

# Wildlife and Native Plants Study Group Newsletter

AUTUMN / WINTER 2006

ISSUE 53

ISSN: 1038 7897



Dear Members,

Well Christmas has well and truly gone, and we are fast approaching Easter. The time seems to go so much quicker now.

This issue we welcome Nita Lester our new Study Group Co-ordinator, who has willingly stepped into Jan Sked's shoes to take up the challenge. So WELCOME Nita! and a big THANKYOU to Jan Sked for all her work in co-ordinating all the ASGAP Study Groups over the last few years.

Many of you will have been affected by the terrible bushfires which plagued our great continent earlier in the year. Fires which ripped at the very heart of Australia's beautiful and natural areas, as well as destroying houses, property, life and livelihoods, with flames devouring everything in its path. Hopefully by now all the fires have been contained, and the threat is over. The smoke haze hangs around reducing visibility in some areas. Many will have returned home to find nothing there, or little standing, others more fortunate with their house standing and those around gone. It is so heart-breaking, and the numbness still remains. Others more fortunate, will have lost native gardens through fire or lack of water. Those plants which have survived, tell a picture with their scorched and dried leaves, single plants alone in a sea of burnt forest remains or bare grassland. We can not hope to understand the how or why of natural fires started by lightning, or the stupidity of those who set alight to the bush. All we can do is start all over again.

Words are little comfort, I know, but those of us who have been unaffected in these latest fires, really feel for you. We sense a powerlessness to assist, and can but offer our support as best we can. We

understand your anguish, and the pain of rebuilding lives and properties.

Perhaps the natural world is not so lucky. Much of our native wildlife have lost their homes too and have had nowhere to go, and in some places whole populations have been destroyed. The cost of this has not yet been evaluated, but I'm sure it will be very high.

I hope that members and other readers enjoyed our last bumper issue, featuring global warming, the second in a series of articles on possums and gliders, all about goosefoots and our threatened species updates. I fear many of these in light of the recent fires will have dramatically altered their status quo, but only time will tell.

Some of you have commented on the problems with possums and native plants in your areas. Perhaps we need to ask ourselves who was here first? Us or them? This applies to all our Australian native fauna - as some can be a nuisance in backyards. However my experience over the years in wildlife welfare and rescue work involves a healthy respect for them all and their place in the scheme of things. Their territory is being reduced dramatically as urban sprawl takes up more of the land, and we must learn to co-exist and co-habit. Many species are a challenge, of that there's no doubt, yet we can learn so much from them. There are many positives. Our native flora also has the potential to become a weed in some areas, and so we need to be vigilant in what we plant in our gardens and bush blocks.

This issue we continue our story of Gliders and Possums, an article on the status of many bird species in Canberra, our regular media updates and book reviews and of course there's much more....So enjoy!

Chris

## Disappearing act

sourced by Leigh Murray

*From The Canberra Times.*

Canberra's urban sprawl may spell the demise of many bird species, as **Rosslyn Beeby** reports.

THE FUTURE is looking grim for Canberra's woodland birds. More than 80 per cent of their original habitat has been lost, sprawling McMansion-style housing developments are chipping away at remaining woodland remnants and once-common species – like the willy wagtail – are disappearing from the Bush Capital.

According to a recent report by the nation's peak ornithology group. Birds Australia, at least 47 species, or 77 per cent of the ACT's woodland birds, are either in decline or showing irregular patterns of detection that hint at possible future declines.

A massive urban development proposed for the Molonglo Valley is also threatening the habitat of 13 species of birds of prey in the ACT, and University of Canberra raptor experts say that if it goes ahead it will almost certainly cause the regional extinction of the little eagle.

Birds Australia's annual "State of Australia's Birds" – now in its third year – has become one of the nation's most important conservation bulletins. It provides an overview of major threats such as continuing loss of habitat from urban and agricultural land clearing climate change and fox predation on bird life, and the conservation actions needed to halt species declines.

This year's report, which focuses on woodland birds, warns that at least one-third of Australia's woodland birds species are in serious decline.

In the ACT, at least 18 species show "clear evidence of decline", including eastern rosellas, willy wagtails, superb fairy wrens, dusky woodswallows and noisy friarbirds.



A further 29 species – a group that includes the grey fantail, red wattlebird and pied currawong – are also showing signs of a worrying downward trend.

A survey of 142 woodland sites in the ACT by the Canberra Ornithologists Group from spring 1998 to winter 2004, revealed a widespread and "sustained decrease" in willy wagtails and eastern rosellas and a "persistent decline" in migratory species and ground-feeding birds.

The yellow-faced honeyeater, a summer migrant whose breeding grounds in the ACT ranges were affected by the 2003 bushfires, has also shown a dramatic decline.

The Birds Australia report notes urban sprawl is continuing to threaten Canberra's woodlands and "there are emerging concerns about the proposed development in the Molonglo Valley where river corridor, woodlands, grasslands and rural grazed lands provide habitats for 13 species of birds of prey".

The site was ear-marked for development by the Canberra Spatial Plan and last month, the ACT Government announced plans for a development that would accommodate 44,000 people in 20,000 new homes.

Both the Canberra Ornithologists Group and the Canberra Conservation Council have lodged objections to the proposed development with the ACT Planning and Land Authority.

Ornithologists Group president Jack Holland wrote that "surveys and research show that a number of woodland bird species continue to decline in abundance, including birds which are listed as threatened under ACT legislation".

The submission says the development will "impact negatively on a large and diverse population of birds of prey in the Molonglo Valley as well as woodland birds, including threatened

species." Of particular concern is the brown tree creeper – officially listed as threatened in the ACT. The COG submission says a small population has been recorded in the Kama woodlands, which will be affected by the development.

"This species has progressively disappeared from other woodlands around the urban fringes of Canberra as urban development has spread and reduction and fragmentation of habitat has progressed," says the submission. "Even in the largest woodland reserves of Mulligan's Flat and Gorooyaroo, brown tree creepers have declined and are now likely to be extinct in those reserves."

The Conservation Council's submission says it supports development in some areas of the Molonglo Valley – such as the burnt pine plantation estate – but calls for a detailed environmental assessment to be made before development proceeds in the river corridor areas.

Last year, University of Canberra raptor ecologists Jerry Olsen and Esteban Fuentes submitted a species impact assessment report to the ACT Government on the Molonglo Valley development. Their report was shelved by Environment ACT and a second report commissioned from a NSW consultant. In their report, Olsen and Fuentes stated that the Molonglo Valley was "a hotspot for raptors, housing breeding territories of nine species and also providing food and shelter for at least another three".

Birds of prey observed nesting and hunting in the valley included the black-shouldered kite, whistling kite, white-bellied sea eagle, wedge-tailed eagle, little eagle, brown goshawk, collared sparrowhawk, peregrine falcon, Australian hobby, brown falcon, nankeen kestrel and southern boobook owl. Olsen and Fuentes wrote that only

two species – collared sparrowhawks and Australian hobbies – would not be affected by the development. These birds could successfully breed in city parks and even parking lots. They appeared to be unaffected by "walkers, automobile traffic, even sporting events, close to or even under the nest".

But at least 10 other raptor species would be affected. Black-shouldered kites required "several hectares of long grassland per pair to survive and breed" and if these large grassy areas were "covered by houses, roads or playing fields, the species is likely to disappear".

Brown goshawks abandon their nests, leaving eggs and young exposed, if disturbed and were likely to leave the Molonglo Valley due to the land clearing required by the housing development.

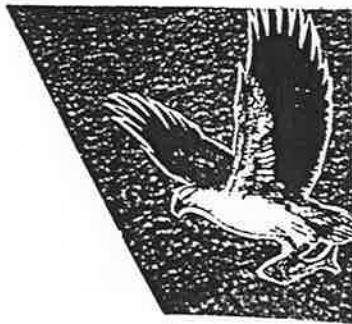
Olsen and Fuentes wrote that raptors such as wedge-tailed eagles and peregrine falcons had strong site fidelity, and evidence showed some territories in the valley had been used for "at least 20 and 40 years for peregrines and wedgetails respectively".

