

# *Wildlife and Native Plants Study Group Newsletter*



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**W**elcome all to the second edition of Wildlife & Native Plants.

Firstly, I must thank all who contacted me regarding membership to the Study Group and the support I have received from all the SGAP and APS State groups. Secondly, thank you to those who enclosed letters or contributions to the newsletter. I value your input highly, and will try to print some excerpts each issue.

Readers will find the newsletter a means of information sharing on a range of diverse topics which broadly cover wildlife and native plants. In this current issue, you will find articles on birds, moths, and native orchids - dendrobiums and epiphytes. Australian plants featured include kurrajongs and the low open woodland ecosystem - a bumper edition of 14 pages in all!

As winter passes, there are some key signs of spring around the corner with wattles starting to flower, orchids emerging, nestlings and the parents feeding frenzy, the air filled with sweet blossom and warm sunny days ahead. But this also means the insects ....ants, bees, mosquitoes and as the ground warms the emergence of snakes and many other creatures from their wintry hibernation. Next issue we explore Biodiversity and Weeds as part of Biodiversity Month and Earth Alive!

#### IN THIS ISSUE :

- Dendrobiums & Native Epiphytes
- Habitat Loss puts Birds in Peril - MDB
- Native Birds and Commercial orchards
- Rainbow lorikeets
- Bellbirds
- ASGAP Conference
- Autumn Day Flying Moths
- The Old Kurrajong
- Low Open Woodlands
- Vale- Judith Wright McKinney
- Book Reviews

#### A census of species

Science has identified 1.5 million species of animals and 300,000 of plants. But for every one classified there are probably ten unclassified. Each year at least 20 news species are discovered....but how many are lost, and gone forever?

Norman Myers said:

*"Unwittingly for the most part, but right around the world, we are eliminating the panopoly of life. We elbow species off the planet, we dent yoom to entire communities of nature, we domesticate the Earth. With growing energy and ingenuity , we surpass ourselves time and again in our efforts to exert dominion over fowl of the air and fish of the sea.*

*We do all this in the name of būman advancement. Yet instead of making better use of lands we have already to our use, we proclaim our need to expand into every lasting corner of the Earth. Our response to natural environments has changed little for thousands of years. We dig them up, we chop them down, we bum them, we drain them, we pave them over, we poison them in order to mould them to our image. We homogenize the globe.*

*Eventually we may achieve our aim, by eliminating every "competitor" for living space on the crowded Earth. When the last creature has been accounted for, we shall have made ourselves masters of all creation. We shall look around, and we shall see nothing but each other. Alone at last."*

#### REMINDER

Subscriptions \$ 5.00 p.a. (Australia)  
\$10.00p.a. (Overseas)

Send your payment and SGAP or APS membership no. to:

ASGAP Wildlife & Native Plants Study Group  
P.O.Box 131, Strathalbyn, S.A. 5255

## DENDROBIUMS

Pronounced **den-DRO-bee-um**

From Pridgeon, Alec.(ed.)(1992) What Orchid is That? Lansdowne.

'Dendrobiums belong to the tribe Epidendreae subtribe Dendrobiinae.'

Etymology: Gr. *dendron*, tree; *bios*, life.

The genus Dendrobium is an extremely variable one consisting of over 1000 species found from India through to the Philippines, Malaysia, Indonesia, New Guinea, Australia, the Pacific Islands and New Zealand.

Dendrobiums are mostly epiphytes and lithophytes with fleshy or wiry pseudobulbous stems. They may be of erect or pendulous habit, with one to many linear to round, to almost terete leaves. Single tiny, flowers appear on either lateral or terminal racemes. The dendrobium displays a wide range of colours with the exception of black. All have the lateral sepals joined to the column foot to form a mentum. Four pollinia are present in two closely appressed pairs.

Growing conditions are widely diverse- from cool to warm, from shade to full sun. However air movement and light are essential.

Some Australian dendrobiums include:

**D.antennatum** (Lindley) found in Northern Queensland, flowers anytime but generally between winter and spring. It is a large plant with stems up to 130cms. long and up to fifteen well spaced, highly fragrant, long lasting flowers on racemes. These have white to greenish sepals and a purple to violet veined lip.

**D.bigibbum** (Lindley) better known as the *Cooktown Orchid* is found north eastern Australia with three varieties. It has a slender pseudobulbous stem, often quite purplish and is up to 60 cms. long. Racemes bear about 20 rosy, mauve to purple flowers, occasionally white or bicoloured, and which are long lasting and between three and seven centimetres across the petals. It is drought and frost tender and prefers a protected partially shaded position.

**D.cucumerinum** (Macleay ex Lindley) better known as the *cucumber orchid* is found in eastern Australia and receives its name from the

gherkin cucumber shaped leaves which are attached to a creeping rhizome. It is an evergreen plant which grows to 0.3m. Small slightly perfumed flowers appear on a short raceme in late spring/early summer and are a greenish white with reddish purple streaks on the basal half of the segments. This dendrobium is drought and frost tender, and also prefers a protected partially shaded position.

**D.discolor** (Lindley) is a large and robust perennial plant found in north eastern Australia and the islands of Torres Strait and New Guinea. The pseudobulbous stems can grow up to 5m high, with a spread of a metre, with racemes from the upper nodes being many flowered, long lasting and free flowering. It often carries 20-40 creamy, yellowish to golden brown flowers with mauve markings on the lip. It prefers moist, well drained, peaty soils in a protected, shaded position, and like most dendrobiums is drought and frost tender.

**D.gracilicaule** (F.Muell) is a very slender, long pseudobulbous stemmed plant reaching a height of 0.9m with a spread of 0.3m. It is found naturally in eastern Australia, Lord Howe Island, Fiji and New Caledonia. There are up to six lanceolate leaves at the top of the stem which, in spring, bears terminal racemes of up to 40 fragrant flowers, coloured yellow to green-yellow with red-brown blotching on the outside. The lip is yellow with few red-brown markings. It prefers a protected, partially shaded position and is drought and frost tender.

**D.kingianum** (Bidw.) This is a compact and popular species considered by some to be Australian, others Asiatic. It has pseudobulbous stems from five to 55 cms. long with three to seven bluish green, long, oval leaves at the top. Erect, terminal racemes can carry up to 15 slightly fragrant, mostly pink to deep mauve (and occasionally white) flowers with generally darker markings on the lip. It prefers a protected and partially shaded position and is drought and frost tender. When grown in containers it does not like to get "wet feet".

