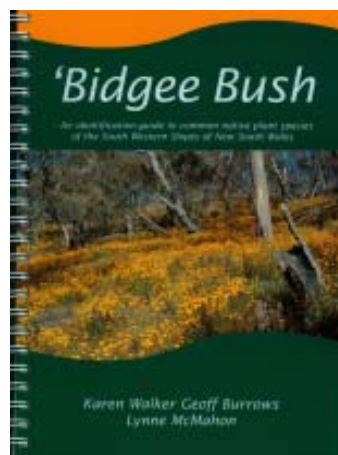
Managing Native Grassland: A Guide to Management for Conservation, Production and Landscape Protection. (2002). D. Eddy, WWF Australia. This 20 page A4 full colour guide aims to provide background information, guidance and encouragement to managers of native grasslands. It outlines why native grasslands need to be conserved, what threatens these habitats and what management is required in the long term for their conservation. WWF Australia. Free. Available from author deddy@wwf.org.au or can be downloaded from www.wwf.org.au.



Plains-wanderer Habitat Management Guide (2002). NSW National Parks and Wildlife Service. This is a photographic guide for visually assessing the grassland structure of Plains-wanderer habitat. The guide provides an easy-to-use tool for landholders interested in maintaining and managing habitat on their land. Photographs indicate the preferred habitat structure and amount of herb/grass cover and bare ground idea for the species. \$27.50. Available from DPI/DSE Information Centre (see page 2 for more details).



Learning to Live with a Wild Neighbour - Magpie Alert (2002). D. Jones. This book aims to provide the latest findings on suburban magpies, their attacking behaviours and how these are managed. It brings together many of the ideas and theories, methods and suggestions about how to deal with magpies in the suburbs. \$29.95. Available from DPI/DSE Information Centre (see page 2 for more details).



'Bidgee Bush (2002). Greening Australia. This photographic native plant guide was produced for those wanting to know more about native plants of the South Western slopes of NSW, however it is also relevant to the Box-Ironbark country in Victoria, which shares many of the same species. This easy-to-use guide contains descriptions and full colour photographs of 130 of some of the most common native plants in this area of NSW, as well as information on propagation and revegetation. Available from Greening Australia, NSW Inc Wagga Wagga (02 6921 8292) or gasws@bipond.com (\$35 incl. postage and handling) or by order from DPI/DSE Information Centre for \$33.

Conservation Properties for Sale

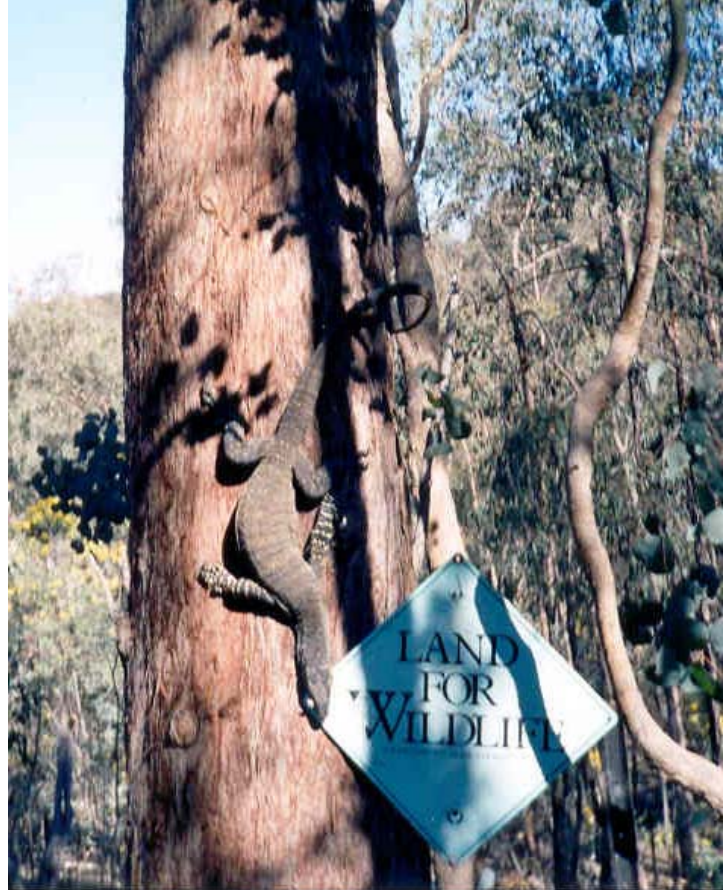
Glen Luce. Fifteen kilometres from Castlemaine. One hour and 20 minutes from the CBD. Six and a half acres with historic dwelling and breathtaking views of rolling pasture and forest. The land is on two titles. One title is a long strip which was the old road that passed by the house when it was a shop/hotel/election hall in the latter part of the 19th century. Consequently, the large box trees which grew either side of the road are still there, along with the beginnings of an understorey. There is a large dam to supply newly planted fruit, nut and olive trees. A new 10 000 litre tank supplies the two bedroom weatherboard in need of TLC. The land has had no poisons for 25 years. Kangaroos and wallabies roam and bird life is abundant. Access to Loddon River at the bottom of the hill. \$200 000. Phone Sue on 03 9534 9672.