They recommended a detailed investigation of biodiversity in the valley and a further study to establish the home range and foraging habits of birds of prey. The one-year study – costed at \$92,500 and which proposed to radio track birds to establish the extent of their hunting and foraging grounds – was rejected by the ACT Government as too expensive.

If the study had gone ahead, it would have been the first of its kind in Australia and provided the first data on urban buffer zones for nesting birds of prey.

"If you want to protect birds of prey, you can't just put a circle around their nests. They can be hunting many kilometres away and that food source has to be protected too," says Olsen.

He is particularly concerned about the fate of the last breeding pair of little eagles in the ACT, which hunt and



breed in the Molonglo Valley. In 1992, he was studying 11 pairs of little eagles in the ACT, but numbers have steadily declined.

"Their numbers are crashing badly, and we don't know why," he said.

Until recently, there were two nesting pairs left – one in the Molonglo Valley and the other in the East O'Malley woodlands. But after the ACT Government sold the woodlands for commercial development, and extensive land clearing proceeded, the little eagles disappeared.

If the Molonglo Valley development goes ahead, it will "run right over the top of the last active nest – the last breeding little eagle – that we know of in the ACT," says Olsen.

Canberra has always been a city of raptors and unrivalled by any other city in the world for the diversity and abundance of birds of prey breeding inside the city limits, he says.

"It was a unique attraction that's now disappearing. The government's attitude seems to be that it doesn't matter if we lose these birds here in the ACT – just drive across the border and go see them somewhere else in NSW."



## The Dianella Diet – It's Just for the Birds!

by Brenda Martin

From the Newsletter of the South-East NSW Group, February 2005

Take one plant of *Dianella revoluta*. Plant in a large pot in a sunny position (mine is against a brick wall facing north-east, just under my kitchen window where I can see it). Allow the plant to thicken and flower – producing sprays of bright blue starry flowers with yellow stamens – enjoy.

Next, allow the plant to go to seed – producing masses of deep blue berries, suspended on tiny stems. Now, watch! As the berries form and start to ripen, you will have visitors. My first visitors were the raucous Red Wattlebirds – they swooped down and tried to land on the fragile stems, which could not support their weight. However they were persistent, and half flying/swooping managed to collect and swallow several berries, and then carried some off for the youngsters.

Our next visitors have been the delightful Yellow-faced Honeyeaters – much smaller birds, with tiny curved beaks. These birds consider the Dianella berries to be a gourmet treat, and swallow about 6 to 10 berries at a time, each berry being swallowed whole and requiring quite an effort to get down their small throats. Then they fly away, and return shortly after, for another lot of berries. Some of the larger berries ended up being squashed. They have made no effort to touch the larger berries on the *Dianella tasmanica* nearby – either being too large, or perhaps do not taste as good.

So, the moral of the story is: Plant more Dianellas, and have your very own blue (berry) birds of happiness.

# ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP

## GLIDERS AND POSSUMS Part Three

### Feathertail Glider (*Acrobates pygmaeus*)

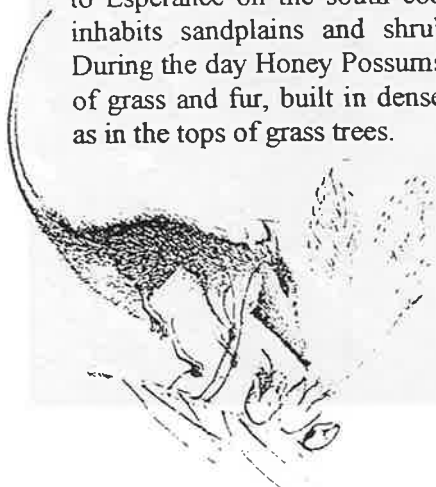
The Feathertail Glider is the smallest glider in the world. It is also known as the pygmy glider, the pygmy phalanger, and the flying mouse. It has the teeth of an insect-eater and the brush-tipped tongue of a nectar-eater. These small creatures live around the eastern coast of Australia from Cape York Peninsula to eastern South Australia. They are found in tall, mature, moist forests congregating in loosely associated groups.

They huddle together in winter for warmth. Communal nesting occurs. Like the pygmy possums, feathertail gliders feed on pollen as well as nectar and insects. They are the prey of currawongs, kookaburras, foxes and cats. In the northern parts of their range feathertail gliders breed throughout the year, but southern populations do not breed in autumn or early winter. The females are more likely to have 3 or 4 offspring per litter, and can conceive again immediately after they have given birth and maintain the second conception in suspension until the first litter has been weaned at 14 weeks.

### The Honey Possum (*Tarsipes spenserae*)

This is a mouse sized marsupial known by its Aboriginal name of Noolbenger. It has a very small body with three well defined striped down its back, and a very slender, long whip-like tapering prehensile tail. It also has a very elongated almost tubular snout and a tongue, similar to a honeyeater's long bill and brush-like tongue, used for the collection of blossoms, nectar, pollen and microscopic insects which are sucked up.

The species is endemic and confined to the south-western corner of Western Australia from the Murchison River on the west coast to Esperance on the south coast. It usually inhabits sandplains and shrub heathlands. During the day Honey Possums hide in nests of grass and fur, built in dense foliage such as in the tops of grass trees.



### Pygmy Possums (*Burramyidae*)

Pygmy Possums are tiny nocturnal creatures with relatively large heads with whiskers, pink noses, big dark eyes and prominent ears. They have a well developed forward facing pouch. All are climbers and can leap from branch to branch. They have long, slender, lightly haired tails for grasping and support and opposable big toes for climbing and clinging. There are four species belonging to the genus *Cercartetus* which live mainly in trees, and the mountain pygmy possum of the genus *Burramys* lives and nests on the ground. Pygmy-possums eat insects, fruits, seeds, pollen, nectar and small reptiles. They play a major role in pollination of some plants.

### Mountain Pygmy Possum (*Burramys parvus*)

The Mountain Pygmy Possum is the only Australian mammal confined to the alpine and subalpine regions, restricted to areas of boulders within shrubby heathlands in the snow country of NSW and Victoria. The bogong moths are a favourite food. They also eat caterpillars, beetles and spiders, and the seeds and fruits of heathland shrubs.

The species' total habitat is now less than 10 sq.kms and is rapidly reducing as a result of greenhouse warming and a reduction in the size of the alpine country.

### Western Pygmy Possum

#### and Eastern Pygmy Possum

The two species are similar and their ranges overlap in the south eastern corner of South Australia and the south western corner of Victoria. The western species (*Cercartetus concinnus*) has a fawn coat tinged with red brown and completely white belly fur; whereas the eastern species (*C.nanus*) is fawn and white tipped hairs on its underside. Western pygmy possums are found in mallee heathlands and dry woodlands where there is plenty of shrubby undergrowth.

They curl up and sleep during the day in leaf lined nests in tree hollows or among the leaves of grass trees. They emerge after dark searching for fruits, seeds, nectar and pollen.

# ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP

Eastern pygmy possums relish pollen and nectar but also eat soft fruits and insects. They prefer wooded habitats such as rainforest and eucalypt forest and play a significant role in pollinating some banksia species. The pygmy possums are easy prey for feral and domestic cats.

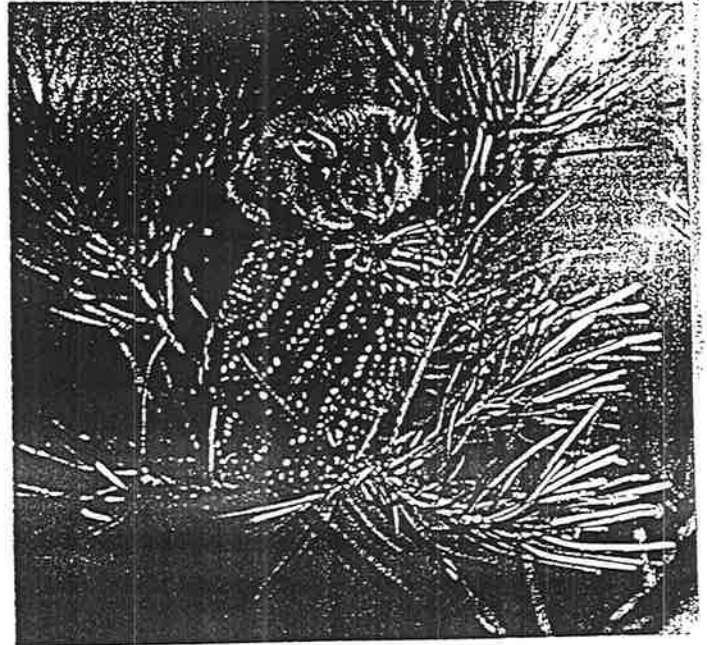
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Pygmy Possum on Barksia cone



Brolga

## NORTHERN AUSTRALIA

### Brolgas, ducks and magpie geese on eggs

As the monsoon rains finish and the water lilies bloom, many waterbirds like the brolgas and magpie geese are on their nesting platforms. The young of the whistling-ducks are about to hatch from their ground nest-scrapes.