**D.smillicae** (F.Muell.) This is a robust, erect plant found in Northern Australia which is deciduous in nature. Odourless, waxy, pastel coloured tubular flowers from greenish white to pink with a bright green tip to the lip occur on the leafless stems.

**D.speciosum** (Smith) This is commonly called the "Rock lily" and is found growing on trees and rocks. It is a widespread, robust species found along the east coast of Australia. It grows to about 1 m. with a spread of 0.5m. It has at least 6 known varieties. Pseudobulbous stems are often in large masses with terminal racemes carrying up to 100 or more white to yellow flowers with dark purple markings on the lip appearing in spring. Prefers a protected, shady position but is drought and frost tender.

**D.striolatum** (Reichb.f.) This is the most southern Dendrobium species and is native to the Blue Mountains. It often grows on rocks en masse, with its perennial nature and creeping rhizomes. Erect, flowering, branching stems have terete curved leaves, corrugated on the upper surface, and of about 11 cms. long which appear like succulent grass. It grows to a height of 0.5m. One or two small fragrant flowers appear on each raceme, and are green-yellow to yellow with brown-purple striae and white lip. This dendrobium is frost resistant but remains drought tender, and prefers a protected, shady position.

**D.teretifolium.** The "Pencil Orchid" appears like a bridal veil in the low elevations of the eastern coast of Australia, growing to a height of 2m. with a spread of 1m. The stems are tough, may be erect or pendulous, wiry and branching, frequently forming large, long masses with smooth, cylindrical leaves up to 65cms. long. Numerous terminal racemes bearing up to 16 spidery white to cream, fragrant flowers with red to purple markings on the lip appear in late winter early spring. Like most epiphytes and dendrobiums needs a shady, sheltered position and is drought and frost tender.

**D.tetragonum** (Cunn). This is commonly referred to as the "Spider Orchid" and is native to eastern Australia, and found particularly in the coastal areas of NSW. It has pendulous pseudobulbous stems up to 50 cms. long, and very wiry and quadrangular in shape, with leathery leaves broadly lanceolate green and up to 7cms.long. Short terminal racemes about 10cms. long produce from one to nine spidery flowers which are greenish to yellowish with reddish markings. It prefers a shady sheltered position and is drought and frost tender

Propagation of all dendrobiums is by division.

## SOME AUSTRALIAN NATIVE EPIPHYTES

An article by Reg Shooter, first published in the OCSA Bulletin (1997)

There are around 170 different species native to Australia, some of which are quite common and easy to grow, while some are rare and difficult if not impossible to grow.

This paper deals with just one genus, the Dendrobiums. The genus is one of the largest in the Orchidaceae family, consisting of around 2000 species found throughout Asia, India, New Guinea and Australia.

Australia has about 60 species confined to the east coast of the continent, with one species in Tasmania, but none in South Australia. I have to say about 60 species because the botanists keep changing things, either creating new species or submerging them.

### Why Grow Australian Natives?

- 1.with few exceptions they are small plants
- 2.they do not require much fertilizer
- 3.most are fast growers
- 4.many flower within 2-4 years from flask
- 5.they produce a mass of flowers
- 6.it is helping to conserve the species
- 7.many are highly perfumed
- 8.some of the new hybrids flower over long periods up to 8 months of the year.

Here are some thoughts on general culture:

Compost: Everybody has a favourite mix and, in actual fact, the materials used are not really important. Any free-draining material that is not toxic and is capable of retaining a little moisture is ideal. Some ingredients are pine ark, which can be used on its own or mixed with charcoal, marble chips, polystyrene pieces or pebbles, etc.

The purpose of compost (sometimes called the medium or media) is really only to hold the plant erect in the pot and provide a mixture of air and humidity around the roots. What IS important is to have all the pieces that make up the compost the same size, that is, all seedling size or medium grade or large, depending upon the size of the plant or type of roots the plant has. The finer the roots the smaller the compost pieces.

Relatively small pots should be used - just enough for one or two year's further growth. If a small plant is placed in a large pot with lots of

compost, the roots cannot utilise all the moisture in the mass of compost and will quickly rot. Squat pots are preferred to the conventional pot. Try to use pots made of the same material, that is, all plastic or all terra cotta. The reason for this is that terra cotta dries out much more quickly than plastic and by having a mixture of pots, unless you are very careful, you will either over water or under-water some of them. Drainage is extremely important. If using terra cotta either enlarge the drainage hole or carefully drill more holes in the base using a masonry drill.

Australian epiphytes can also be grown on mounts of various materials- natural cork bark, compressed cork, tea tree log, tree fern and many others. However, much more attention has to be paid to them, particularly in the hot summer months, when it may be necessary to mist them two or three times a day.

#### Re-potting

The best time to re-pot Australian epiphytes is immediately after flowering, usually spring, when new growth is just starting. As previously stated, do not over-pot. Just move the plant into the next size pot. Seedlings can be very fast growers and may need moving twice in the year, again, only into the next size pot.

Do not water the plant for about one week prior to re-potting. This makes the roots easier to handle. Take advantage of this opportunity to clean off the old, dry sheaths and dead leaves and roots. Examine roots carefully for pests such as scale, aphids, mealy bug etc. which can over-winter in these places. After the plant has been re-potted, immerse the pot in water containing 1/4 strength fertiliser such as Aquasol, Thrive etc. Remove the plant from the water and stand in a shady place and do not water again for at least seven days. If the weather is cool or cold, even longer, up to 2 weeks. Never re-use old compost for orchids.

#### Watering

More questions are asked about watering than any other subject. The main one is "How often should I water?" Well, the easy and trite answer is "When the plant needs it." But when is that?

Aim to have the compost just moist, never wet, for any length of time. These plants grow on trees or rocks in nature with their roots fully exposed to the elements. They receive water from heavy rain. As soon as the rain stops they

dry out, but with a residue of moisture retained by the rock or bark of a tree. This is what must be aimed for in a pot. Give a thorough drenching then do not water again until the compost has almost dried out. The times for this vary with the seasons. In winter it may be 3 or 4 weeks between watering, even less if heavy rain is experienced. In the summer months when the plant is in active growth, it may be once a day. Do not give dribbles of water. This only leads to rapid evaporation and salt build-up, which is eventually toxic and can lead to the death of the orchid. Plants can be misted on hot days, particularly in the early mornings and evenings. In their natural habitat they receive this by way of fogs and mists, but do not count this as watering.

