Bush Matters

No 1/2004

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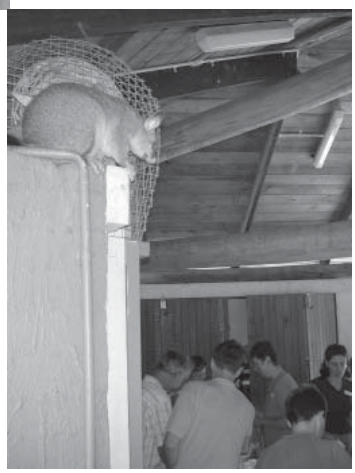
Department of Environment and Conservation (NSW)

inside.....

Conservation Partners' gathering at Bournda National Park on the Far South Coast.
March 2004

Above: Landholders learn about fire planning.



Right: Mum possum showed alot of interest in the cinnamon bun at morning tea.

Photo: J,Miles

Bega Dry Grass Forest, an endangered ecological community found near Bega on the Far South Coast.

CONTENTS

... from the Director General

Since the last ***Bush Matters***, Dr Tony Fleming has been appointed as the Deputy Director General, Parks and Wildlife Division within the new structure of the Department of Environment and Conservation. The new Parks and Wildlife Division will contain five Branches which broadly constitute the previous four NPWS Regional Directorates and the new Reserves and Wildlife Conservation Branch. The Conservation Partners Program will continue to run within this Branch. Tony was previously the Director of the NPWS Southern Directorate and so has a knowledge and background in key programs run by NPWS including the Conservation Partners Program.

I am pleased to see that this edition features the landholder Gatherings held on the Far South Coast and Central Coast. Landholders with Voluntary Conservation Agreements, Wildlife Refuges and Land for Wildlife properties in these regions had the opportunity to meet each other as well as local NPWS staff and local government, Rural Fire Service and community group members to share experiences and knowledge. One of the key objectives of the Conservation Partners Program is to provide opportunities for landholders to obtain support and advice. We are keen to hear from landholders as to how best we can support their efforts to manage their land, but I understand that the opportunity to network with other landholders was enjoyed by all who attended the gatherings.

LISA CORBYN
Director General
Department of Environment and Conservation

Talking about land tax...

On the 6 April 2004, the NSW Treasurer, Mr Michael Egan, announced a mini-budget for NSW. One of the items of interest to readers of **Bush Matters** relates to changes to Land Tax.

The threshold for payment of Land Tax will change but there will be no change to the current eligibility rules for exemptions from Land Tax.

In the past you may not have been concerned about Land Tax because the threshold meant that many people with additional properties to their principal place of residence did not have to pay Land Tax. In the financial year 2003-4 for example if your property was valued at less than $317 000 you did not have to pay Land Tax. This threshold has been removed for 2004-5.

If you think that you may now be eligible to pay Land Tax on land protected by a VCA you may be exempt if the primary purpose for your agreement is to maintain threatened species, populations or ecological communities.

If you think that you meet the criteria for an exemption you can contact Louise Brodie on 9585 6671 to request documentation from us that can be provided for your submission to the Office of State Revenue.

If you need further advice on Land Tax issues more generally contact the Office of State Revenue directly on 1300 139 816, or visit their website at http://www.osr.nsw.gov.au or seek advice from your accountant.

Linda Bell,
Landscape Conservation
Partnerships Coordinator

Fire Planning

At the landholder gathering on the far south coast, John Cullen and Greg Potts from the Rural Fire Service talked about fire planning.

Most important is the need to communicate with your local Rural Fire Service. Getting involved and joining your local RFS would be even better. Training session will help you to understand how fire behaves and how you can best minimise damage to your property with good planning and preparation.

Good communication is important so that the local RFS know the sort of fire planning that you have carried out, and where they can best access your property and any relevant equipment that is needed.

Their message regarding planning for fire stressed the need to identify the assets on your property which you want to protect from fire – this includes buildings and equipment. For areas being managed for conservation, assets also include wildlife habitat and threatened plants and animals.

Conservation Partners Gatherings

Networking is an easy way to find out what other people are doing, especially if those people all have something in common. Gatherings held earlier this year provided the ideal opportunity for landholders to network with each other and officers from DEC and other organisations, both on the Central Coast and the Far South Coast.

...on the Central Coast

Pretty Beach and Kincumber Public Schools hosted a gathering for VCA, Wildlife Refuge and Land for Wildlife landholders on Saturday 1st May. These two schools have joined the Land for Wildlife Program. Our partners travelled from around the Central Coast and the Hunter Valley on a superb autumn day to meet fellow landholders, Council, NPWS (now part of the Department of Environment and Conservation - DEC) and Central Coast Community Environment Network (CCCEN) staff, to share information and experiences.

The day started at Pretty Beach Public School where Catherine Price from DEC spoke about the Bush Stone Curlew, a threatened bird that is found along the coastline and bays of the Central Coast. Catherine is keen to hear of any birds that may be seen or heard in the area and it was useful to be reminded of their call or hear it for the first time. Rachel Lonie from Gosford Council spoke about the Gosford Council's fox baiting program and the program of events for landholders to become involved. This was followed by a walk with Doug Beckers (from the local Gosford Parks & Wildlife office) in the bushland at the back of the school. This bushland backs onto Bouddi National Park and we learnt about monitoring of regrowth following fire hazard reduction burns that have recently been carried out. Doug also explained a range of monitoring techniques that can be undertaken on your property and the value of accurate record keeping. Kate Consterdine and Steve Honeywood told us about the efforts and achievements of the school's bushcare group and the importance of maintaining the School's creek which is home to the Red Crowned Toadlet.

©DEC: S.Ash

Di Warman shows participants the bushland restoration in the school grounds at Kincumber School, near Gosford .

John Asquith (CCCEN) spoke about the unique natural environment on the Central Coast. When selling properties, those with bushland and wildlife habitat should be promoted for these qualities rather than for potential development or horse grazing. The CCCEN is working with the Real Estate Institute on this approach. David Green advised the group that DIPNR (Central Coast Region) had $90,000 available for 'on-ground works' associated with landholder commitments to long term property agreements and Di Warman and Doug Beckers helped us discover the recovery and habitat potential of the bushland at Kincumber Public School.

Thanks to all who helped organise and host the day and to our partners for coming along and sharing experiences.