### Doves and dust bowls

It is a common sight now along northern roadsides to see groups of up to 12 bar-shouldered doves playing in dust bowls. As the dry season approaches, up to 100 may gather at favourite feeding places.

### Flowering of the cluster fig

The fruit receptacles (really flowers) are now appearing along the main branches of this spreading tree of northern riverbanks. They ripen and redden at the end of the dry season.

### White-tailed rats are nut-crackers

This is one of Australia's largest rodents and a most efficient climber. In March it cracks open the fruit of the candlenut and moves onto the silky oak in April, leaving the forest floor strewn with husks.

### The spears of the mangrove

The bruguiera or dagger plant is a mangrove whose fruit germinates while still on the tree. The fruits are dagger or cigar shaped and several centimetres long. Now they spear into the mud to establish new trees.

### Return of the flycatchers

The satin and leaden flycatchers and black-faced monarchs which have been nesting in southern Australia are now arriving back in the north. Those monarchs breeding in northern Queensland migrate to New Guinea.

## SOUTHERN AUSTRALIA

### Antechinus young become independent

The young of the tiny carnivorous brown antechinus are now leaving their mothers to become independent foragers. Mating will take place in August when all the males will die within a few weeks.

### Field crickets on the move

As the paddocks dry during Late Summer, the now mature black field crickets hide in the widening cracks during the day. At dusk they emerge to sing and fight and mate. Large flocks of this will scour these paddocks.

### Octopuses lay egg clusters

White, translucent egg strings will be found attached in clusters on beach-washed seaweed at this time of year. Sometimes, the developing embryos are visible. Egg clusters of the related cuttlefishes are brown in colour.

### Puffballs are puffing

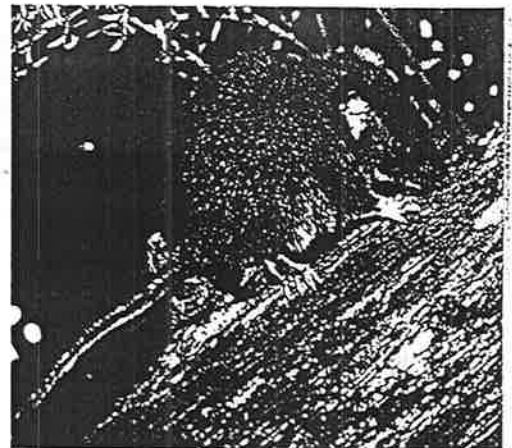
The white fruiting bodies of several species of puffball fungi will appear after the first solid rains in March. The spheres of the giant puffball are good to eat as long as the flesh inside is white. Check with local experts.

### Cranberry heath is flowering

This tiny, prostrate, rosette heath has now begun flowering. The flowers are bright red, horn-shaped heads, often hidden by a mat of tiny, clustered, sharp-pointed leaves.

### Daphnia waterfleas encyst

As the waterholes dry up in southern Australia, some daphnia females form hard ephippia brood pouches with resting eggs within their bodies. When they die these will rest in the mud until water returns.



From  
Terrestrial

## Groundsels and Fireweeds

Phil Watson

With over 1500 species worldwide, the herbaceous Groundsels and Fireweeds make up a significant portion of the Daisy (*Asteraceae*) family. This genus has many interesting features and relationships, including two intriguing stories. The first explores how the hardy South African Sticky Groundsel (*Senecio viscosus*) imposed grief and extensive heartache upon the 'Imperial Bushmen Contingent' troops during the Boer War and the second describes the strange but painful exploding trousers problem arising from efforts to control the rampant Ragwort weed (*S. jacobaea*).

**Groundsels exhibit attractive floral displays**

Before exploring further the above two stories, let's highlight some of the fascinating attributes of the numerous Groundsels and Fireweeds species. Many species are horticultural gems appreciated for their contributions towards colourful garden displays. Well known are the reliable winter flowering, shade loving 'Florists Cineraria', *S. cruenta* and the old fashioned grey-leaved 'Dusty Miller', *S. cineraria*. Others include the garden gem California Geranium, *S. petasitis*, with its distinctive lobed foliage enveloping delightful yellow panicles and the bold bright yellow flowering trusses of the Big-leaf Groundsel *S. grandiflorus*

**Alpine and woodland Groundsels abound**

Tasmania is privileged to have 23 indigenous species including a suite of alpine Groundsels such as the single flowering yellow and cream forms of *S. pectinatus*, the floriferous *S. leptocarpus* and the showy *S. primulaefolius*.

Common woodland species include the Shrubby and Common Fireweeds, *S. minimus* and *S. linearifolius* and the differing forms of the Variable Groundsel *S. lautus*. These grow prolifically with their characteristic yellow daisy flowers, often dominating any bare soil. The more drought-tolerant natives, such as the silver Cotton Fireweed (*S. quadridentatus*), Hill Fireweed (*S. hispidulus*), and the Annual Fireweed (*S. glomeratus* —with its distinctive covering of soft cobweb-like hairs), carry out a scab-like protective role particularly after bush fires and vegetation clearing. By temporarily protecting the soil from water erosion they contribute significantly towards re-establishing the original woodland community and its delicately balanced interrelationships.

**Butterfly-attracting flowers produce fluffy grey bearded seed heads**

Most species develop characteristic fluffy grey or white parachute-like seed heads (pappus). Since these resembled an old man's beard this feature resulted in the botanical name *Senecio*, derived from the Latin for old man '*Senex*'. Their common name, Groundsel, came from 'Grundeswyle', Latin for 'earth glutton'. It reflects upon the ability of its wind-blown seed to germinate freely, enabling them to act as pioneering colonisers.

Close examination of their yellow flower heads reveals many tiny ray- and disc-shaped florets, packed tightly together to resemble a single flower. This flower form evolved to provide a wonderfully simple way for nectar seeking insects to easily pollinate many flowers during only one visit. Hence it is not uncommon to observe them enveloped in a cloud of insect pollinators such as beetles, hoverflies, moths, native bees, flies, flower spiders and lady birds. The Chaostola and Donnyssa Skippers along with the White Grass Dart and Yellow Banded Dart butterflies take advantage of this feature, collecting nectar in exchange for their pollination services. Under protection of darkness their larva browses on native grasses or sedges and finally pupates by forming cylindrical cells out of the leaves that they tie and roll together. These butterflies are very territorial towards their Groundsels, displaying aggression against other males or insects with buffeting and

(Continued on page 6)

GROUNDSELS AND FIREWEEDS (Continued from page 5)

spiralling flight patterns.

Their orange, brown and black colourations send a clear message to potential predators that they contain a highly toxic alkaloid (*pyrrolizidine*). In fact they have absorbed substantial amounts whilst feeding on the groundsel's pollens and flower parts. This same alkaloid has been linked to irreversible liver damage and death of stock. Flour (grain crops), milk (grazing cows) or honey (foraging bees) contaminated by Groundsel are constant concerns to primary producers.

**Sticky Groundsel and Ragwort caused disastrous impacts**

Unfortunately, the *Senecio* genus contains a number of environmental weeds including the highly toxic Ragwort, *S. jacobaea*, and the pretty Purple Groundsel, *S. elegans*.