#### Fertiliser

Almost as many questions arise regarding fertiliser as with watering. Australian epiphytes do not require as much fertiliser as for instance cymbidiums, or cattleyas. Seedlings can be given a balanced fertiliser, Aquasol or Thrive etc. as a 1/4 strength once a week from September to March and established plants a 1/3 strength once every 3 or 4 weeks over the same period. Do not over-fertilise. You will end up with a beautiful, lush, green orchid plant that does not flower well.

In my list of priorities for growing Native epiphytes, fertiliser is last. Finally, never give dry fertiliser to an orchid or give an orchid dry fertiliser.

#### Air Movement

As stated previously, because the plants grow naturally high up in the canopy of trees or on exposed rocks, they require ample air movement at all times. Even the tropical species, if grown in a glasshouse, should have moving air provided by a fan day and night all the year round. For the cool growers a 50-70% shade-house in an open situation is ideal. Keep the leaves on the orchid clean during the year by washing them, either individually or by hand if the collection is small, or by spray from a hose for a larger collection. Do it on a warm day after the new growths have matured and before the flower spikes appear. Dust and grime build-up on the leaves prevents efficient photosynthesis. Tie up any wayward growths as they become apparent during the year. Train them over a number of days into the position you want them. Be careful as young growths snap off easily and, once off cannot be put back.

## HABITAT LOSS PUTS BIRDS IN PERIL

An article by Catherine Hockley (Advertiser 20/3/00)

The Murray Darling Basin's native birds are under threat because of the destruction of their habitat. Mass vegetation clearance and degradation and the impact of feral animals have affected bird numbers in the Basin. Five species of birds found in the Basin are regarded as nationally endangered, nine are vulnerable and 32 are classed as rare in South Australia alone.

Riverland birdwatcher Bob Goodfellow, a passionate advocate on behalf of the basin's bird life, says mass development in the basin has impacted dramatically on native birds. "The brolga and the magpie geese are no longer here because of the encroachment of civilisation and development in general along the river," he said. "There has also been a reduction in numbers of mallee-fowl and Black eared Miners. Dryland salinity, the impact of habitat destruction, the increased pressure on the river through the installation of locks and the widespread clearance of trees is threatening bird species."

Mr. Goodfellow, who operates bird-watching tours in the Riverland, has been behind the campaign in South Australia to protect the Black eared miner. "They are critically endangered and were thought to be down to 11 birds in Victoria. He said that SA - in comparison to other states, enjoyed a good reputation for preservation of the basin's native environment. "SA probably is one of the leaders in not allowing the willy-nilly clearing of scrub...but we still need to be vigilant." he said.

*[Ed.note. What do members who live in other parts of the basin, have to say. Have you noticed the disappearance of other birds in your particular area? Sometimes non-appearance of birds can be related to seasonal fluctuations, but when they haven't appeared for many years this must be a significant observation which may have long term consequences. Your thoughts and comments please.....]*



## DON'T LET THEM VANISH

(by Belinda Huppertz The Advertiser 27/3/00)

At least half of the native birds living in the Adelaide Hills are threatened with extinction, a leading environmental scientist claims. Seemingly common birds were at risk after decades of land clearance had destroyed about 90% of native vegetation in the Mt. Lofty Ranges, said Professor Hugh Possingham.

Among the species which had already disappeared were the King Quail, Glossy Black Cockatoo, Swamp Parrot, Azure Kingfisher, Field Wren, Regent Honeyeater and Spotted Quail Thrush.

Professor Possingham, of Adelaide University's Department of Applied and Molecular Ecology, said species such as the Scarlet Robin, Eastern Spinebill and Yellow tailed Black Cockatoo could be next.

Research during the past 20 years showed reducing an area of habitat by 90% would result in 50% of species common to the area becoming extinct. "Destroying 90 per cent of native vegetation has incurred an extinction debt, which is the future loss of species as a consequence of our past actions," he said. "There will be a substantial time lag between the loss of habitat and the consequent loss of species - for birds this time lag is likely to be hundreds of years."

*[Ed.Note it would seem that by our greater understanding of the situation, and with a little common sense, we could all take actions which will prevent species loss. If we are to achieve this we must support species and habitat in the long term, so that our children and their children can see the wonderful species of both birds and animals, and plants that Australia has. Unfortunately like many things, it is not until they have gone forever that we appreciate them.]*



## NATIVE BIRDS AND COMMERCIAL ORCHARDS AND VINEYARDS

(adapted from an article by National Parks & Wildlife SA)

Most native birds are protected by law. Some species however may and often do cause damage to commercial orchards. Australians recognize that native birds are a unique part of this country and value the positive effects they have on our environment and lifestyle. However Australian native birds can become pests in a variety of ways, for various reasons. Almost every rural region and a number of urban areas in Australia experiences some sort of native bird problem. Problems differ according to the species present, type of industrial, horticultural, agricultural or residential land use, the natural features of a region, and the population dynamics of the native species concerned. The problems related to native birds are linked to the behaviour of the species and their local distribution and abundance. We have a responsibility to ensure the ongoing survival of the species, while minimising the negative impacts of populations conflicting with specific areas or land uses.

In South Australia Adelaide rosellas, Yellow rosellas, Musk and Rainbow lorikeets are common native birds which feed on insects, seeds, pollen and nectar from eucalypts, fruits and flowers buds. These birds often cause damage to commercial crops. The reason for the birds abundance, is reflected in the increased food sources in parts of their range, due to the establishment of grape vines, fruit crops, the planting of flowering trees in backyards, streets and parks and revegetation programs. These conditions support increased survival odds and the birds ability to breed. While some actions have been taken over a limited period to cull some of the numbers of problem species, common sense must prevail. There is no single solution to address the pest impacts caused by abundant native birds, however integrated management programs would appear to be the long term and most beneficial answer.

*[Ed.Note. Destruction of native species has been a topic hotly contested in SA. Man has over the years tried to manipulate natural systems for his own greed at the expense of our native flora and fauna. A balanced approach where we can plant appropriate food crops for human survival, without necessarily killing off the native fauna*

*which inhabit an area seems in order. However shouldn't we control the exotic species first? ]*

## 20 WAYS TO PREVENT BIRDS HITTING WINDOWS

(courtesy of Birds Australia)



There are a number of things you can do to help prevent bird strike. They include the following:

- ❖ Let your windows get dirty.
- ❖ Draw drapes and blinds when possible.
- ❖ Cover the outside of windows with netting.
- ❖ Leave a space between the window and netting so that if a bird hits the netting its impact will be cushioned.
- ❖ Place pot plants in front of your windows.
- ❖ Attach spider web decals to your window.
- ❖ Hang mobiles, wind chimes or silhouettes (not necessarily, but very effective raptors ) in front of windows.
- ❖ Hang strips of material such as ribbons along the full width of the window or chain link fences.
- ❖ Place shade cloth around chain link fences.
- ❖ Position attractants such as feeders, bird baths and nutritious vegetation close to windows (within half a metre) so that when birds leave they have not built up enough momentum to injure themselves.