Sally Ash, Conservation Partners Coordinator

.....on the Far South Coast

Bournda National Park was the venue for the Conservation Partners Program on the Far South Coast. In this region there are 56 landholders with agreements and another 10 with Wildlife Refuges. The 'gathering' brought together a number of these and people from Parks & Wildlife, both locally and from Sydney, and representatives from the RFS, to meet and discuss issues of mutual interest, including the management of the bushland and habitats on their properties.

Marcus Sandford from the Merimbula NPWS Regional Office was our M.C. for the day, ably assisted by Parks & Wildlife Rangers who organised the eats and showed talent at the barbeque. Fire was a 'hot topic', being of interest to everyone and John Cullen and Greg Potts from the Rural Fire Service were there to talk to the group. Peter Windle from the Merimbula Parks & Wildlife office talked about fire and its role in the maintenance of flora and fauna habitats.

Local ecologist Jacky Miles told us about the endangered ecologcal communities in the area.

The group discussed a range of other topics relevant to conservation on private land such as local successes in managing weeds and pests as well as the protection of endangered plants.

Thanks to everyone for their input and enthusiasm.

Louise Brodie

'Taralea'-

landholders managing an endangered ecological community. Ian and Aimee Curtis talk about their experience.

On purchasing land which was part of the Kameruka Estate near Bega, Ian and Aimee Curtis did not expect to end up managing vegetation which is an endangered ecological community.

Kameruka estate is known for its long association with cheese production. The homestead at Kameruka was established by the Walker Brothers who took over the then 200000-acre cattle run in 1844. They were from Scotland and set up the estate in the style of the landed gentry in Britain.

Candelo Dry Grass Forest on Taralea

The land changed hands a couple of times and in 1862 was sold to Frederick Tooth who, in turn, sold it to his nephew Robert Tooth in 1864, who began to develop the largely self-contained community, based on the English agricultural estate system.

Over the years the original land holding has been broken up and parts sold, and it was in 1996, that the Curtis's were able to purchase 10 hectares.

The Curtis's became involved in Landcare projects on their land and in the local area. They were lucky enough to be visited by local botanist, Jackie Miles sho identified that the vegetation was an endangered ecological community – the Candelo Dry Grass Forest.

Candelo Dry Grass Forest is found in the Bega and Towamba Valleys in South East NSW, on fertile soils in rain-shadow areas. Being in fertile valleys, these areas were cleared for agriculture. It is thought that only 10% of this vegetation remains with most of this on private land. The remaining vegetation patches are subject to further clearing, grazing and weed invasion. Preferential grazing may also have changed the composition of the understorey and inappropriate fire regimes may also be a threat. It differs from other communities in the South East Forests with the presence of yellow box (*Eucalyptus melliodora*), snow gum (*E. pauciflora*) and grass and herb species more usually found on the tablelands.

Weed invasion by *Eragrostis curvula* (love grass) in the region further threatens this community.

To help ensure the long-term survival of this vegetation, the Curtis's decided to have a conservation agreement over 3.8 hectares of their property put in place at the end of 2002.

Jackie considers their remnant to be an exceptionally intact example of this community. Previous use of the land involved only light or intermittent grazing, and this has allowed the vegetation to be dominated by native grasses and a good diversity of native herbs.

Aimee and Ian have been monitoring the health of the remnant and are managing threats to ensure the integrity of the area is maintained.

African lovegrass poses a threat, but is able to be controlled by regular removal or spraying. An eye is kept out for serrated tussock which occurs nearby, so that control could be undertaken to prevent subsequent invasion. Some native grasses on the site have a similar appearance so identification needs to be accurate. Other weeds such as blackberry are seen occasionally and are controlled.

Planning for the use of fire, thinning of tree regeneration and the use of grazing are all being considered as tools so ensure the area maintains the diversity of groundlayer species.

How do we get the time? - *Jim Collins who has a conservation agreement on part of his property at Bega, talks about the challenges of managing this land.*

We entered into a conservation agreement over part of our property 'Grevillea Estate' fifteen years ago. The area under the agreement has had stock excluded for over twenty years.

Our conservation area, unlike most of the Bega valley, is not granitic. It is covered with rocky immature soils of volcanic origin being located on a small flow of dolerite.

This made it difficult to clear and work commercially for farming. It could not be cultivated so the original vegetation is still largely intact. It is unusual to find in the centre of cleared pasture a patch of *Eucalyptus dives* forest with an understorey of correa, persoonia, bursaria, pterostylis and the like.

Farming and conservation

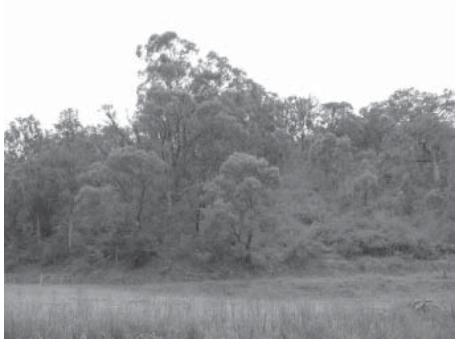
At a recent gathering of landholders with VCAs on their properties, one fact was obvious. Mainstream dairy farmers were notable by their absence from the group of landholders with agreements. The reason is not that they are disinterested. The reason is the same one that has left so many tasks that we should wish to have carried out on our VCA, undone. Commercial farmers generally are subject to commercial pressures which dictate that they focus almost exclusively on their farming activities.

The net result of this is that apart from excluding livestock, our management of the conservation area involved doing virtually nothing over the twenty year period.

There are lessons to be learnt from the bushland in our conservation area, and how it has responded to this lack of attention.

First the plusses of doing little in the conservation area apart from excluding stock:

- Wherever there was a gap in the canopy, young Angophoras and Eucalypts have filled the gap.
- The understorey has thickened and now in places it is impenetrable.
- Amazingly , although only three kms from the town, the area now has a considerable population of mammals:- possums, bandicoots, wallabies and wombats.



- Apart from diamond firetail finches, bird species have survived.
- As the forest thickened, blackberries are being suppressed
- A small cleared section is being colonised by *Eucalyptus* sp., *Bursaria spinosa* etc.

Next the minuses which are the problems which we have due to little attention to work which was needed in the conservation area.