Ragwort, being a prolific weed confronting pastoralists both in Australia and New Zealand was the focus of a major control program in the 1930's, using the unstable but effective Potassium Chlorate. However, the dust from this chemical trapped itself within the cotton fibres of horsemen's trousers. Once heated by riding friction it dramatically exploded causing severe burns and major loss of dignity to many devastated horsemen. It was soon replaced by another safer herbicide by the late 1930's.

Sticky Groundsel is the most toxic of all Groundsel weeds and this fact brings us back to our Boer War story. The trouper's horses making up the ranks of the Light-Horse Regiment were decimated by this toxic little South African native. This situation was described vividly in a quote by Adamson in the book *The Private Capital*:

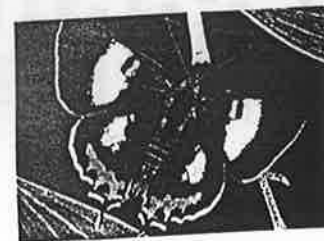
Horse sickness, a disease particular to South Africa, is doing its work: A horse starts out perfectly well and is dead by noon.

No wonder its war record had an enormous impact on the morale of the Aussie Light Horsemen, whose horses had accompanied them all the way from home. Beyond this strong bonding, their survival was a tribute to their trusty steeds.

As an aside, its succulent leaves have enabled it to flourish as a weed on gravel bedding along railway lines in the USA. Its fine roots clamber over the stone surfaces, scavenging moisture that condenses in the cool of the night between the stones. With its ability to kill most grazing insects, its insecticidal qualities are attracting research dollars.

**Parrot's favourite treat**

On a happier note, the Common Groundsel (*S. vulgaris*) often revives memories of those by-gone days when one's pet parrot, canary or finch was given a fresh sprig as a treat. Many of our feathered friends also enjoy, without ill effects, pecking the developing seed heads from our native Groundsels. These birds include the introduced European Goldfinch, the Greenfinch, the Beautiful Firetail (Tasmania's only native finch) along with our colourful Blue-winged parrot, Eastern and Green Rosellas and Musk Lorikeets. As gardeners, feeding the birds is one of the many great reasons for growing a selection of hardy but cheery groundsels and fireweeds!☺



### Fossils, Megafauna and Megamounds

By Dr. Walter Boles, ornithologist, Australian Museum. Article appeared in *Malleefowl Matter* Iss. 38, November 2005.

The malleefowl, *Leipoa ocellata*, is one of three species of Megapode (big-foot) in Australia.

The other two are the Brush Turkey and the Scrubfowl. Fossil megapodes are difficult to identify but their ancestors are believed to have lived in France 40 million years ago.

Megapodes are the most primitive members of the Galliformes, comprising fowl-like birds (pheasants, peafowl, guineafowl, turkeys, quail etc.) Their closest relatives are the waterfowl (ducks, geese, South American screamers).

In Australia, the earliest Megapode record is *Ngawudpodius minya* recovered from the 25 million-year (Late Oligocene) deposits in north-eastern South Australia. This form was quite small, about the size of a quail. Its direct relationship to any of the living forms cannot be determined but it does share some similarities in proportion with the Malleefowl. The other fossil megapode from Australia is also the largest, the turkey sized *Progura gallinacea* from the Darling Downs, Queensland deposits about 1.5 million years old.

The genus *Progura* was originally placed with the pigeons. Recent workers re-examined the Queensland fossils and compared them with fossils from other Australian regions, particularly Naracoorte, South Australia. *Progura* has been well represented in these deposits because of the many caves in the region and the birds' apparent inadvertent practice of falling into them at regular frequency.

Following analyses of these comparisons, a second smaller species *Progura naracoortensis* was distinguished on relative leg length and overall size. It is now believed that the two 'species' represent the male and female of a single species. The comparison between the bones of *Progura* and those of modern Australian megapodes

showed that there were extensive small but consistent differences from the Brush Turkey and the Scrubfowl. In contrast, the only significant difference between *Progura* and *Leipoa* is one of size. There is little justification for keeping them as separate genera (thus the fossil *Progura gallinacea* became *Leipoa gallinacea*.)

During the late Pleistocene (100,000 - 10,000 years ago) many groups of Australian animals began to show an increase in body size. Collectively called the megafauna, these animals included the giant kangaroos, koalas, wombats and other mammals. Suddenly, about 30-40,000 years ago these large animals either died out or started getting smaller, a process called dwarfing. The grey kangaroo, koalas and Tasmanian Devil went along this path. The decrease in size ranged from only 4% in the Devils to more than 25% in the kangaroo. Dwarfing of the fossil *Progura* by about 25-35% has resulted in the living Malleefowl. The modern malleefowl is now regarded as a subspecies, *Leipoa ocellata* and the giant fossil form is *Leipoa ocellata gallinacea*.

The present malleefowl can create mounds of considerable size. Therefore it is reasonable to assume that its giant relative in past times would have produced nests of even more substantial volume. It is possible that large accumulations of soil and rocks that differ from the underlying ground, as reported from drier parts of Australia, represent such giant mounds. Further work is ongoing and hopefully will shed light on the origin of these structures and their possible relationship with Megapodes.

In Oceania, there are many other species of Megapode, mainly belonging to the Scrubfowl genus *Megapodius*. Some are still living but most are now extinct. These fossils are known from Palau, Mariana, Caroline and Solomon Islands, Vanuatu, New Caledonia, Fiji, Samoa and Niue. Most or all of these extinctions occurred in the last 10,000 years or so and are attributed to human activities, usually through direct predation of eggs or adults.





### Australia's Rivers in Crisis

*From Greening Australian, Iss. 1, 2005*

'Our rivers are a critical part of our country's future success. They provide clean water for drinking, water for agriculture and industry, and critical habitat for many of Australia's unique plants and animals. But our rivers are in crisis.'

'River Recovery a program to be undertaken by Greening Australia, will focus on practical environment restoration and protection work on the following rivers: Yarra (Vic.), Derwent (Tas.), Boorowa (ACT/NSW), Lower Murray (SA), Burdekin (Qld.), Hawkesbury - Nepean (NSW), Hutt (WA), Coliban (Vic) and Katehrine (NT) rivers.'

'In 2001 the National Land and Water Resources Audit showed that 85% of our rivers have had their environmental features modified by human activity; 90% have higher than natural loads of sediment and nutrients; and river flows have been substantially altered in many of our most important river systems.'

'The Boorowa River is a hotspot for salt degradation, an important tributary to the Lachlan River, and a major contributor of salt to the Murray Darling Basin, and will be a focus for River Recovery in southwest NSW.'

'Named after a Celtic word meaning 'clear water' and home to the critically endangered Spotted Handfish, the upper reaches of the Derwent are the focus for River Recovery in Tasmania.'

'For many Australians, the most important rivers are those found in and around the city they live in. In NSW River Recovery is focussed on the most damaged parts of the Hawkesbury Nepean River system and catchment and will work to help improve the health of creek lines in this magnificent river system. The Hawkesbury Nepean supplies drinking water to over 4 million Australians, supports more than \$1 billion in agriculture production and 10 million tourists every year.'

### Snowy River Story

Claire Miller

The stirring David and Goliath story of the townspeople of Dalgety and Orbost on the Snowy River, whose grassroots campaign took on the massive power of the Snowy Hydro in an attempt to restore the flow to the river and by doing so, save their communities and the River from a slow death.



### Greening Australia thinks big in the west

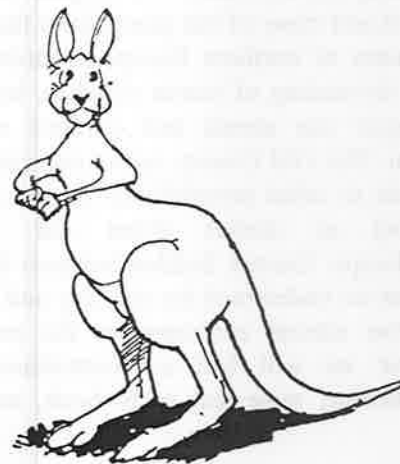
*From Greening Australian, Iss. 1, 2005*

The Gondwana Link project focuses initially 'on connecting two areas of extraordinary biological diversity - the Stirling Ranges and the Fitzgerald River National Parks along the central coast of Western Australia.' On the ground this will mean reconnecting natural habitats from the Karri to Kalgoorlie. The aim of the entire project is to protect and replant bushland for over 500km to build a living link that stretches eastward across the continent.'