In addition if you are ever in the position of designing a new home or office building, there are other things you can do:

- ❖ Replace clear or tinted panes with frosted or non-reflective glass.
- ❖ Ensure windows are not on opposite sides of the room creating an inviting flight path for birds.
- ❖ Avoid placing windows so that they appear to extend the garden or sky through reflection.



Sulphur-crested Cockatoo

### RAINBOW LORIKEETS

Did you know that Rainbow lorikeets were the first indigenous Australian birds to be depicted in a British publication in 1774?

### RAINBOW LORIKEETS

Racing and reeling high and low  
Pursuing their calling there and so  
Rhapsodising aloud, apt of the show  
With colours rivalling the rainbow  
Lovely golden green glimmering sheen  
A ritzy red over head,  
A discordant note needed  
For survival sake heeded,  
That repellent screech  
To ward off each  
Enemy decoy  
Who might appear in ploy  
Attack the ears, attack the ears  
Here's cheers, again cheers, cheers, cheers.

by Philip Napier from 'An Oracle for Ornithology', 1993 courtesy Galah,- Birds Australia No.44

### YOUR LETTERS, VIEWS from Issue 29.

Alan Baker from New Zealand writes of his experiences and sightings of birds and banksias.

"Our common honeyeater is the Bellbird (20cms.) I have seen them feeding on the nectar of *Banksia integrifolia* (March - December), *B. ericifolia* (July - October), *B. marginata* (February - May) and *B. collina* (June - September). The larger Tui (30cms) also feeds on these flowers, especially *B. integrifolia*. I have occasionally seen Bellbirds taking nectar of *B. media* and *B. serrata*, and Silvereyes (self-introduced from Australia) at the flowers of *B. collina*.

*Banksias* are commonly planted in New Zealand to attract nectar feeding birds. The Curator of the aviary at the Dunedin Botanic Garden likes the seedheads of *B. integrifolia* to feed to his cockatoos.

Although the Tui and Bellbird are not found in Australia, I hope this information may be of interest.

(Ed.Note. Thanks Alan for sharing this with us. I should point out that we do have Bellbirds in Australia!)

### BELLBIRDS

Bellbirds, *Manorina melanophrys* are often referred to in Australia as the Bell mynah (or miner). They survive in dense colonies, and can be found, although more often heard, in the south eastern coastal eucalypt forests of Australia. Their clear, metallic, bell - like, repetitive, single notes are amongst one of the most beautiful bird sounds I have ever heard.

The Crested Bellbird, *Oreoica gutturalis* can be found in dry inland areas and sub-inland woodlands and scrub throughout Australia. It too has a distinctive ventriloquial voice and is also a little over 20cms. long.



NZ tui

Both Jeff and myself have been watching the activities in our garden over the past few years, as the garden takes shape. A number of bird attracting plants have been incorporated into the garden, and this year we have been privy to visits from a wide range of birds to the garden. Particularly the banksias have ranked high. *B. baueri* and *B. media* have provided a feast of nectar and insects for a range of birds including several varieties of honeyeaters particularly the New Holland honeyeater, the singing honeyeater, little and red wattlebirds, and lorikeets. Babblers, diamond firetails and sparrows have also been sighted in the bushes.

All banksias produce copious amounts of nectar and it is little wonder that so many birds and insects are attracted to the blooms, and assist in the cycle of pollination.

While having that leisurely cuppa in the garden, read on for some light relief!

#### Herd in passing.

Out on a field trip a friend of mine pointed to some cows. "It's going to rain," he said. "They say that if cows are lying down, it means rain, and if they're standing up, it will be dry."

A little further on we saw more cows, some lying down, others standing. I asked my friend for his latest weather forecast. He paused for a moment and then said confidently, "Scattered showers!"

#### The Sylvan Screen from Sports Illustrated.

Out of the pages of a guide to North American trees, the Baltimore Sun has come up with the following cast of characters for a western movie:

**Bull Pine:** owner of the Ponderosa, biggest ranch in the valley.

**Virginia Pine:** Bull's pretty daughter.

**Yellow Pine:** Bull's weakling son, who has been hanging out lately with...

**Black Birch:** A ne'er do well dandy who is suspected of cattle rustling.

**Quaking Aspen:** a tenderfoot from the East.

**Sugar Maple, Honey Locust and Scarlet Haw:** three popular dance hall girls seen often in the Longbranch Saloon.

**Red Spruce:** Bull's two fisted foreman, whose suit for the hand of Virginia Pine seems destined for success - until she met...

**Douglas Fir:** a new foreman over at the sawmill.

I wonder, do you think we could come up with something Australian along the same lines....By gum! Wattle it be?

Any ideas?????

#### **ADVANCE NOTICE**

ASGAP 2001 Conference - the 21<sup>st</sup> Biennial Conference and Seminar is to be held in Canberra in October 2001. The theme for the Seminar is Australian Plants in a Changing World. Three of the three sub themes planned are:

- ❖ Changing World of Australian Plants in Urban Landscapes and Gardens
- ❖ ASGAP study groups' contribution to Australian Plants in a Changing World
- ❖ Conservation of Australian Plants in a Changing World.

#### **Knowing and Growing your GST**

*Reproduced from the Wildflower Society of Western Australia Newsletter. Vol.38 No.2 May 2000*

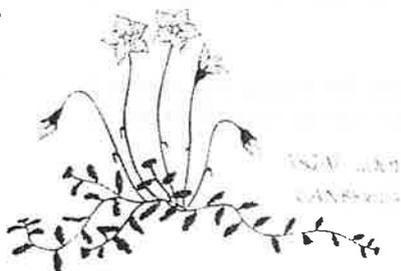
A new species will be released into the community on 1<sup>st</sup> July,2000. It has some very unique qualities. It:

- takes root instantly;
- grows well on most goods and services;
- is invasive;
- has an effect on everybody whether they like it or not;
- cannot be eradicated;
- blooms but does not blossom;
- can be replicated without seed or cuttings;
- grows to a width of over 4000 km;  
..... and probably will not tolerate pruning.