- Large and small leafed privets have invaded the forest area, particularly in the moist gullies.
- There are a number of love grass plants scattered throughout the area.
- There are three houses on the eastern side of the area. Without fire for twenty years, the fuel levels are very high on a steep western slope below the houses.
- A small rabbit population seems to be immortal.

How do we get the time?

Having recently retired, I look forward to finally being able to spare the time to attack some or all of the above problems.

I also intend to look at the possibility of re-introducing species I know existed in the are originally eg *Hakea sericea*.

Endangered ecological communities on the Far South Coast

The four endangered ecological communities on the far south coast region, are mainly within Bega Valley Shire.

How much is left?

- *Candelo Dry Grass Forest*
- *Bega Dry Grass Forest*

Around 90% of both of these estimated original communities has been cleared for agriculture, and virtually all of the remaining fragmented area occurs on private land or small parcels of public land such as roadsides, cemeteries and Travelling Stock Reserves.

- *Brogo Wet Vine Forest*

Around half of the estimated original extent of Brogo Wet Vine Forest has been cleared for agriculture with all of the remaining stands on private land.

- *Dry rainforest of the south east forests*

The total area of the community is believed to be less than 100 ha, with most restricted to small patches of less than 2 ha.

Jackie Miles, Ecologist

Below: Brogo wet vine forest and dry rainforest. Photo: J.Miles

Frogs of Western NSW

identifying them and helping frogs survive.

Australia is home to over 200 different species of frogs, many of which occur in coastal and inland New South Wales. Most people think that frogs are only found in wet environments such as wetlands, creeks, rivers, dams, ponds and swamps. However, a number of frog species are also found in arid and semi-arid environments that may not contain water for quite a long time. Some of these dry environments include sand dunes, clay pans, dry creek beds and mallee.

There are many different types of frogs found in western NSW, each especially adapted to living in their particular environment. Tree frogs are the most commonly known types. Tree frogs have small discs on their toes that enable them to climb up vegetation and other objects such as buildings and fences. Different species of tree frogs are found throughout NSW. Some of the more common known species include the Green Tree Frog (most NSW except SW corner), Peron's Tree Frog (most NSW except NW corner), Desert Tree Frog (most NSW except coastal) and Red-eyed Green Tree Frog (coastal NSW). Tree Frogs generally require some moisture throughout the year and are usually found around wetlands and swamps and built structures such as toilets.

Ground dwelling frogs are also commonly encountered throughout NSW. These frogs do not have the distinctive toe discs and are generally found near or at the edge of waterbodies where they shelter and hunt for food. Common ground dwelling frogs include the Striped Marsh Frog (coastal) and its inland cousin, the Spotted Marsh Frog. Other ground dwelling frogs include the Barking Marsh Frog (known by its call that sounds similar to a dog barking) and many small froglets that are often no bigger than your fingernail.

The other type of frogs that are found in western NSW are burrowing frogs. These frogs spend most of their time hibernating underground and can do this for years at a time waiting for rain. After substantial rains and given the right temperatures they come to the surface. Here they feed and breed in a frenzy so that they have eaten and reproduced before the water dries up. Burrowing frogs are able to survive the hot and dry conditions in western NSW because the ability to burrow underground allows them to escape the desert heat. One third of Australia's frogs do this. Most burrowing frogs have large bumps on their feet that enable them to dig a burrow in which to escape the hot, drying conditions on the surface. Some of the more commonly known burrowing frogs include the Pobblebonk or Giant Banjo Frog, Crucifix Frog and Common Spadefoot or Painted Burrowing Frog.

Poster

"Frogs of Western NSW" is a recently released spectacular new poster depicting 35 of the native frog species found in central and western NSW. On the front of the poster are full-colour pictures of the frogs. On the back is a description of each frog, detailing where they are found, a description of what they look like and their call. Also included is a photograph and description of the introduced cane toad. Although the cane toad is not normally found in western NSW, many native frog species may be easily mistaken for a cane toad and accidentally killed as a result. The cane toad was therefore included on the poster to enable comparison with native frog species.

For a copy of the poster, call Sally on 9585 6040 or Louise on 9585 6671.

Melanie Bannerman shows off the new 'Frogs of Western NSW' poster. Photo: DEC

How common are frogs in western NSW ?

Most of the frogs in western NSW are common or widespread. However scientists have become increasingly aware of a worldwide decline in the numbers of frogs. The suspected causes of this decline include habitat loss (infilling of wetlands, vegetation clearing, diversion of water from wetlands to agricultural lands, etc), fragmentation of wetlands, chemical pollution of waterbodies, stock grazing or rubbish dumping, disease, salinisation of waterbodies and predation of eggs and tadpoles by introduced fish, particularly Gambusia (mosquito Fish).

Threatened Species

Twenty-five species and one population of native frogs are listed as threatened in NSW. This means that they are faced with extinction if the causes of their decline are not halted in the near future.

In central and western NSW five frog species are threatened. These are the Southern Bell Frog, Green and Golden Bell Frog, Yellow-spotted Bell Frog, Painted Burrowing Frog and Booroolong Frog.

References:

- Barker, J., Grigg, G. and Tyler, M. (1995) *A Field Guide to Australian Frogs*. Surrey Beatty & Sons, Sydney.
- Robinson, M. (1998) *A Field Guide to Frogs of Australia*. Reed New Holland, Sydney.
- Romanowski, N. (1998) *Wetlands and Dams - a practical guide to wetland design, construction and propagation*. UNSW Press, Sydney.

What can you do to help frogs:

- Retain watercourses and waterbodies in a natural state.
- Provide places to hide from predators both in the water and on the ground - these can be provided by vegetation, partially submerged logs, rocks, and fallen timber.
- Control feral animals including cats, foxes and the mosquito fish (which prey on tadpoles).
- Provide damp shady regions for burrowing frogs.
- Provide fresh unpolluted water.
- Ensure pesticide use does not affect watercourses and waterbodies.
- If possible, fence off or restrict stock access to waterbodies to provide clean, clear water and untrampled vegetation for frogs.
- Increase plant cover by planting a variety of vegetation including shrubs, reeds and grasses near watercourses, wetlands and dams.
- Don't move frogs from one location to another as this may spread disease, such as chytrid fungus, which is a disease that may be responsible for declining frog numbers.

