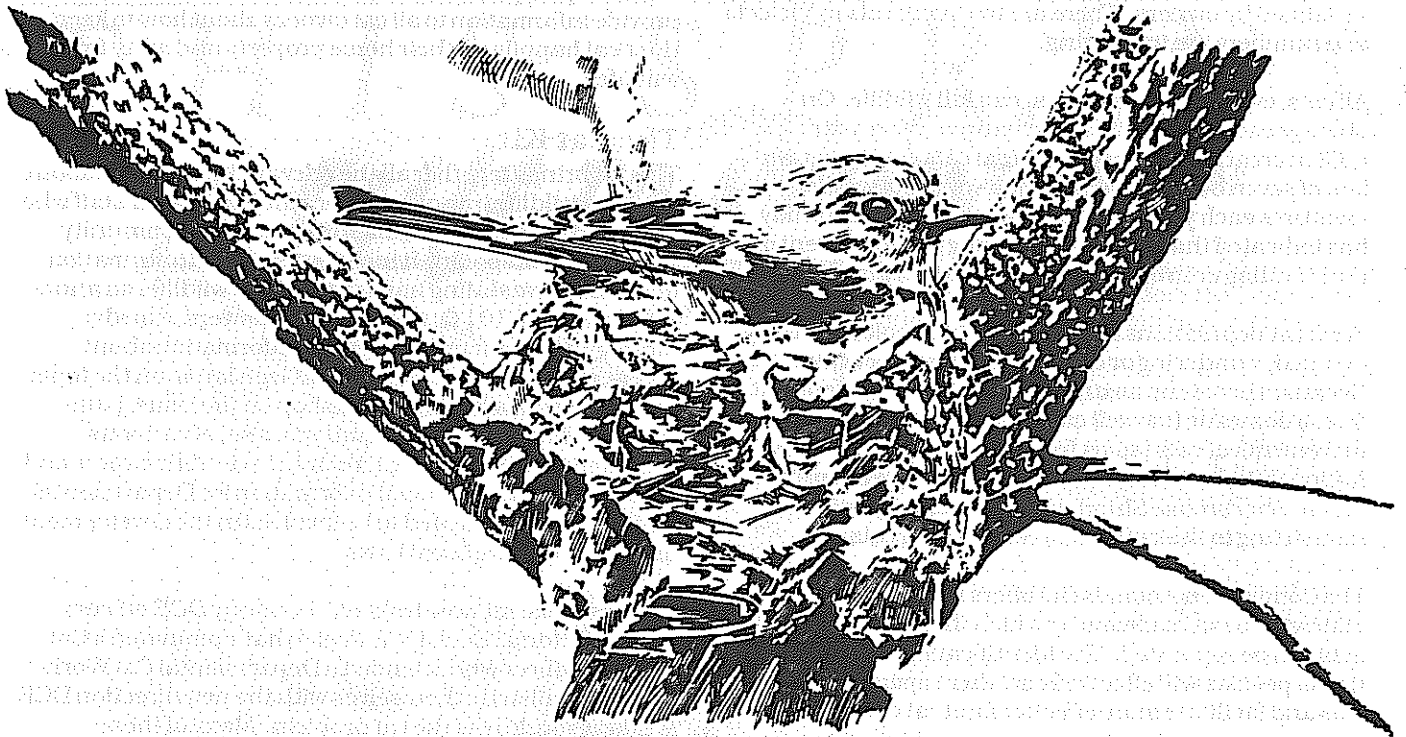


# INDIGENOTES



Drawn by Graham Kennedy

## Cats and Wildlife: An IFFA campaign



# Protect Your Cat, Protect Wildlife

The Minister for Conservation and Environment, Barry Pullen, recently launched DCE's new community education campaign "Protect Your Cat, Protect Wildlife". The statewide campaign aims to raise the community's awareness of the impact of cats on wildlife and the need for statewide and municipal controls on cats.