'The south-west of WA is special. Conservation International lists the region as one of the world's 25 biodiversity hotspots, or areas that support at least 1500 native plant species. The south-west supports over 6,000 species - 80% of these are plant species found nowhere else on the planet.'

### The Grassy Groundcover Research Project

This focuses on restoring Victoria's once vast native grasslands. 'Around 150 years ago, it is estimated that one-third of the 'garden state' was covered by grassland and grassy woodland ecosystems. Today, less than 1% remains. This dramatic loss is matched by a similarly disturbing decrease in the number of animal species. Of the 22 mammal species that are now extinct in Victoria, at least half relied on, or lived in, native grassland and grassy woodland landscapes.'



# ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP NEWSLETTER

## MEDIA ARTICLES

*From The Murray Pioneer (SA) 25/11/05 p.6*

'An increase in the number of western pygmy possums has been recorded at Calperum Station, north of Renmark (S.A.)

The possums are small, nocturnal marsupials that live in trees but wander on the ground in search of food.' The first western pygmy possum found on Calperum Station was in 2003. 'Each year the numbers have gradually increased and a variety of vegetation types, previously thought not to be ideal habitat for the pygmy possum', have been populated.

It is believed that feral animal control measures undertaken at Calperum have allowed the increase in numbers.



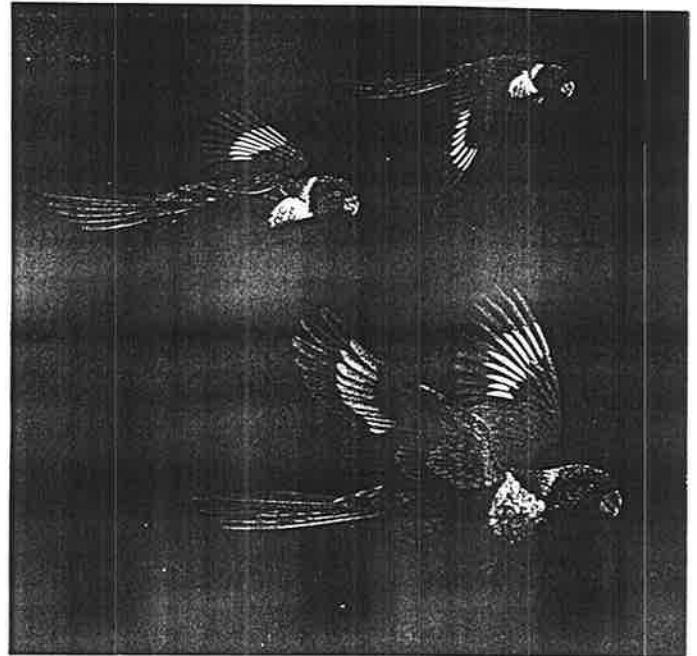
### BOOK REVIEW

The Old Country - Australian Landscapes, Plants and People by George Seddon- Uni. of WA. Hardback rrp. \$49.95 304 pps.  
*Courtesy Cambridge University Press*

New from the acclaimed author of the best-selling Landprints (1997) comes a lavish survey of the Australian flora and how we relate to it....

We are a nation of gardeners, and we take pleasure in tending our backyards. But this pleasure sits uneasily with our knowledge that the places where most of us live are running out of water. We suspect that our lawns and many of our plants from the damp climates of northern European gardens are too demanding of scarce supplies, but can't imagine our streets and gardens without them. The Old Country opens our eyes, and minds to other possibilities. It does so by telling us stories about our natural landscape. George Seddon believes that the better we understand the delicacy and beauty of our natural environment, the more 'at home' we will feel as Australians. This passionate, wise and witty book, enriched

with breathtakingly beautiful illustrations, suggests that the answers to our water problems lie here, at home.



### GRASS PARROTS *prose by W.A.Pretty*

The noisy apple-bird  
Tells of green birds  
In their numbers;

They nibble, bite and chew on fruit:  
With bits upon the ground  
Like fresh confetti  
But more in full destruction mode

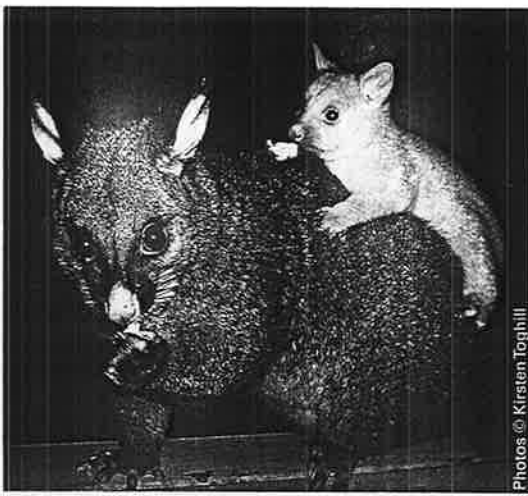
En masse they screech communications  
in the Tuarts  
on the streetside of the park  
before in low swift flight  
retreating to the taller flowering-gums  
in more seclusion.



# ISLAND BLONDES

BY MARTIN FINGLAND

There's something glamorous about blondes. Is it because they're naturally rare, or do they just have more fun?



Photos © Kirsten Toghill



Photos © Kirsten Toghill

**Above left and right:** While living on six acres of Tasmanian bushland, Kirsten Toghill enjoyed visits from a friendly female brushtail that would drop in to nibble a bit of apple on her deck in the evening, often accompanied by her current joey. One year, she brought a real surprise: the baby was gold.

**Facing page:** That flash of gold in the Tasmanian bush is a naturally occurring colour morph that can also run in families – this baby, shown with its golden mother, was fathered by the golden male on the cover of this issue.

**D**espite their many unique and unusual features, Australian marsupials are sometimes denigrated as 'a rather drab-coloured lot'. As a wildlife educator, I do hear this comment occasionally, from people who perhaps neglect to look further than skin deep.

No one could make that comment about our feature animal: a stunning peroxide blonde! 'Is it natural?' you may ask – and rightly so. But hold that question for a moment. Most blondes don't give up their secrets so easily. An equally valid question could be: What is it?

A possum? Well, yes, of course. But before you go searching through your ID guides to find out which possum... stop. You probably won't find it. Information on this animal is almost non-existent.

The possum in question is none other than a form of the common brushtail (*Trichosurus vulpecula*). It is similar in most respects to the brushies that inhabit suburban back yards. However, it may come as a surprise to find that our familiar grey brushtail actually sports a range of colours, from brunettes to blondes to reds. In the Wet Tropics of north Queensland, a coppery-red colour is not unusual. Black, chocolate, white and silver-gold populations occur, particularly in Tasmania.

Islands – such as Tasmania or isolated pockets of rainforest – lend themselves to genetic variants. The smaller, closed gene pools are less likely to dilute or suppress the occasional recessive gene. Once emerged, it has at least some chance of establishing itself as a new feature in the population. Whether that new feature is a desirable or undesirable trait, only time and circumstance will tell. In the same way Tasmania has dishied up a golden brushtail possum, North Stradbroke Island in south-east Queensland has its own golden form of the swamp wallaby and the Daintree area of the Wet Tropics (a stretch of rainforest relatively island-like in its isolation) has produced a white form of the lemuroid ringtail.

### Celebrate the difference

So, why get excited about an animal that, apart from its colour, is just another brushtail? As someone who has been involved with wildlife for many years, I'd ask: why not get excited? Diversity is the spice of life and there is something special about an animal that seems to defy the norms and

Virtually everyone who has seen a golden brushtail in the flesh (or fur) is in awe of the stunning colour

stand out in the crowd. If a species is the sum of all its populations and forms, why not *celebrate* all of them, instead of tucking some away as if they were a tad freaky or too resplendent to be real? Virtually everyone who has seen a golden brushtail in the flesh (or fur) is in awe of the stunning colour, but try finding a photo or even a mention of a golden brushtail in a wildlife book.