You'll find more details, particularly for frog researchers, managers and keepers on how to stop the spread of chytrid fungus in:
NSW National Parks and Wildlife Service (2001). *Hygiene protocol for the control of disease in frogs*. Information Circular Number 6. NSW NPWS, Hurstville NSW. (www.nationalparks.nsw.gov.au/PDFs/hyprfrog.pdf)

For further information on frogs contact either your local Parks & Wildlife office or the Frog and Tadpole Study Group of NSW Inc. PO Box 296, Rockdale 2216 NSW
Tel: **Frogwatch Helpline**: 0419 249 728.
Enquiries: fatsgroupnsw@hotmail.com or
Website: www.fats.org.au

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Oolambeyan National Park

- a different style of park management

National Parks are generally thought of as native vegetation which has not been cleared and where use is limited to low impact public access and tourism. Oolambeyan National Park (ONP) has been a working pastoral and cropping property for over 100 years. The grassland on the property contains habitat for and a population of the endangered ground dwelling bird the Plains-Wanderer. This population and related habitat exists as a result of the past pastoral management and grazing practices. To some extent, the Parks & Wildlife officers, will have to take on the role of both station manager and National Park custodian.

The park is 21,980 hectares in the Western Riverina, southeast of Hay. The major reason for the national park is to protect habitat of the endangered ground-dwelling bird, the Plains-Wanderer. State and Federal Governments jointly funded the purchase of the property, with the Park gazetted on 25 October 2002. The Plains-wanderer is listed as endangered on Schedule 1 of the *NSW Threatened Species Conservation Act 1995* and on the Federal *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).*

This small ground dwelling bird resembles but is unrelated to quail, and lives in open grasslands. Optimum habitat for the bird is maintained by light stock grazing, utilising domestic stock on the property. To gain an optimum conservation outcome, DEC will need to manage and maintain stock (sheep) on the property.

The Victorian Department of Natural Resources and Environment (DNRE) has experience in using stock to gain a grassland conservation outcome in its management of Terrick Terrick National Park in northern Victoria.

DEC has set up a working group including some neighbours and ecologists aware of the habitat requirements of plains-wanderers. In 2002 a tender process was implemented to determine who would gain grazing rights and in doing so maintain some of the last remaining habitat for the Plains-Wanderer.

After months of planning, the controlled grazing program has begun. The sheep will be supplied by a local landholder and will be grazing selected paddocks up to 15,700ha, specifically to enhance the grassland habitat. The reserve is already divided into grazing paddocks with the necessary infrastructure available. This will be accompanied by a monitoring program.

As well looking after habitat for the Plains-wanderer, management of the park will involve a comprehensive fox-baiting program within and outside of the reserve. Foxes are recognised as a threat as they are known to prey on Plains-Wanderers and on lambs.

Other Flora and Fauna

The native grassland also supports a number of rare and threatened plant species, such as the nationally endangered slender Darling pea *Swainsona murrayana.*

Apart from being a key areas for the Plains-Wanderer, ONP is of significance for a variety other threatened bird species, including the Grey-crowned Babbler and Bush-stone Curlew.

Other vegetation on the park includes shrubland with boree, cypress pine, rosewood-belah and black box woodlands. Such shrublands are important habitat for woodland birds. Stock grazing will not occur in woodland areas of ONP so as to improve those habitat areas for endangered woodland bird species

Aboriginal Values

Oolambeyan is in the area of the Wiradjuri nation and its name is believed to be based on the Wiradjuri language word, *Wulambiyan*. *Wulam* meaning to call or give voice to and *biyan* can be past tense or always and continuous. Possible definitions are; '*Have always been calling'* '*The song of the wind passing through the trees*', or '*The voice of the wind calling through the trees'*. These are then linked to the Dreamtime story of Dharramulan (one of Biamie's sons), whose voice was put into the trees and this is how we get the bullroarer.

The park has many areas that could contain relics or be of significance to the Aboriginal community consisting of scar trees, ovens, middens and other artefacts.

Historic Values

Oolambeyan has been a pastoral property and sheep stud for over 100 years. Oolambeyan contains a complete set of structures related to past land uses. The Homestead and its associated out buildings, the Woolshed and Shearers huts complex and the Boundary rider / outstation hut are of particular interest.

Tim Sides, Ranger, ONP.

Spotlighting - an enlightening experience

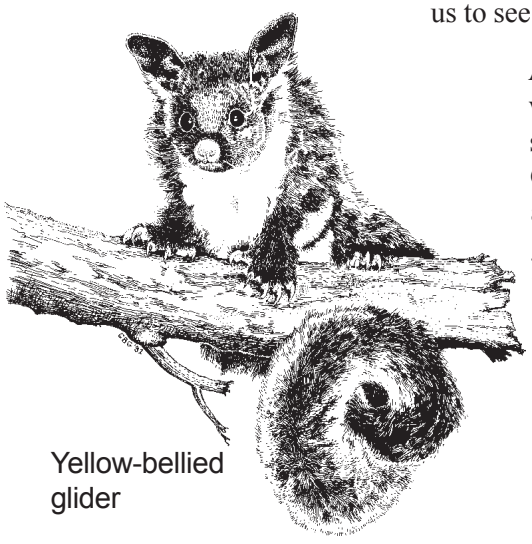
Jeff Drudge, the Land for Wildlife project officer on the Central Coast tells us about his recent experience on a recent spotlighing survey.

A couple of months ago I was fortunate enough to accompany a UNSW research student on a Yellow-bellied Glider survey in Bouddi National Park.

This was by far my most exciting wildlife spotting outing I have experienced!

The area surveyed was the ridge that separates the east of Bensville from the west of MacMasters Beach. The survey was part of a study of Yellow-bellied Gliders through UNSW and also as part of research project for Gosford City Council.

As soon as we started walking we could hear Yellow-bellied Gliders calling from all several directions. We could hear lots of Southern Boobook Owls, Sugar Gliders and microbats. Our experienced spotlighter's ears were so tuned in to the sounds of the forest at night that he could also hear the faint noises of bandicoots. We could also hear other noises that Brian said were gliders landing on the tree trunks after their long glide from a neighbouring tree.



Yellow-bellied glider

After a short time, the mosquitoes were swarming around us so prolifically that microbats were flying around us to feed on the mozzies. At times the bats came so close that their wings brushed past our shoulders or hair.