#### **FROM YOUR LETTERS, NEWS AND VIEWS**

At the Birds Australia Members' Day held in Armidale on the 27<sup>th</sup> May 2000 several speakers outlined the history of the group, its progress and changes since 1901, and questioned where the organisation was heading into the new millenium. Of particular interest was Geoff Barrett's discussion on the comparisons between the first and current Bird Atlas project. He suggested that many species appear to have declined including the smaller raptors and groundbirds, whereas introduced species are increasing. Increases in - habitat complexity appears to increase bird diversity, and sites with an understorey tend to have 25% more species than sites without. On average, each large old tree at a site, increases the variety of birds by 3%. Planting local native trees brings in more native birds, while planting exotic trees tends to increase the number of introduced birds.

*From Galah- Birds Australia No.45.*



## YOUR SUBURB'S TREELESS OPEN SPACES MAY NOT BE AS DESERT-LIKE AS YOU THOUGHT

Just after Easter I revisited sites of investigations in the winter. The Autumn Day Flying Moths *Apina callisto* are flying, mating and searching for suitable plants or new habitats in numerous locations around the suburbs and, coincidentally, on a property not far from the Tarlo River which was the focus of a SGAP outing on 10th April.

The 55 cm wingspan moths have strikingly orange and black striped abdomens, the orange being visible as they fly almost erratically over their territory. There are 5 mm brown and beige stripes on the head from the base of the antennae. The fore-wings are patterned with beige and brown markings which hide the hind wings and camouflage the moths when they are at rest on a plant or on the ground. The hind wings have broad bands of the palest creamy-yellow between black bands. The edges of each of the wings are marked with small white spots. Theirs is a rapid, erratic, searching flight. Predicting where they will land or where they are heading can be difficult. How long do the adults fly and live? What, if anything, do they feed on?

The moths appear to "have got it all wrong" by being active as the number of warm weather days decrease. This is but one of the ways they reveal brilliant adaptive capabilities. They lay eggs which will hatch out in the depths of winter. Caterpillars less than 8 mm long will spend many frosty mornings absorbing the winter sun's warmth as they grow, eating the leaves of plantain, salvia, cranesbill and capeweed. Last winter they were onto a good thing as the rosettes of capeweed built up to produce the unprecedented, colourful display we witnessed. However visions of a biological control coup appear to be premature, as the larvae seem to prefer not to share their food-source plant and the plants weren't obviously 'crawling with caterpillars'.

By late August the larvae may have grown to between 4 & 5 cm and 7-8 mm in diameter. Look through a hand lens and the wonderful velvety effect of their hairs (setae) is revealed in magnificent black-brown dominated leopard/tiger colours. Sometimes black leathery-looking spots are visible, each with a longer white spinelike seta. There are two pale yellow spots on their tails with that same yellow sometimes along the lower part of their bodies. The dark melanin-based colouring aids in absorbing what warmth there is but these larvae also have glycerides or sorbitol in their blood to act as a natural anti-freeze, as another adaptation to being active in the winter and needing to survive its sub-zero temperatures.

Originally *Apina callisto* probably had a free run of our area as inland Southern Australian grassland closely cropped by macropods. Around Belconnen, at least, they have adopted suburban open spaces that most naturalists would be forgiven for dismissing as degraded wastelands. Bulldozed, scraped, scoured into landscapes that planners have dictated, some of these spaces are mown because they are roadsides, near drainage embankments, are appendages to ovals and inter-facility areas.

Wahlenbergias, *Chrysocephalum apiculatum*, Vittadinias and some native grasses may also cheer the naturalist in the spaces where mowing simulates the macropods' grazing. Patches of soil between tussocks and forbs are also vital to the species' lifestyle for on these their eggs are laid.

Once their instars are completed the larvae begin the construction of vertical tunnels\* by removing pieces of soil. By September holes the diameter of a pencil in inter-tussock spaces, may reveal caterpillars coming to the surface every 7-10 seconds with pieces of soil which are left in an accumulating pile near the entrance. The evidence of these pupation tunnel entrances may disappear with the next shower of rain and the question is raised, how do the soft-on-emergence young moths cope with the journey up the tunnel and breaking through the debris in the original tunnel and hole? They may wait, exhausted beside the hole whilst their unfolded wings dry or await the sun's warmth. Their emergence is triggered by rain which also may stimulate a burst of plant growth in the last weeks of Autumn.

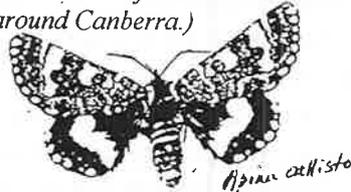
Let's hope some moths are still flying when you read this or winter searches will reward you with munching larvae!

\*Common, IFB. Moths of Australia. Melbourne Uni.Press., 1990.p.463

*Ack. This article originally appeared in the Newsletter of the Field Naturalists Association of Canberra, and was supplied by Rosemary Blemings, SGAP Canberra Region.*

Rosemary informs us that the dates refer to 1998 when Easter was on the 4<sup>th</sup> April. She says that there were a few moths around this Autumn. I hope Rosemary will inform us whether she's seen any caterpillars emerge this winter!

*(Ed.Note: Belconnen is one of the town centres that are grouped around Canberra.)*



Aub Podlich, Lutheran pastor, of Boonah in Qld. writes to us and I have included parts of his letter and an article Aub prepared titled 'The Old Kurrajong'. Aub's poetic style paints a vivid picture, which I'm sure all will enjoy.

'My wife Merrilyn and I live on a five acre block in a housing estate in Boonah, Qld. Once cleared of all except its tallest trees, the block has now become a little island of scrub in an ocean of ride-on lawns. We've planted thousands of scrub trees and allowed the original scrub to come back. Birdlife is great (106 species here, averaging about 45 per month). Two dams have encouraged 15 different species of frogs. We've recorded over 30 species of butterflies, 12 different snakes, various lizards, brush tail possums, echidnas, and a wonderful array of spiders. Because we have Qld. blue gums (Euc. tereticornis) we have koalas come through on average every three months.

Recently, having decided we'd run out of places to grow trees, we bought 43 acres of degraded vine scrub 15km. away. A whole new array of wildlife waits for us there as we set out first to clear the scrub of the bane of all remnant vine scrubs in this area- the introduced smothering

vines: catsclaw, madeira vine, climbing asparagus and of course heaps of lantana.'