The golden brushtail is a naturally occurring colour morph. Information about where or how it lives, its status or, indeed, how it interacts with other Tasmanian brushtails is hard to come by. In fact, Tasmania may have many secrets to yield when it comes to brushtails: the diversity of colours, habits and discrete populations appears to have received little research attention.

Tasmanian wildlife experts are wary of saying much about some of their special animals – not least because until recently an open season existed for brushtails. Large numbers were trapped for fur and meat on an annual basis.

It seems most golden brushtails have been found in the more open, drier forests of the south-east coast, particularly the Tasman Peninsula. Golden animals, at least in this area, live alongside and interbreed with the grey and chocolate forms.

I have kept and bred golden brushtails in captivity now for more than a decade, and I can say that they are the largest brushtails I've encountered. Their fur is longer and denser than that of their grey kindred. In general, they also seem to have a much more placid and gregarious nature than other brushtails. Without a doubt, they have the cuddliest and most stunning locks.

If they remind you somewhat of a spotted cuscus (*Spilocuscus maculatus*), your wildlife antennae are tuned in and operating well. Brushtails and cuscuses are close cousins and together form a family known as the phalangers.

Perhaps for the golden brushtail, peroxide blonde is not necessarily a bad complexion for a nocturnal forager living in the silvery, moon-drenched forests of Tasmania, or ambling across frosty flats in the cooler months!

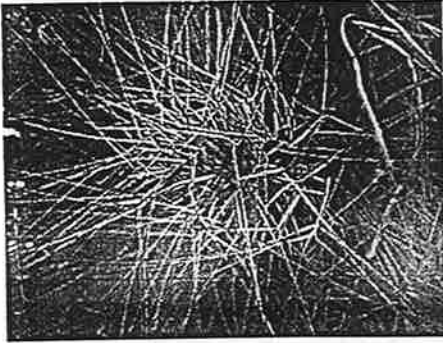
**MARTIN FINGLAND** and his wife Fiona (also a blonde) own and operate Geckoes Wildlife Presentations and currently have a baby golden brushtail as part of their travelling wildlife collection.

## Propagating Native Grasses Using Tubes

Barbara Cook - Member of the Native Grass Resources Group

**This is the first of a two-part series covering various aspects of native grass propagation.**

**The final article will appear in the winter issue of Small Talk.**



Brush wire Grass

Collecting and growing native grasses from seed, whether for revegetation purposes or for the home garden is a satisfying experience. Some native grasses have a potential in the horticultural industries as an ornamental species or as a lawn/turf alternative. Some such as the Themeda, Cymbopogon and Poa species make attractive plants, with the colour and texture of the foliage coupled with the ability to survive periods of drought with minimal water requirements, make them suitable for mass planting or specimen plants in the landscape.

The Gramineae or Poaceae (grass) family is important to people as both a food source and providing feed for our grazing animals. They contribute to biodiversity directly through provision of food and provide habitats for a number of animal and invertebrate species. In Australia there are approximately 1000 species of native grasses and about 350 species that have been introduced and become naturalised. Native grasses are well adapted to the Australian environment and have developed a range of characteristics to enable their survival during periods of drought and fires.

Native grasses have the reputation of being difficult to propagate but this is not the case. As with any plant the knowledge of the germination requirements and meeting those requirements make propagation easier.

Native grasses do have some issues that need to be taken into consideration when propagating the seed. Many have a dormancy or 'after-ripening' period in which the seed looks mature and have dropped from the plant but are in fact immature. These seeds will only become mature or 'ripen' after a period of 3-12 months, depending on the species. This 'after-ripening' period delays germination until conditions are suitable.

An example of this is Themeda triandra (kangaroo grass), the most widely recognised species of native grass in Australia. The flowering period of kangaroo grass is during summer, with seed ripening progressively on the floret and falling readily from the plant on maturity. Kangaroo grass has a dormancy period of between 9-12 months, so seed collected in late spring or summer will be ready for germination the following spring and summer. This dormancy period varies greatly in different locations, so seed collected from the warmer, drier regions respond differently than seed collected in the cooler, moister areas.

Generally, it is recommended that kangaroo grass seed be planted from late spring to early summer, to allow time for germination and establishment of the seedlings before the chill of late autumn. The seed can be encouraged to germinate outside of these months by providing extra warmth and moisture. Kangaroo grass has been successfully germinated in tubes, during November-December and again in April, using a sheet of clear Perspex raised 30cm over the tubes on days below 25°C.

Another genus of native grass that is prevalent in the Adelaide Plains and Mt. Lofty Ranges is the Austrodanthonia (wallaby grass) genus. Wallaby grasses are the most widespread of the native grasses, covering a wide range of soil types and climatic condition. Most are tufted perennials that remain green all year, with active growth occurring in winter and spring. Many species respond to summer rains, greening up and producing flowers, while others flower all year unless heavy frosts occur. Wallaby grass also tolerates some grazing, making

### Field Guide to Eucalypts

Ian Brooker & David Kleinig

- Volume 1 – South-eastern Australia  
364 pages hb colour photos 1876473037 \$99.00
- Volume 2 – South-western and Southern Australia  
436 pages hb colour photos 1876473282 \$130.00
- Volume 3 – Northern Australia  
428 pages hb colour photos 1876473487 \$129.95

### Environmental Weeds

A Field Guide for SE Australia

Kate Blood

This comprehensive field guide with excellent colour photography allows accurate identification for a broad range of users. Each entry includes shape, size, history and uses, taxonomic relationships, origin, weedy distribution, description, reproductive and growth characteristics, and confusing look-alikes.



### Nest Boxes for Wildlife

Alan Franks & Stacey Franks

With basic carpentry skills you can build a nest box, and be rewarded with the pleasure of watching the activities of the wildlife that takes up residence, as well as knowing you are contributing to their conservation.

### Wildlife of the Box-Ironbark Country

Chris Tzaros

Provides an overview of the ecology of the box-ironbark habitat and its wildlife, and detailed descriptions of 249 species found in the region. Includes a CD of bird calls.



### Growing Australian Native Plants from Seed

Second Edition

Murray Ralph

Interest in the propagation of native plants has dramatically increased recently. Join this growing revolution with this book which outlines methods used to propagate native species from seed for revegetation, tree planting or direct seeding projects

Continued from page 2

it a valuable species for unimproved pasture.

The optimal germination temperature for wallaby grasses is between 15° and 25° C for seed that is older than 6 months, but very fresh seed also germinates readily. The seed can be planted in autumn or spring, as availability of water is more important than temperature, but the recommended sowing time is autumn.

Propagating native grass seed in tubes has both advantages and disadvantages. Filling and planting seed in the tubes is time consuming and an area needs to be set aside to that receives shade when seed is germinating, but has access to full sun to ensure strong healthy seedling growth. An easy way around the differences in germination and growing requirements is to use shade cloth to cover the tubes until germination has occurred, then remove to allow the seedlings to get full sun until they are ready to be planted out.

A spray watering system is suitable, but unless the system is set up correctly some tubes may not receive enough water and others may get too much, whilst hand-watering is time-consuming yet efficient.



**Hakeas**  
A Field and Garden Guide  
Ivan Holliday

Hakeas are increasing in popularity in the garden. This is the first fully comprehensive book on this plant group and features all 148 species and 15 subspecies known.



### Australian Native Plants

Fifth Edition

John W Wrigley & Murray Fagg

This new edition of an Australian bestseller is for everyone interested in growing native plants anywhere in Australia. Completely new layout including over 1,000 photographs and new, easy-to-recognise symbols to indicate different properties of each plant. A must have for native plant lovers!



### Native Plants of Northern Australia

John Brock

A comprehensive guide to 450 species of trees and shrubs found in Northern Australia. With 700 colour photographs and records of Aboriginal plant usage. A valuable reference for all native plant enthusiasts.



### Australian Rainforest Plants

Nan Nicholson & Hugh Nicholson

Volume 6 latest release. These 6 volumes celebrate the extraordinary beauty of Australian rainforest plants. Each contains 72 pages of colour photographs with descriptions of over 100 native plants.