After a while we also started to hear rustling in the leaves up above. After a bit of searching, our torches caught the eyes of Greater Gliders feeding on the eucalypt leaves. These are the largest gliders and like Koalas feed almost entirely in leaves. Like Koalas they are very docile, and just sit there munching away as you watch them.

Some time later we began to hear a Sooty Owl making its blood-curdling call from some distance away. With time it grew closer and closer until we saw a dark shape fly up to a branch just in front of us. A quick check with our torches showed it to be the Sooty Owl! I was quite excited to see one of these. Sooty Owls are the least well-known of our native owls because they are quite secretive.

A couple of minutes after the Sooty Owl flew away we heard a Masked Owl hissing from behind us. The understorey trees were too dense for us to see this one, unfortunately.

As we continued along our way, we started to hear the soft repeated yaps of Sugar Gliders calling from the trees around us. We also caught glimpses of small creatures flying past our heads. We first thought that these were bats but after shining our torches at the trees around us we found that they were Sugar Gliders. One of them landed about two metres above the ground in the tree right beside us. It quickly ran up the tree however, scared off by the light. These gliders feed on all sorts of food - insects, nectar, sap, and the gum that wattles exude from the holes made in their trunks by borers. This high sugar diet makes them very active little creatures! Their big eyes also make them very cute!

While it climbed up the tree, we caught sight of another large dark abject fly up to a tree a little further off the track. This turned out to be a Yellow-bellied Glider! It was also very cute. Its big eyes and out-turned ears gave it what I thought was a dopey kind of look. We were entertained by this glider for quite awhile as he climbed around and made the distinctive Y-B Glider call.

After this we returned to our cars. On the way back we saw plenty more Sugar Gliders and Greater Gliders and heard more Yellow-bellied Glider calls.

We continued on to another site, working well into the early morning. I however was very satisfied having seen Yellow-bellied, Greater and Sugar Gliders, a Sooty Owl and lots of microbats, as well as hearing a Masked Owl and Bandicoots.

I must add that although this survey was conducted in the National Park, many of these species, particularly the owls and the Yellow-bellied Gliders, rely on habitat on private land, outside National Parks and council reserves to survive. Many of your properties are likely to contain a similar wealth of wildlife that we encoutered that night.

Many of the animals sighted on this survey require large areas of habitat for a populations to survive in the long term. Landholders with bushland contribute to providing this habitat.

Be Wise — look out for Owls

Den and Geoff Robin have a VCA over their land at Dignams Creek, on the slopes of Gulaga (Mt Dromedary), where some four owl species are regular visitors. Den writes about owls and rodenticides.

The devastating effect of habitat destruction on Australia's owls is well known.

A lesser-recognised threat to owls is 'secondary poisoning' occurring when they prey on mice or rats that have eaten rat poison (rodenticide). The toxins from these poisons may build up in the owls' livers and eventually kill them.

There is evidence that pest rodent species are on the increase and, use of rat bait is necessary sometimes to keep them at bay. The good news is that there are some products which are safer to use and being less harmful to owls.

At the recent meeting of VCA holders at Bournda National Park, it was suggested that I should pass on the following information in the interest of the owls.

Rodenticides have been around for more than 40 years. The early rodenticide chemicals known as 'first generation' of these were multiple dose baits containing anticoagulants (such as warfarin or coumatetralyl), that compete with Vitamin K1 and reduce the rodent's blood-clotting ability. After eating sufficient bait, the rodent dies within 3-8 days after the initial feed. Few secondary poisonings of wildlife were reported during the use of this first generation of rodenticides.

However, the more recent and now more common 'second generation' rodenticides pose a much greater risk of secondary poisoning. The reason for this is that they are single dose, more potent, including anticoagulants such as bromadiolone, brodifacoum and flocoumafen. These products are capable of killing rodents after a single feed, although the rodents still take some 3-8 days to die, giving them more time to eat extra poison and to be available as prey. Perhaps more significantly, the products are effective against populations that have become resistant to the first generation warfarin. The greater toxicity of these active ingredients and their greater persistence in animal bodies is what causes the danger to owls.

The issue of rodenticides was discussed at the International Owls 2000 symposium in Canberra in January 2000.

One of the papers reported on trials using a product containing coumatetralyl, a first generation rodenticide, which was registered in 1999 for use in Australia's canefields following withdrawal of a second generation rodenticide. As well, a number of measures were recommended to minimise exposure to non-target species, including the use of rodenticide in bait stations, as part of the integrated pest management program. It has proved effective in rodent control and with a reduced risk of secondary poisoning.

© DEC. G.Gatenby

Sooty Owl

As researchers and ornithologists point out, there is no perfectly safe bait, but the risk to non-target species can be reduced by the choice of a product which uses coumatetralyl as the active ingredient.

So look out for the owls! If you have to resort to rodenticides, read the label carefully and choose an owl-safe product. (See Editor's note below for names of chemical involved)

Ornithologists generally distinguish 10 species of Australian owls, including the Christmas Island Hawk Owl. In southeastern Australia, at least four species are listed as endangered or threatened – the Powerful, Masked, Sooty and Barking Owls. It is in our power to reduce the threat to them.

The Owls 2000 symposium proceedings are now available as *The Ecology and Conservation of Owls*,
Published by CSIRO 2002.

Editors Note:
First Generation chemicals include coumatetralyl and warfarin, however in some places rats have become resistant to warfarin.

Second generation chemicals include: bromodiolone, brodifacoum and flocoumafen.

There are a variety of rodenticide products and brands which contain these chemicals.

Further information on this topic is available from The Barn Owl Trust in the UK – www.barnowltrust.org.uk/Forms/no_21.pdf

Owls in NSW

Owl species in Australia number 11, from two groups or genera. This number does not include frogmouths, and nightjars, which are related.

The 5 species of *Ninox (*hawk-owls and boobooks) all have large, yellow eyes and a hawk-like face. Three of these are found in NSW

- Powerful Owl (*Ninox strenua*),
- Barking Owl (*Ninox connivens*),
- Southern Boobook (*Ninox boobook*).

The six species of *Tyto* – (the barn owls and masked owls) are easily distinguished by their heart-shaped facial disc. Those found in NSW are

- Sooty Owl (*Tyto tenebricosa*),
- Barn Owl (*Tyto alba*),
- (Eastern) Grass Owl (*Tyto capensis*),
- Masked Owl (*Tyto novaehollandiae*) .