*(Ed.Note: Thanks Aub for sharing this with us. We wish you well with the challenge before you!)*

#### The Old Kurrajong by Aub. Podlich

We live on five acres of "developed" housing estate in Boonah, Queensland. The original vegetation was vine scrub. We have replanted the scrub, and allowed it to return naturally.

The old kurrajong (*Brachychiton populneus*) beside the house began to die years before we built here. Each year rot creeps further down its trunk. Branches shrink from the tips. Dead bits drop. Borers, the larvae of longicorn beetles, tunnel in the dry rotted wood.

We should cut the old kurrajong down before it falls on the garden shrubs, or us. But it's such an artistic, gnarled old stump now, dying, but still a centre for life. Once, kookaburras tunnelled into it and laid two white eggs. A thunderstorm snapped the trunk off, just above the tunnel. The two white eggs sat forlorn, gleaming on top of what had suddenly become a pillar!

A brush tailed possum took advantage of the kookaburra's ill fortune and hollowed out the top of the pillar, calling it home for several weeks. After him came a green tree snake, no doubt attracted by numerous eastern sedge frogs and several green tree frogs in the tree.

Last Spring, when we thought seriously of using the axe on it, the kurrajong flowered. One day, admiring the flowers we noticed the larvae of Tailed Emperor and Common Aeroplane butterflies amongst the bronze new growth. We have recorded 106 species of birds on these five acres, and a good proportion of them have at some time or other, visited the old kurrajong. Noisy miners use it as their launching point against intruders, pied butcherbirds as a hunting platform, peaceful doves as their place in the sun.

The old kurrajong has sired two sturdy saplings, waiting underneath it for their turn. That's if, when it falls, it doesn't fall directly on them.....

*(Ed.note: Readers share your experiences with us too. Send me your articles please.....)*

# Low Open Woodland

## Land Snail *Pupilla australis*

This small land snail is usually found in dense tussocks and under rocks, bark and litter in dry woodlands and mallee. It is one of a number of small land snails which have adapted to dry environments.

## Wanderer Butterfly *Danaus plexippus*

A widespread species, the wanderer, or monarch butterfly, also occurs in parts of the dry inland of Australia. It became established in Australia in the late 1800s after the milkweeds were introduced. The milkweeds contain highly-poisonous chemicals, but the butterfly transfers these to its wings and thus avoids the toxic effects. These compounds make the wanderer highly distasteful and poisonous so birds avoid attacking it, as eating just one wanderer can make a bird violently ill. The eggs are laid mostly around the edges of patches of milkweeds. Spiders and ants prey upon the eggs, and bugs and mantids feed on the larvae.

## Springtails *Collembola*

The small, wingless springtails are soft-bodied primitive insects, usually found in cool weather after rain. They can spring a considerable distance when disturbed. They live at or near the soil surface and under litter and debris, feeding in decaying vegetable matter, algae, fungi and lichens. Spiders and beetles prey upon them. Springtails are nocturnal, taking refuge on hot days in grass tussocks and under litter.

## Variable Spear-grass *Stipa variabilis*

The widespread perennial, variable spear-grass, occurs in a variety of woodland, shrubland and grassland communities. It grows mainly on light-textured red and brown soils, rarely on clays. Growth mainly takes place in winter and its solid tussocks are a feature of the grass cover after a wet winter. It provides fodder for kangaroos, seed for birds and also hosts many insect species.

## Bottlewashers *Enneapogon* species

Their compact and often dense spike gives bottlewashers their name. These grasses are usually found on alkaline or calcareous sandy soils on plains or open woodlands. Bottlewashers is one group of grasses which provides fodder for kangaroos, seeds for birds, and ground cover for small reptiles, birds and insects.

## Bush Thick-knee *Burhinus magnirostris*

Saltbush or porcupine grass communities are avoided by the bush thick-knee. It lives in grassy woodlands and remnant woodlands, such as farmland still carrying some timber, where the ground cover is short or sparse grass. It forages, usually at night, for insects, including beetles, and spiders and other invertebrates. It occasionally feeds on fruit and small vertebrates such as skinks. During the day it rests on the ground among trees or fallen debris. It nests on the ground, the eggs being laid in a simple scrape.

## Purple Lovegrass *Eragrostis lacunaria*

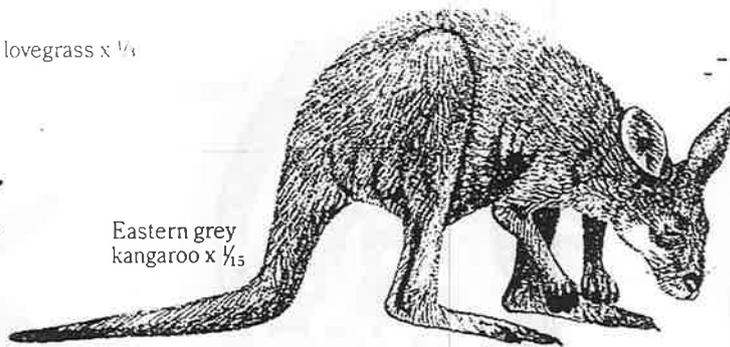
Heavy rains in the warmer months encourage the vigorous growth of purple lovegrass, providing fodder for kangaroos. It often occurs in mulga and other woodlands on plains, flats and undulating country. Its purple-brown seeds are eaten by many birds, including quail and doves, and the tussocks provide cover and food for insects.

## Nelia *Acacia loderi*

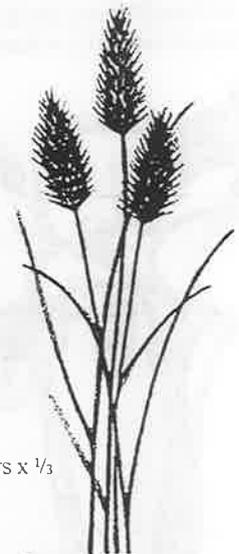
Restricted to south-west New South Wales and small areas in Victoria and South Australia, nelia, or nealie, mainly occurs on brown and black soil plains. The sparse foliage provides little shelter for large animals such as kangaroos and emus. Its shallow roots prevent most other plants growing underneath the canopy, although grasses and herbs grow in the clearings. The seeds are eaten by many birds.