### Bumblebee Importation News

Horticulturalists are about to take the second step in their bid to import European bumblebees to mainland Australia.

Conservationists are deeply concerned about the harm European bumblebees could cause to our bushland, farms and gardens. Meanwhile, research on an excellent native bee alternative is well advanced in Adelaide.



**Australian Native Bee Research Centre / Aussie Bee**  
PO Box 74, North Richmond NSW 2754, Australia  
Fax: (02) 4576 1196. Email: [anbrc@zeta.org.au](mailto:anbrc@zeta.org.au)

Visit our Website! <http://www.aussiebee.com.au>

### Consider Edge Effects

Where one kind of habitat meets another there will be an edge. Edges are unique environments which affect different species in different ways – positively and negatively.



Edge habitats are subject to different environmental conditions than core areas surrounded by similar habitat. Edges offer a greater variety of resources to those species that are able to utilise different elements of adjacent habitat. In natural situations, this can mean that edges have high species diversity.

However, where native vegetation abuts unfavourable land uses, as in many rural agricultural situations where paddock or crop meets native vegetation, edges can affect some native plant and animal species negatively. Species near edges may be influenced by increased light penetration, salt-laden winds, increased rate of predation, competition, weed invasion, noise, and adjacent land use including chemical spray drift and soil disturbance.

Edge effects can exert an influence on different species for varying distances. For example, in one study vegetation structure was affected for less than 13 metres from the forest edge but the distribution of bird nests indicated an edge influence of from 9 to 64 metres. Populations of edge-liking species tend to be higher in rural environments because of the high degree of fragmentation present. Thus, providing for species that need larger patches of vegetation with 'core' habitat is usually a high priority.

### What should landholders aim for?

Aim to develop core areas for edge-sensitive species by reducing the edge-to-area ratio (ie. make the area consolidated rather than long or convoluted). It is worth remembering that there are few straight lines in nature and reducing edge doesn't mean making perfect circles.

Taken from Platt, SJ (2002). How to plan wildlife landscapes: a guide for community organisations. DNRE Melbourne.

From Land for Wildlife News, Vol 5 no 8 March/April 2005.

### What value are eucalypt plantations to wildlife?

A study has shown that plantations support higher densities of forest birds and mammals than cleared farmland, and slightly lower densities than native forest. The reverse applied to open-country birds. Pessimists expected that introduced birds or invasive native species would dominate the bird fauna, but this is not the case. Introduced birds formed less than 1% of the bird population in plantations, compared to 1.7% in native forest and 2.5% in cleared farmland. Evidence was found that plantations could help protect adjacent native vegetation against adverse effects of stock and invasive birds.

From Land for Wildlife News Vol 5 no 9 Sep/Oct 2005

# ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP

## MEDIA ARTICLES

### **\$7.5m to lift alpine visits**

*From The Border Mail (NSW) 6/1/06 p.9*

'A \$7.5million investment in environmental partnerships in the Alpine National Park is expected to lead to 20% more tourists and world heritage listing,' stated Mr. Thwaites (Vic. Environment Minister) recently. He believed the park was under utilised particularly in summer, and that people need to promote the use of the park, as 'it is a wonderful resource and a great place to visit'. He outlined some key steps to renewal.

#### **Steps to renewal**

- ❖ Willow removal from alpine wetlands
- ❖ Alpine bog restoration
- ❖ Culling goats at Mt. Mittamatite
- ❖ Brumby removal from east alpine region
- ❖ Maintaining and restoring cattlemen's huts and
- ❖ The sealing of the Bogong High Plains Rd.

### **Dramatic fall in the state's water us**

*From The Adelaide Advertiser 7/1/06 p.27*

'South Australians have saved 11 billion litres of water in the past year', as part of the water conservation measures introduced in October 2003. The report infers that 90% of the population support the continuation of water conservation measures, which reduce over-reliance and use on the ailing River Murray in SA. Permanent water conservation measures in SA include:

Public or private gardens, recreational areas or nurseries can only be watered by hand, a drip-feed irrigation system/ sprinklers, and only after 5pm and before 10 am on any day.

### **Thousands of Ibis breeding on Lower Lachlan**

*From The Riverine Grazier (NSW) 10/1/06 p.4*

'The first major water bird breeding event on the lower Lachlan River in five years is currently underway. More than 15,000 Straw-necked ibis are present in the colony along Merrowie Creek, west of Hillston. DEC, DNR and State Water staff inspected the colony with local landholders recently and found thousands of chicks. They range

in age from some just hatched to others ready to leave the nest. The breeding appears to be in response to a replenishment flow- traditionally used to supply stock and domestic water. An abundance of food such as caterpillars and locusts resulting from good local spring rains may have also been an important trigger. To ensure a successful breeding some additional water is being released into Merrowie Creek by State Water.'

### **Work underway at Etiwanda Wetlands**

*From Sunraysia Daily. (VIC) 10/1/06 p.2*

'Work has started on construction of the Etiwanda Wetlands which will replace the existing stormwater ponds on the Mildura Marina Resort site.' 'The wetlands will reduce nutrients and pollutants entering the river, provide a buffer to chemical spills as well as becoming a focal point for environmental education in the area. Boardwalks and interpretive and educational signage will encourage eco-tourism and reinforce the importance of the river system to the local community as well as the Murray Darling Basin at large.' 'The wetlands will receive stormwater from a significant portion of the Mildura urban and industrial areas on the eastern side of Mildura.'

### **Scientists play leapfrog to help save a species**

*From the Sydney Morning Herald 11/1/06 p.3*

After three years 200 'desperately endangered corroboree frogs will see their first high-country dawn. Once the southern corroboree frog was one of the more common alpine species, with hundreds of colonies living in the nations highest swamps. But in the 1980s and '90s their numbers plummeted, and today a mere 18 colonies are left, most with fewer than five adults.' 'Climate change, drought and amphibian chytrid fungus disease have all been blamed for taking corroboree frogs to the edge of extinction.' After losses and failed efforts at releasing the tadpoles into



## ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP MEDIA ARTICLES

Kosciuszko National Park, scientists have decided to use the trick of leap-frogging the tadpole stage to prevent contact with other species carrying the chytrid fungus. As adults the frogs are terrestrial and don't go near water, laying their eggs on land and waiting for the swamps to flood.'

A NPWS Threatened Species Officer said "This is our best option for trying to prevent the extinction of this species in the wild."

### Scientists say global warming drives frogs to extinction

*From The Canberra Times 13/1/06 p.6*

'Global warming has triggered the extinction of hundreds of species of frogs and toads by helping a deadly skin infection to spread across the world. Scientists believe they have found the first clear proof that global warming has caused outbreaks of an infectious disease that is wiping out entire populations of amphibians.'

'The dramatic demise of the 6000 species of amphibians was first identified in 1990. A study by an international team of researchers has now linked the spread of a species of chytrid fungus called *Batrachochytrium dendrobatidis* with a rise in tropical temperatures associated with global warming.'

'The dramatic loss of amphibians- frogs, toads, newts and salamanders - has led to about a third of them, about 1856 species, being officially classified as threatened. Hundreds more are on the brink of extinction. Scientists believe the chytrid fungus is behind the disappearance of the golden toad of Costa Rica and at least 67% of the 110 species of brightly coloured harlequin frogs.'

"Disease is the bullet killing frogs, but climate change is pulling the trigger. Global warming is wreaking havoc on amphibians, and will cause staggering losses of biodiversity if we don't do something fast," stated one of the researchers.

'The study found that between 1975 and 2000 average air temperatures for the tropics increased by 0.18 degrees Celcius a decade-triple the average rate of warming for the

20<sup>th</sup> century. Most "extinctions" occurred in unusually warm years. Rising temperatures enhanced cloud cover over tropical mountains, leading to cooler days and warmer nights, both of which favoured the growth of the fungus.'

### Weeds are choking escarpment

*From The Chronicle (QLD.) 6/1/06 p.5*

'Dick Smith squints into the sun as he points towards the flourishing greenery on Toowoomba's escarpment.' That greenery is an infestation of weeds - privet and lantana forming an impenetrable strip winding up the Range crossing. Currently these are in flower. The privet is a shrub-like tree native to China, which has cloud-like blooms of fragrant white flowers and small black berries spread by water and birds. It threatens taking over patches of Australian landscape and causing problems to native habitats.