The powerful, sooty, masked, barking and grass are all listed as vulnerable under the *Threatened Species Conservation Act 1995*, which means that the species is likely to become endangered if threats continue.

Loss and continued fragmentation of forest habitat through clearing of native forests is the main threat to these owls. Owls, like other predators are at the top of the food chain, taking birds, mammals and some invertebrates, and require extensive areas of their natural habitat for their survival. Other threats include the combination of grazing and regular (often illegal) burning. This may affect habitat quality for owls through its effects on nest and roost site availability and its effect on the quality of ground cover for mammal prey. Also human induced mortality such as fences, wires, rabbit traps and open-topped water tanks has also been recorded. The use of rodenticides in cane fields in North Queensland was linked to a dramatic fall in populations of barn, masked and grass owls. Removal of trees with nesting hollows in areas away from forests could affect numbers of barn and boobook owls.

The powerful, sooty and masked owls are all found in forests, and woodlands and farmlands with large trees. Numbers can be reduced when forested patches become too small to provide enough prey.

The barking owl is found in woodland and has had its habitat dramatically reduced due to clearing for agriculture and other human development. Surveys in the Pilliga forests in the Winter of 2001 by NPWS, found a high density population, being one of only two such high density populations in southern Australia.

The grass owl (*Tyto capensis*)is the only owl species in Australia which does not need trees. However it is only found over a small area and only in tropical coastal grasslands.

NSW State Forests are regulated by conservation protocols that form the terms of Threatened Species Licences for forestry operations, to manage these areas for threatened owls and other species. For the barking, powerful, masked and sooty owls, special protection is given to areas where owls nest and roost and their prey are most likely to be found. In addition, old hollow trees are retained within logged areas to reduce logging impacts on the owls and their prey. These conditions apply throughout wood production forests, regardless of whether owls are known to occur. Other conditions apply where these owls are know to occur.

Have fun identifying owls.
Find out if you have owls which use your land. Often we hear rather than see owls.

Go to http://www.owlpages.com/australian_owls.html , which has pictures and also recordings of owl calls, which will help you identify any on your property.

How to help owls on your land:

- Protect and retain large hollow trees.
- Retain nest sites, roost sites, patches of habitat and prey bases.

More information: Try the web site above plus:
http://home.mira.net/~areadman/owls.htm

Image from: John Gould (1804-81) *The birds of Australia 1840-48*. 7 vols. 600 plates Artists: J. Gould and E. Gould; Lithographer: E. Gould

Masked Owl (Tyto novaehollandiae)

The Australian Owl Genetics Project

Museum Victoria scientists are studying the DNA of owls, to increase our knowledge about these birds, find out whether deforestation affects their populations, if owl populations are at risk from inbreeding, and to establish any patterns of movement of owls within and between forest fragments. The project will also examine the relationships between Australian owls and owls from other parts of the world so we can discover more about how they have evolved.

Want to get involved? You can get involved in the project by collecting owl feathers and sending them to the research team at Australian Owl Genetics Project, Sciences Department, Museum Victoria, GPO Box 666E Melbourne VIC 3001.

When collecting feathers try to identify which owl the feather may have come from, using either the kit or a Field Guide. The special Owl Identification Kit is being sold through the Melbourne Museum shop and all Australian Geographic outlets, with proceeds donated to the project.

Place the feather(s) into a clean envelope or plastic bag, and include a label detailing the type of owl (if known); location (e.g. which state, name of nearest town, road name), date collected and your name and address. Use a new envelope/bag if collecting feathers from more than one location or individual.

Initial Confusion

Decided to catch up with my friend over a cuppa. She arrived "I'm so confused" she said. I waited with bated breath for the latest gossip from the school tuckshop or comments on the latest royal wedding. However she continued ……..

"I so wanted to get involved in looking after my bit of bush, but I seem to have lost track of who I am talking to. I called the person who I thought dealt with Landcare, but they told me to call the NRM facilitator at DIPNR, which used to be DLWC, and now they have CSOs. And of course I could get funding from NHT or NAP, but that depends on which CMA you are under as they are different from the CMBs which are different from the old CMCs, and of course that is linked to DEH. And other funding could be via the ET, which was run by the EPA, which is now DEC, and NPWS are part of that too"

Being ever ready to help I gave her a bit of an explanation about the bits I understood.

- DEC is the Department of Environment and Conservation. The National Parks and Wildlife Service (NPWS) is part of this department, as is the EPA (Environment Protection Authority), the Royal Botanic Gardens and Resource NSW. The ET (Environmental Trust) which is administered by DEC is one source of funding for environmental projects. DEC maintains the functions of all the previous departments which includes looking after threatened species, fauna and Aboriginal heritage.
- DIPNR is the Department of Infrastructure, Planning and Natural Resources. The former DLWC (Department of Land and Water Conservation) and Planning NSWare part of this department. DIPNR administers amongst others, the Native Vegetation Act 2003, which will come into effect soon, as well as catchment and water management issues.
- Crown lands are now dealt with by the Department of Lands.
- Funding available for work to restore the environment is made available from the federal government through the NHT (Natural Heritage Trust). There is also funding for certain areas to deal with salinity under NAP - National Action Plan for Salinity and Water Quality.
- DEH (Department of Environment and Heritage) is the federal agency, which used to be known as Environment Australia (EA).
- CMAs (Catchment Management Authorities) have been set up separately to DIPNR but will report to DIPNR's Minister. These authorities will work out how best to use the funding available through funding programs both state and federal (including NHT). These have replaced Catchment Management Boards, and the areas they cover are slightly different. To date the chairs and some members of the CMAs have been appointed. The CMAs will also incorporate work carried out by the Regional Vegetation Committees and Water Management Committees, which will stop operating July 2004.
- NRM (Natural Resource Management) facilitators and Community Support Officers have replaced the Landcare support network, although exact titles may alter in each area.
- The Department of Primary Industries (DPI) commenced on the 1st July 2004. This Department incorporates the former NSW Agriculture; NSW Fisheries, State Forests and the Department of Mineral Resources.

Rubbish for Reptiles

Habitat does not always need to be created. Sometimes it exists in places we don't think about.

On recent trips to Wildlife Refuge properties in western NSW, the team spent fruitful hours looking for reptiles in piles of old wood, under pieces of galvanised iron and other materials.

These provided warm places for reptiles and shelter from predators.