A few figures can quickly tell the story. There are an estimated 1.5 million cats in Victoria - over 900,000 owned cats, over 300,000 stray cats in urban areas, and an estimated 200,000 feral cats. Every year over 45,000 cats end up in animal shelters, and less than 1% are reclaimed by owners. There are too many cats in Victoria and numbers are increasing.

All cats, even well-fed pet cats, can kill wildlife. On average each pet cat kills 25 creatures every year - 25 million creatures every year. Feral cats eat the equivalent of seven bush rats each week - over 100 million creatures each year. A recent South Australian study has indicated that pet cats are taking the equivalent of the standing crop of all birds in suburban areas.

Feral cat populations are continually supplemented by escaped, wandering or dumped domestic pet cats. Because there is no means of distinguishing a feral cat from a domestic (owned) cat and no controls on the movements of cats (apart from the regulations of the National Parks Act and the recent Animal Welfare Local Law in Sherbrooke Shire), management agencies are hamstrung in their efforts to control feral cats.

The Companion Animals Bill offers for a first time on a statewide basis, a means by which these two groups of cats can be separated. The identification and registration of pet cats will effectively set them apart from feral cats and facilitate more effective feral cat control.

The proposed Act is, however, only one step towards solving the problems of cat welfare and wildlife predation by cats. Its requirements do not include compulsory desexing or restriction of cats to the owners property, for example, and thus only indirectly addresses the impact that pet cats have on wildlife. There is an enormous need to educate the community about how to be responsible cat owners and so protect their cat and protect wildlife.

## A summary of DCE's new Community Education Resources

DCE's community education campaign focuses on protecting cats and protecting wildlife. It was developed in close consultation with animal welfare agencies, and stresses the need to recognise and balance the rights and needs of wildlife, cats, and cat owners and their neighbours. Education materials were produced with funding assistance from the Endangered Species Unit of the Australian National Parks and Wildlife Unit.

The campaign has two components - community information, and the Cat Kit, a resource kit primarily for use by Departmental staff implementing the campaign.

## Community information

A brochure "Protect Your Cat Protect Your Wildlife" has been produced and is available from DCE offices across the state. It outlines how great an impact cats have on wildlife, dispels some myths about cats and shows cat owners what to do to help conserve our unique Australian Wildlife. This pamphlet has been sent to all Victorian State and Catholic schools and municipalities, and was included in an Australia-wide mailout of the Bird Observers Club.

A second pamphlet which will be available soon will provide information to all cat owners about how to keep their cat happily on their home property and away from wildlife.

## The Cat Kit

This kit brings together all the relevant information about cats and wildlife into one convenient package for staff who will be driving the Department's statewide community awareness campaign. It includes essential information about the devastating impact of cats on wildlife, an annotated slide set, 101 Questions and Answers, a media strategy and draft press releases, information about recent state and local government legislation on the topic, proceedings of a Federal Workshop on the issue, pamphlets from relevant organisations, a set of cartoons prepared for the campaign, relevant scientific papers and references, and additional information for Departmental staff who may be invited to be involved in the development of Animal Welfare Local Laws.

This resource kit was designed for use by DCE officers across Victoria. Each DCE Region has nominated a Cat Contact Officer who attended a Departmental Cat Workshop to familiarize themselves with the new direction DCE is taking to address the cat problem. Many of these Regional Contact Officers subsequently held a briefing seminar for colleagues within their DCE Region. In this way the campaign will ultimately educate both DCE staff and the community about the threats cats pose to wildlife and how they can help tackle the problem.

## Access to pamphlets and the Cat Kit

If you would like small numbers of copies of the "Protect Your Cat, Protect Wildlife" pamphlet, contact your nearest DCE Regional Office. For large quantities, contact a member of the DCE Cat Working Group listed below.

Only 35 copies of the cat Kit were initially compiled. We are investigating producing another edition for wider distribution to meet the large demand generated by the campaign. If you would like to view or arrange to borrow a copy of the Cat Kit, contact your local DCE Regional Office and ask for the Cat Contact Officer. To order a kit, phone a member of the DCE Cat Working Group.