Costerfield. Private and secluded with abundant wildlife, 3 acres (plus 13 acres DPI leased) in Heathcote Wine District, bordered on four sides by Costerfield State Forest. Two homes - a renovated three bedroom miners cottage and a modern north facing two-storey home, open plan, extensive glass all doubled glazed, both with electricity, air conditioning and wood heating. 26 000 gallon storage in water tanks, two dams, a winter creek, four bay machinery shed, glass house, wood, storage and work sheds. The house block of three acres is revegetated yellow and grey box with a variety of native flora, including orchids.

The property is located in close proximity to Rushworth and Grayton forests (Box-Ironbark National Park). There is easy town access (10 minutes), 45 minutes from Bendigo, one hour to Melbourne. Ideal for family, business or leisure. Asking \$225 000. Phone Brian and Joy on 03 5433 2867. Email greavesj@netcon.net.au

Yinnar South. A three bedroom house with study, lounge, dining and second living area. A colourbond barn and a gazebo, with ample water. The block consists of 10 acres of mature gums and shrubs with lots of other plantings. A few ferns and lots of native orchids. Abundant birds and wildlife

with a permanent koala population and lyre birds. The block is next to Morwell National Park with a school bus stop at the end of Stewart on nanand@austarnet.com.au



A Tree Goanna making itself at home at a LFW property in Upper Lurg.

Photo: Trevor Banfield, LFWer, Upper Lurg

Have you sold or are you thinking of selling your Land for Wildlife property?

If you sell your Land for Wildlife property, please inform the Extension Officer or Statewide Coordinator. We can then alter the database and invite the new owners to join. **The Land for Wildlife sign is the property of DPI and needs to be returned or picked up.**

Advertising your property here is free to Land for Wildlife members.

**Land for Wildlife
Extension Offic-
ers are at the
following De-
partment of
Primary Indus-
tries Offices:**

Alexandra

- (03) 5735 1240
- (03) 5772 0257

Bairnsdale

- (03) 5152 0400

Ballarat

- (03) 5333 6736

Benalla

- (03) 5761 1611

Bendigo

- (03) 5430 4368

**Central and West
Gippsland**

- (03) 5183 9103

Geelong

- (03) 9785 0134

**Portland and
Colac**

- (03) 5523 3232

**Melbourne area &
Port Phillip East**

- (03) 9785 0134

St Arnaud

- (03) 5495 1700

Wodonga

- (02) 6043 7947

**Other Land for
Wildlife contacts:**

Horsham

- (03) 5362 0765

Swan Hill

- (03) 5036 0832

**Bird Observers
Club of Australia**
PO Box 185,
Nunawading, 3131
(03) 9877 5342 or
1300 305 342
(country callers).

Courses/Field Days/Information Sessions

6th February 2003. Habitat Conservation and Management Course 2003.

Mornington. Greening Australia Vic. 15 week course. Cost \$880, 90% rebate for FarmBis participants. Joey Whitehead (03) 9450 5321.

7th February 2003. Getting Seed from Native Plants.

Victorian Landcare Centre, Creswick. Cost \$35/\$20 concession. Gayl Morrow 5345 2200.

9th February 2003. Healthy Land for Healthy Horses.

Castlemaine. Castlemaine Landcare Group, NCCMA and Future Family Farms NRE. Morgan Kurrajong (03) 5470 6394.

13th February 2003. Two lectures 1. Physical geography of Port Phillip and Western Port Bays: How and why it suits some bird species. 2. Identification of selected seabirds, shorebirds and others from around the Bays. BOCA, Edna Walling Room, 183-185 Springvale Road, Nunawading. Cost \$10/\$8 concession. Jenny or Trish (03) 9877 5342.

16th February 2003. Port Phillip Bay Cruise.

Led by Ken Simpson. BOCA. Sorrento or Queenscliff Pier. Cost \$27/\$24 concession. Jenny or Trish (03) 9877 5342.

18th February 2003. Using Fire in Vegetation Management.

Mt Martha. Greening Australia Vic. \$200/\$80 concession. John van Braam (03) 9450 5304.

20th February 2003. Herbicide Use in Natural Vegetation.

Monash University, Claydon. A seminar presented by the Weed Society of Victoria. Costs \$100/\$50 concession. (03) 9576 2949.

15th March 2003. Night Sounds of the Bush.

Peppermint Ridge Farm. Tynong North. Cost \$40 (\$20 for Cardinia Shire residents). 5942 8580.

16th March 2003. Introduction to Landcare.

Peppermint Ridge Farm. Tynong North. Cost \$40 (\$20 for Cardinia Shire residents). 5942 8580.

30th March 2003. Introduction to Sustainable Land Management.

Peppermint Ridge Farm. Tynong North. Cost \$70 (\$20 for Cardinia Shire residents). 5942 8580.

26th April 2003. Principles of Ecology.

Peppermint Ridge Farm. Tynong North. Cost \$40 (\$20 for Cardinia Shire residents). 5942 8580.



Don and Meg created this beautiful wetland and surrounding habitat in just two years. See pages 5 and 9 for their story.

Photo: Don and Meg MacMillan