On lifting this piece of galvanised iron a singleback lizard was found. A range of other lizards and skinks were also found in these situations.

Coolatai grass - a serious threat to bushland

- be on the look out for this invasive grass.

We all spend significant amounts of money in order to reduce the effects of weeds on agriculture and our bush and grasslands. The best way to prevent weed spread is to identify new weed invasions on your property and control them while the areas affected are still small.

A weed which is becoming more prevalent is Coolatai grass (*Hyparrhenia hirta*) which is an invasive grass from Africa and the Mediterranean. In some places it is also known as Tambookie grass. It was first introduced into northern NSW for erosion control, and is now widespread in North West NSW, the Central West and coastal NSW including Sydney.

It can quickly spread from roadsides and other disturbed areas into undisturbed bush. The plant produces thousand of tiny, sticky seeds which adhere to animals, machinery and motor vehicles. In some areas it has been spread by slashing and mowing.

It grows so densely that it displaces native ground cover plants. The grass soon dominates pastures, creating large amounts of dead leaf and stem that has little food value and is unpalatable to stock.

Identification

Coolatai grass is a perennial grass that forms tussocks. This growth habit is similar to a number of native grasses and this weed could be confused with these.

It is usually about 1.5 metres tall and has thin greyish-green leaves. The seed head is quite distinctive, as can be seen in the diagram. It is described in botanical terms as being a much-branched panicle ending in paired racemes. Flowering occurs in spring and summer.

If you are unsure of its identification, take a piece to your local bushcare, landcare or weed officer.

Coolatai grass seeds
- very small and sticky! Bingara 29/5/03 (LRT)

Control

Once an invasion is mixed with valuable native grasses, control can be difficult.

Manual removal or herbicide treatment prior to seeding can be used, and regular follow-up is required to prevent regrowth and re-establishment from seed.

If the plant is in seed, do not slash or mow as this will simply spread the weed. Seeding weeds can be pulled and burnt or removed from the site in bags, so that weed seed does not spread.

Herbicides can be effective. There are two permits in place for spot-spraying of coolatai grass - Permit PER5457 allows the use of certain glyphosate herbicides for spraying of small patchy infestations in non-crop situations. The permit is found on the website www.nre.gov.au and should be read and the directions followed.

Volunteers working to control this grass have found that it is even more effective is the grass is slashed to 5-10 cms from the ground, then left for two to three weeks prior to spraying. This allows a better production of green leaf which responds best to the herbicide spray.

Of course spot-spraying must be done with care to minimise effects on native vegetation in the area, especially low growing native plants and grasses.

Research

The impacts of infestation by Coolatai Grass on native grasslands and endangered Grassy White Box Woodlands in northern NSW, are being investigated by the North West Vegetation Forum (a voluntary group of landholders and agency representatives), the Department of Infrastructure, Planning and Natural Resources and the National Parks and Wildlife Service of DEC.

The diversity and abundance of native plants and animals are threatened by the spread of Coolatai Grass, an aggressive environmental weed. This includes the White Box-Yellow Box-Blakelys Red Gum endangered ecological community.

The continuing study is showing that Coolatai Grass infestation:

- has a big impact on the native plant cover, reducing the number of species present and the abundance of each species;
- significantly reduces the abundance of ground-active invertebrates;
- reduces the abundance and variety of frogs present;
- may reduce the abundance and variety of reptiles, giving advantage to some species and not others.

Success in controlling infestations is best achieved if all land managers identify and implement coordinated actions to reduce the spread of Coolatai Grass, particularly to protect pastures and other areas of high conservation value native vegetation. This will require the identification of where effective control is possible, particularly areas of new infestations.

There is also a need to increase awareness of the need to act quickly to maintain grazing to control weeds, before major costs are incurred.

There is much that is unknown about Coolatai Grass so further research is also necessary to try and halt this serious threat to our properties.

Peter Croft, Senior Ranger, Glen Innes

Bush friendly gardening

Gardeners can now get important information about the weed potential of some garden plants.

Did you know that weed invasion is more damaging to the environment and is a greater cost to agriculture than salinity?

New economic research undertaken in 2003 by the Weeds CRC through the University of New England has established that the annual cost of weeds to Australian agriculture exceeds $3.5 billion. This compares with recent estimates for salinity of an annual net loss of $200 million.

Weed invasion is a major threat to Australia's primary industry and to the natural environment. Weeds are second only to land clearing as a cause of biodiversity loss. There are also close ties between the environment and the economy. Tourism, which generates $30 million annually in Kakadu National Park, is heavily reliant on the appeal of 'untouched' wilderness, an aspect which is under serious threat from weed invasion.

Weeds arrive into an area either accidentally or are deliberately. Frequently plants introduced as agricultural or horticultural imports become weeds. There is often a lag phase between introduction and becoming invasive. A most notable example of this is *Mimosa pigra* which was introduced into Darwin in the late 1800s, but did not explode until a century later.

Helping Gardeners

It can be a real disappointment to discover that your favoured garden plants are likely to be harmful in the environment. Often a feature which makes the plant a weed, such as easy to reproduce via seed or other plant parts, makes it easy to propagate for sale.

How do you as a gardener who cares about the environment know which plants for sale are liable to become weeds?

Luckily help is at hand, and information to help you is becoming more readily available.

On the North Coast of NSW.

Do you live on the North Coast of NSW? The Bushland Friendly Nursery Scheme (BFNS) has been set up to help you select plant species for your garden which will not become weeds in your local area. The area covered is from Taree to Tweed, and the sixteen councils in this area participate in the project. The scheme was initiated by the North Coast Weed Advisory Committee (NCWAC) and funded by the NSW Environmental Trust.

The scheme has two aspects:

- listing of environmental weeds in the area
- lists of alternative plants which can be used.

Look for this logo at your local nursery

The BFNS has developed an environmental weed list. The 84 most significant weeds are those that 'BFNS Nurseries' shall not sell, propagate or knowingly distribute. Many of these are rarely sold by nurseries now, so will have little impact on most nursery sales. A few, like *Duranta repens*, are currently popular species.

Identifying alternative non-invasive plants is another important aspect of the BFNS. Although many of us do not want to plant weedy species, it can be hard to know which plants to choose.

A number of nurseries have already elected to participate in the scheme, and this group can be consulted for sales and advice.