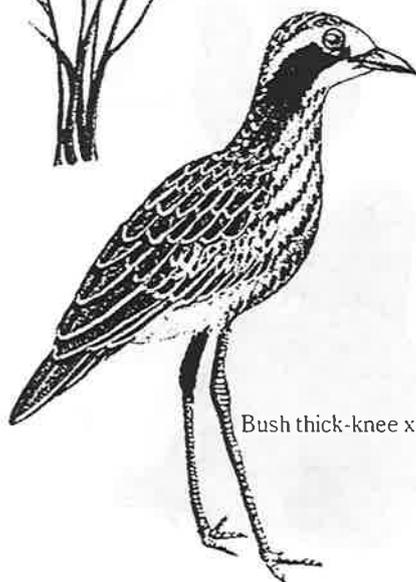
Purple lovegrass x 1/4



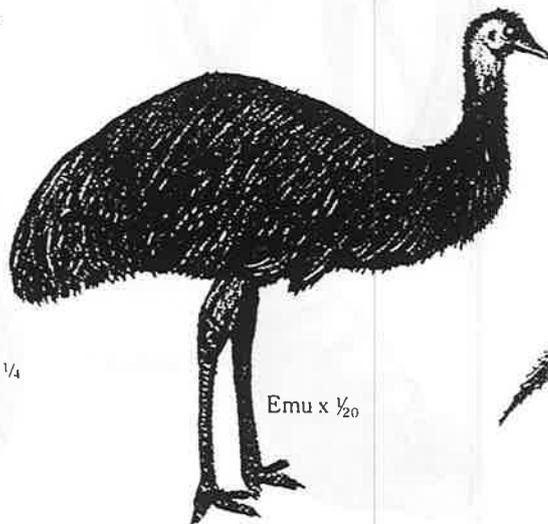
Eastern grey kangaroo x 1/15



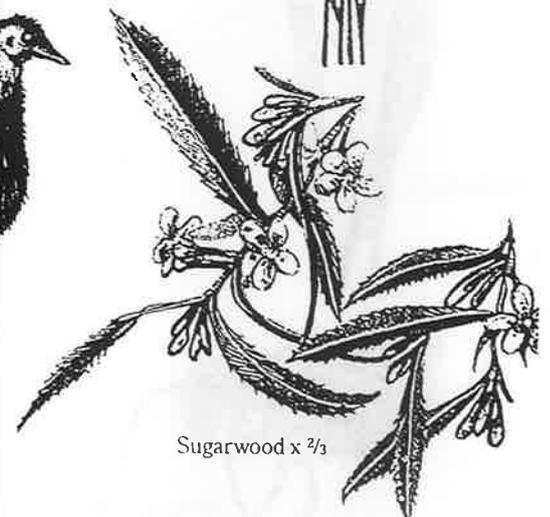
Bottlewashers x 1/3



Bush thick-knee x 1/4



Emu x 1/20



Sugarwood x 2/3

**Mulga** *Acacia aneura*

If there is sufficient rain, mulga can flower at any time of the year. It grows as a bushy shrub or small tree on sandplains and dunefields, and on heavier soils subject to occasional flooding. Mulga woodlands have little ground cover because the shallow roots prevent grasses and herbs receiving sufficient soil moisture. Many birds feed on the seeds, especially cockatoos and galahs which break open the pods seeking the seeds. Mulga is also a valuable shelter tree which protects the soil from erosion.

**Rosewood** *Heterodendrum oleifolium*

Seedlings of rosewood, or cattle-bush, are rarely found because the plant readily suckers from the roots. It is found in numerous plant communities, most commonly on sandy soils and often in association with belah. The seeds provide food for many birds, including the blue bonnet and singing honeyeater.

**Wilga** *Geijera parviflora*

Widespread but sparse in southern New South Wales, wilga is rare in Victoria. It usually occurs as a small tree on calcareous soils in woodland communities, but occasionally grows in dense stands. Considerable leaf fall takes place in summer to autumn, contributing to the litter layer. The larvae of the swallowtail butterfly eat wilga leaves, and the seeds are important to the common bronzewing. The foetid smell of its white flowers attracts flies which may aid pollination.

**Sugarwood** *Myoporum platycarpum*

This tree exudes a sugary, sweet-tasting 'manna', hence the name sugarwood. It occurs in a wide range of mallee and woodland communities. It is a straggling shrub in its young growth stages and remains in this form in dense mallee, but in the open develops a tree form with drooping foliage. Its resin was used by early settlers as a sealing wax, and by Aborigines to fix stone axe heads to wooden handles. The seeds are eaten by many birds, and small dense shrubs provide nesting cover for small birds such as Gilbert's whistler.

**Emubush** *Eremophila longifolia*

Occurring singly or in small stands, the shrub emubush, or berrigan, occurs on most soils, but is most common on loamy soils on plains. Its pinkish flowers appear at any time in the year, developing into blackish-purple fruit which are an important food for birds, including the emu, Australian bustard, black honeyeater and white-fronted honeyeater.

**Emu** *Dromaius novaehollandiae*

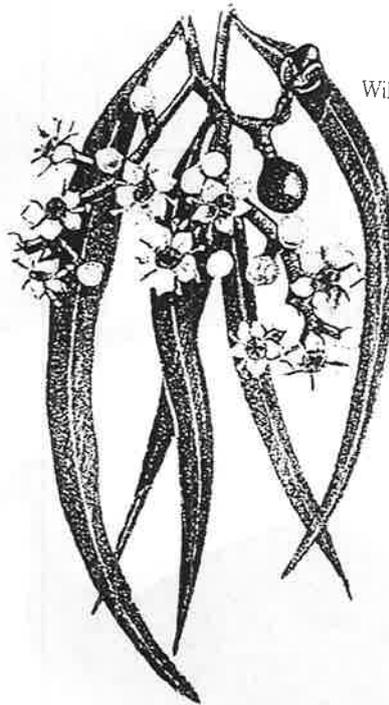
Because it drinks each day, the emu is usually found within twenty kilometres of water. Needing the shelter of trees or shrubs on hot days, it prefers mallee (avoiding areas of porcupine grass), woodland or tall shrublands but is also found on plains near timbered watercourses. Emus nest on the ground in the dense cover of low shrubs. Food includes insects, fruit, seeds and young green shoots. Flowers and fruit of dillon bush and *Eremophila* species, such as emubush, are an important food source. The fruits of these plants germinate better after passing through an emu's gut. Insects eaten include caterpillars found on saltbush and low shrubs, and moths.