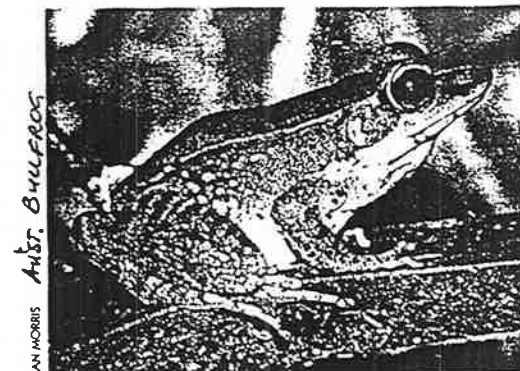
Toowoomba City Council has indicated that persons wanting a privet hedge, can only do so, if they ensure that the plant does not flower or become a weed. Privet also causes a health hazard, and causes asthma and breathing difficulties.

### CSIRO targets fuel, food

*From The Weekly Times (VIC) 8/2/06 p.31*

The CSIRO will shift its rural focus to environmental issues and to producing healthy foods and bio-fuels as part of a new-look research program. The CEO of CSIRO Mr. Geoff Garrett stated "*CSIRO must move with the times and, increasingly, ahead of the times if Australia's scientific research is to be relevant for the challenges the country faces.*"

It is understood that CSIRO would increase funding on technologies aimed at reducing greenhouse gas, halving emissions and doubling the efficiency of energy generation, supply and use, and renewable energy such as solar power.





## ASGAP WILDLIFE & NATIVE PLANTS STUDY GROUP MEDIA ARTICLES

### **Brolgas find a new playground**

*From Shepparton News (VIC) 7/2/06 p.36*

Brolga sightings at the Murchison Sewage Farm have been confirmed. 'Two brolgas were feeding in one of the clean filter ponds along with other wading birds such as the yellow-billed spoonbill and black-fronted dotterals.'

'Brolgas are commonly known for their dancing which is a display of leaps, bows and high-steps accompanied by loud trumpeting calls. They mate for life (about seven years) and are often found in pairs or parties around swamps, wetlands and pastoral areas. A brolga nest is usually a raised mound of grass, sticks and leaves that sits above the water or on land.'

'Foxes are a major enemy of brolga chicks and wetland degradation has seen brolga numbers drop dramatically. Brolgas are classified as a vulnerable species in the Goulburn Broken Catchment and it has been estimated that up to only 1000 individuals are found in southern Australia.'

### **Ear's to a brighter future for furry friends**

*From The Courier Mail (QLD.) 18-19/2/06 p.13*

There has been a successful release of captive-bred bilbies in Currawinya National Park in Queensland's remote southwest.

'The bilbies were released in December and are thriving inside a 20km. predator-proof fence, free from feral cats and foxes that helped send them to the brink of extinction. They were digging burrows within hours of their release and were eating well.' They are the vanguard of plans to reintroduce them back to their original range.

### **Experts agree on the problem, but not on the solution**

*From the Sydney Morning Herald 16/2/06 p.13*

'The truth about land clearing is competing land uses and past land management practices', says a spokesperson from the WWF. Land clearing has led to a number of serious environmental problems: loss of topsoil, rising salinity and loss of biodiversity.

'Broadscale clearing of mature bushland remains the number one threat to the survival of animal and plant species in Australia, as well as leading to the occurrence of dryland salinity. Where too much water enters the water table, underground salt rises to the surface. In the Murray Darling Basin alone - an area that supports 40 per cent of Australian farms and contains about 75 percent of Australia's irrigated land - close to 5.7million hectares are at risk or affected by salinity, WWF says. Land clearing is also a significant contributor to greenhouse gas emissions, which are changing climate and weather patterns. It is estimated that more than 13 per cent of Australia's total carbon dioxide emissions come from the burning and decay of cleared vegetation.'

### **Natural attractions of Kings Billabong highlighted**

*From Sunraysia Daily (VIC) 8/2/06 p.2*

Canoe tours marked World Wetlands Day and highlighted the natural attractions of Kings Billabong. The unique experience lasting 90 minutes, provided participants with an introduction to the plants, birds, fish and aquatic invertebrates of the wetlands.

'Wetlands occur where the water table is at or near the surface of the land. They are diverse ecosystems and can be permanent or ephemeral, salty or fresh, natural or man-made. They include areas such as swamps, rivers, lakes, floodplains, saltmarshes, mangrove flats, seagrass meadows and coral reefs. Wetlands support numerous animals and plants and also perform important functions such as water storage, flood mitigation, shoreline stabilisation, erosion control, groundwater recharge and discharge, and water purification through the retention of nutrient sediments and pollutants.'

'Wetlands are among the world's most threatened ecosystems, due to drainage, conversion, pollution, salinity, lack of flooding and over exploitation of their resources.'



**Cod Sightings linked to environmental efforts**

From *The Murray Pioneer* January 13, 2006

**Water flows see results - in a nutshell**

Early indications from efforts to mimic natural river flows include:

- ❖ Sightings of Murray Cod at Chowilla anabranch
- ❖ Many red gum, lignum and other vegetation, which were flooded have shown new growth and vigour.
- ❖ Bird breeding has been observed in some wetlands as temporary habitats have been created by the weir raisings.

**River redgum logging concern**

From the *Sunraysia Daily* (VIC.) 11/1/06 p.5

'Redgum forests along the Murray River and its tributaries are still being heavily logged despite being added to the endangered species list'. A NSW Scientific Committee 'has just listed the red gum as endangered as the size of the habitat for this iconic species in the hunter valley has shrunk dramatically from 20,000 down to 100 hectares since European settlement. The committee is quoted as saying the risk of extinction is extremely great as the trees are not being regenerated, due to cropping and grazing and changes in hydrology.' Such a warning regarding the health of the species should be heeded says the report. There are no NSW national parks along the Murray River. The area 'is still suffering serious ecological decline'. The report indicates that the NSW Government 'needs to conduct an assessment of the forestry industry in these precious forests and to protect these areas for the future.'

**Green Schemes take roots**

From the *Western Times* (QLD) 19/1/06 p.5

The Victorian Government's BushTender and CarbonTender projects have been taken up by Victorian farmers, as a new approach to improving native vegetation management on private land. Two pilot BushTender projects in northeast Victoria and Gippsland involve almost 5000 ha. of native

vegetation. This is a positive step 'according to DSE, as only 12 % of Victoria's remnant native vegetation, supports 30% of the State's threatened species.' Carbon Tender is a greenhouse strategy paying landholders to grow trees to act as greenhouse gas "carbon sinks" on their properties. 'A third incentive scheme, Bush Broker is due to be launched in Victoria this year. Farmers who protect native vegetation on their land will be able to trade the area with developers or other farmers who must offset the lost native vegetation they clear for housing or agricultural developments.'

**Wildlife impact highlighted**

From *Sunraysia Daily* (VIC) 25/1/06 p.2

'The potential impact on wildlife habitat in the Nowingi area is the basis of the Bird Observers Club of Australia's submission on the Environmental Effects Statement (EES) for a toxic waste dump in the Mallee.'

It said 'the proposed LTCF (Long Term Containment Facility) site was important for birds' with 11 species currently on the Advisory List of Threatened Vertebrate Fauna in Victoria 2003 - nine of which are threatened taxa under the Victorian Flora and Fauna Guarantee Act 1988, and five of which are listed as endangered or vulnerable under the Commonwealth EPBC Act 1999' 'All 11 species are included in the Action Plan for Australian Birds (2000) which recognises those taxa, which, according to World Conservation Union are threatened or non-threatened.'

'The location proposed in the EES is recognised by bird observers as the best location in Australia to see the Mallee Emu Wren - one of the last strongholds of the species.' 'The site is currently unreserved Crown land, it forms part of a vital corridor between the Murray-Sunset and Hattah-Kulkyne National Parks.'

'Development of the site would create a significant hole in the environmental landscape.'