The BFNS has developed a booklet for landholders. This gives details and pictures of the targeted environmental weeds, and also lists suitable alternative non-invasive species for planting. The booklet gives 'broad examples' only, and encourages landholders to consult participating Bushland Friendly Nurseries for appropriate plants.

The participating councils have agreed to exclude the use of environmental weeds in new developments as well as in their own landscaping. They will also promote the participating Bush Friendly Nurseries.

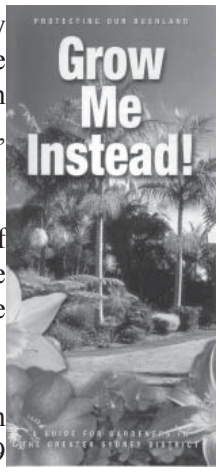
For copies of the booklet, ring Sally 9585 6040 or Louise 9585 6671.

Further information is available on the website **www.bfns.org.au**. This lists participating nurseries and lists of weeds and alternatives.

Or contact the BFNS:
Ian Turnbull, Secretary,
POB 117, Bellingen, NSW 2454
Email:
iturnbull@bellingen.nsw.gov.au;
Ph: (02) 6655 7338

"Grow Me Instead"

This is another handbook for landholders and is produced by the Nursery and Garden Industry in NSW & ACT. Whilst the guide is largely for the Greater Sydney District, it applies more broadly to many areas of the state. It focuses on 'garden escapes'- popular garden plants which will spread into neighbouring bushland, gardens and farmland.



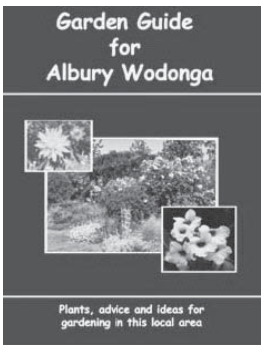
For each garden escape, there are a number of alternatives illustrated and described. These include native and non-native species, so give gardeners a wide choice of plants to use.

For further information contact the Nursery & Garden Industry NSW & ACT Ph: 02 9679 1472 Fax: 02 9679 1655; **info@ngina.com.au**

Garden Guide for Albury Wodonga

This guide has been produced by the City of Albury Council, to introduce the sorts of plants which can attract birdlife and create your own outdoor haven. It was developed by council is association with the NPWS (now DEC) Urban Wildlife Project.

The Guide is a handy little book that provides guidance on garden design, plant selection, maintenance, and safety. There are over 70 local natives, Australian natives and exotic plants represented. The community based committee involved also ensured 75% availability of the plants from local nurseries and selected those species which are easy to cultivate.



At only $5, the Garden Guide is available from the Albury City Customer Service Centre, Albury Library, Charles Sturt University Herbarium, TAFE Thurgoona Campus and Department of Sustainability and Environment (VIC). Other booklets available from council include '*Bush Invaders - identification &control of environmental weeds of Albury Wodonga &Surroundings*' ($8) and '*Along the Bush Tracks Albury Wodonga'* ($8)

Other sources of advice

In a number of areas, local councils or local groups of the Ausstralian Plant Society can also provide advice or lists of what species may become invasive in your garden.

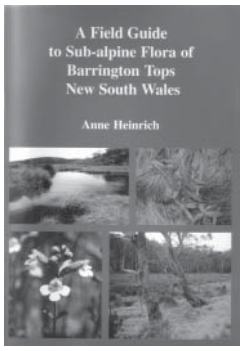
Some of these oprganisation may also be able to help with a list of suitable plants which can also help to create habitat for native fauna.

Your local landcare group may also have lists of suitable species to plant in your area.

New Books

"A Field Guide to Sub-alpine Flora of Barrington Tops New South Wales."

By Anne Heinrich, 2003



If you enjoy going to the Barrington Tops, then this book is a vital addition to the library. Of course it will have a broader application.

The book describes the vegetation of Barrington Tops Plateau and its climate and geology. There are 130 plant species which are described and illustrated.

Available from the author, Anne Heinrich for $14.95 (plus $2 p&p), 389 Playfords Road, Comboyne, NSW 2429

"Native Species Habitat. Its identification and protection on farming and grazing land in South West NSW."

DIPNR November 2003.

A great little book with lots of photos of habitat. Although based on work in the Lower Murray Darling Catchment and the Cobar Peneplain, the habitats examined are found across western NSW. The hints on maintenance of habitat are applicable to most grazing properties.

Call Sally 9585 6040 or Louise 9585 6671 for a copy.

WHAT'S ON

Swift Parrot and Regent Honeyeater 2004 Survey season

The national surveys for Swift Parrots and Regent Honeyeaters are being carried out.

The next survey date is the first weekend in August (31 July/1 August)

Contact Debbie Saunders 1800 66 57 66 or email: swiftparrots@yahoo.com.au
David Geering, 1800 62 10 56, david.geering@npws.nsw.gov.au

Other information is available on
www.parks.tas.gov.au/wildlife/birds/swparrot.html
www.birdsaustralia.com.au/birds/swift.html
www.birdsaustralia.com.au/birds/regent.html

Big Scrub Rainforest Day

A day for rainforest lovers.

5th September 2004
9am to 4 pm

at Rocky Creek Dam,
(15 Kms north west of Lismore.)

The Big Scrub rainforest once covered a roughly circular area where Lismore, Ballina, Byron Bay and Mullumbimby are presently situated.

THE WOMEN'S GATHERING 2004 at COONABARABRAN

17-19 September

REACH FOR THE STARS

Holistic Health, Wealth and Well-Being

Dr Fred Watson, Astronomer in Charge at the Anglo-Australian Observatory at Siding Spring Observatory, will be the dinner speaker.He a well-known from his broadcasts on the ABC.

Fiona O'Loughlin - comedian and TV personality based in Alice Springs will also be a guest.

Further information: Phone 1800 242 881 or
visit: www.coonabarabran.com/womensgathering2004

Wildlife Refuges in Western NSW

Discover what plants and animal live on your property!

This project aims to work with landholders to find out more about the flora and fauna on Widlife Refuges.

More surveys will be undertaken in Spring.

For more information contact the Community Conservation Officer, Laura Kelly on 02 6841 9202.

Chalinolobus gouldii Gould's wattled bat - this little creature has been found on a number of Wildlife refuges in north western NSW, during surveys.

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DEC cannot acccept responsibility for errors or omissions.

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