**Eastern Grey Kangaroo** *Macropus giganteus*

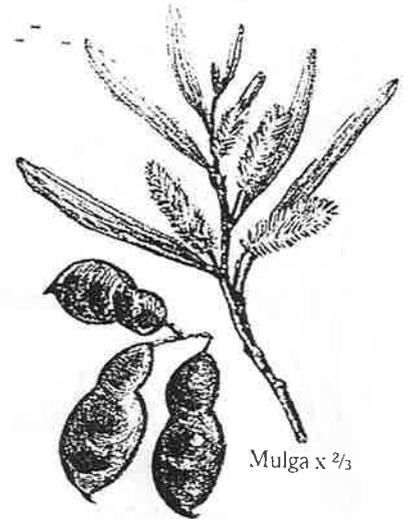
The development of pastures and the provision of watering points for stock has resulted in increased numbers of grey kangaroos in Australia. The eastern grey kangaroo is absent from north-west Victoria, where the western grey kangaroo predominates. However, the two species coexist on the western plains of New South Wales, although they do not interbreed in the wild. The eastern grey is distinguished from the western grey by its grey, rather than brown color. Grey kangaroos use trees and shrubs to shelter from the sun and wind. They graze from late afternoon to early morning, often congregating in open grassy areas.



Emubush x 1



Wilga x 1/2



Mulga x 2/3



Springtail x 10



Land snail x 10



Wanderer butterfly x 1

Not so funny.....

From AESSRA 'Sensitivity Matters', September 1999 come the following two items.

#### **RAINDROPS KEEP FALLING.....**

Swiss researchers report that rain falling in parts for Europe is so contaminated with pesticides that it would be illegal to sell it as drinking water: while the European Union sets 100 nanograms per litre as a maximum allowable concentration for drinking water, levels of up to almost 4000 nanograms per litre of 2,4-dinitrophenol have been measured in rain. These residues are believed to have evaporated from agricultural use, been incorporated into the clouds, and then redeposited as precipitation. What, one wonders are the levels in our own rainfall, given that pesticide use is far more widespread in Australia than in closely settled Europe?

#### **QUOTABLE QUOTES**

Consider the following writings of Alexander Von Humboldt (1769-1859). Humboldt is now hailed as the father of ecology, and was the first to study plants within the context of their environment rather than as isolated botanical specimens. Humboldt, a wholist, wrote in the late 18<sup>th</sup> century: "...I shall try to find out how the forces of nature interact upon one another and how the geographic environment influences plant and animal life." Words and concepts far ahead of their time, as are these: "When forests are destroyed as they are everywhere in America by European planters, with imprudent haste, the springs dry up completely, or merely trickle. River beds remain dry part of the year and are then turned into torrents whenever it rains heavily on the heights. As grass and moss disappear with the brushwood from the mountainsides so rainwater is checked in its course. Instead of slowly raising the river level by filtrations, the heavy rain digs deep channels into the hillsides, dragging down loose soil, and forming sudden, destructive floods. Thus, the clearing of forests, the absence of permanent springs, and torrents are three closely connected phenomena."

#### **VALE Judith Wright McKinney (1915-2000)**

Along with other Conservation groups we mourn the death of Judith Wright McKinney, who died in a Canberra Hospital on Sunday June 25<sup>th</sup>.

Friend and colleague Jan Oliver said: "Judith leaves a lasting memorial to all Australians for her work in conservation, her life as a poet and her commitment to land rights for indigenous people."

Judith campaigned against oil drilling on the Great Barrier Reef, and as a result the Great Barrier Reef Marine Park was set up in the mid 1970s. She also organised campaigns against sand mining, (particularly on Fraser Island), pesticides, wood chipping, and was a long term advocate for the preservation of rainforests. She was a major supporter of land rights and native title - a passion she maintained until her death. Indeed, she participated in the Walk for Reconciliation just a few weeks ago.

While her poetry continues to be read and enjoyed by many Australians, the fact that many of her other writings are still relevant to current conservation issues hints of her significance and foresight.

Judith moved to Canberra in 1975 and although she continued writing she kept a low profile due to failing health.

Judith Wright's name is synonymous with Australian conservation. Her memory is enshrined in the environments she has helped save for future generations. In her own words: 'Time's not for weeping. Time and the world press on. So take life further.'





## BOOK REVIEWS

*Field Guide to Australian Wildflowers* by Denise Greig

From tiny annuals and terrestrial orchids to large perennials, shrubs and trees, Australian plants and their beautiful flowers come in a wide array of shapes and colours. This informative field guide describes more than 1000 of the most common species, each listed alphabetically within their family group. Details provided to aid plant identification include: height, leaves, flowers, fruits, habitat, distribution and flowering season. The comprehensive introduction contains information on how to identify wildflowers in the field; classification and terminology; and vegetation zones. Many botanical line drawings and colour photographs, all in softcover field guide format.



Densy Clyne's *Wildlife of Australia*  
*"Everyone who's travelled along country and outback roads, even busy coastal highways, can recall with delight some brief encounter with wildlife. Camping holidays bring the exquisite pleasures of unfamiliar morning birdsong, evening encounters with waking nocturnal animals, and time to look more deeply into things. And for me there's as much pleasure - if not more - in following the seasonal activities of the wildlife in my suburban garden.."*

*I hope this collection of essays about creatures large and small and mostly familiar will both inform and entertain you...the stories are not really mine; I have merely translated into words the plots and characters provided by nature." - Densy Clyne.*

The book has excellent colour photographs and easy reading.

*Reading the Rocks : Animals and Plants of Prehistoric Australia and New Zealand* by

Mary E. White, available at all good book stores or a public library near you.

This book talks about ancient natural environments of both Australia and New Zealand, from the first green cells that created an oxygenated atmosphere four billion years ago, to today, tracing the evolution of living things. Mary White discusses everything from continental drift to fossil Trilobites. There are excellent colour photographs, and the book is large format. Well worth an investigation if you are interested in evolution history.

*Birdwatching in Australia and New Zealand* by Ken Simpson and Zoe Wilson.

Written in simple, non-technical language this hand book is perfect for the beginner birdwatcher. It explains bird behaviour, how to look for birds, the best times for birdwatching, how to make the best use of a field guide, tricks for quick identification and how to keep useful records. An excellent book with colour photographs, in a softcover edition ideal for taking on field trips.

*Botanica's two volume set : Trees & Shrubs and Annuals & Perennials* is

recommended as a small format softcover set for any library, each containing over a 1000 pages of information.

Comprehensive coverage of over 2000 plants plus information on soils, pruning and choosing



a site can be found in *Trees & Shrubs*. Its companion volume *Annuals & Perennials* is the authoritative gardening guide providing a wealth of information on over 2000 plants for landscaping with flowers. This includes both Australian natives and introduced exotics.