## DCE Cat Working Group

John Seebeck (Convenor) (03) 450 8667  
Linda Greenwood (03) 412 4113  
Di Ward (03) 651 3552

# Cat poo - A modern tyranny

From Roger Jones\*

Now that cats have been given legal identity, I wonder if we can lend some thought to the problem of cat poo. People love their cats, and one reason why, is the buggers never shit at home. They always void themselves somewhere else. And do you know where? My place.

It is not practical to cover your domicile in shark net. Ammonia has some effect, but is not perfect and must be replenished often.

What I would like to see is a curfew. No cats out after 8 pm, and everybody has a box in which the cat poos so they have to dispose of their own

## THIS SPRING

### *A Gift to Wildlife...*



The final stage for the passage of the Companion Animals Bill will come before the Legislative Council during the 1992 spring session of parliament.

The Bill aims to reduce stray and feral cat numbers through the introduction of statewide registration for cats. This will enable the removal of unowned cats from the total population of nearly 1.5 million and so facilitate effective control of stray and feral cats.

Currently an estimated 25 million native animals are destroyed each year in Victoria by pet cats alone. It is vital that you show your parliamentary representative your support for this legislation.

*I support the Companion Animals Bill and urge the introduction of compulsory cat registration.*

Name.....

Address.....

.....Postcode.....

See over for list of Parliamentary Representatives.

## CAT REGISTRATION!

very good chance you will be up before the magistrate. You can trap cats, but it only works once, so the method you use must be final and legal. So what can you do? You don't know whose cat it is, it is allowed to roam wild, and you are not allowed to do anything that is construed as cruel.

If a wild animal bothered us as much as these cats do, we would be perfectly justified in removing it. If a possum was dancing the tarantella on the tin, you could have it sent away to the black stump. But a cat? It's not allowed.

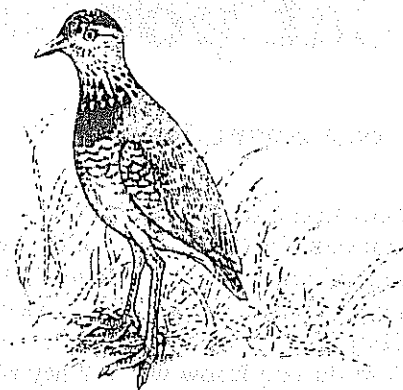
\*90 Bayswater Road Kensington Vic 3031 (03) 372 1582 (h)

.....  
Mary Baker - Minimizing impact of petroleum development on a north-west Australian Island

- Ian Lunt - Rare or threatened plants of lowland grassland and grassy woodlands in Victoria
- Kathy Preece - Wilderness conservation: the "quality" approach.

Advances in Nature Conservation will be published twice yearly. Mail subscriptions to ANC, 42 Gratten Rd, Montrose Vic 3765, payable to Advances in Nature Conservation.

# THE PLAINS WANDERER



**A regular series by botanist Ian Lunt\* on endangered native grasslands and grassy woodlands**

## SAVING REGIONAL PROVENANCES

In recent years, IFFA and kindred groups have placed a number of important issues on the remnant vegetation agenda. Issues such as local provenance, management objectives and restoration techniques. I was recently reminded of how relevant these issues are to grassland conservation, and of how unresolved many issues remain, while reading a recent document from the Department of Conservation and Environment, the "Draft Management Plan for the Derrimut Grassland Reserve". (I recommend this detailed document to readers as it addresses, but often fails to resolve, many complex issues in the management of urban remnants).

At a lordly 154 ha, Derrimut is the largest reserve for *Themeda* grassland on the western basalt plains. Its future management is vitally important for grassland conservation on the Kellor plains. Yet, many management decisions await broad agreement from the general community (ie. us) on the issues raised above - what role do we want the reserve to play, should we plant extra species in, if so then which species and where from, and so on. Unfortunately, DCE seems reluctant to make these decisions, and awaits informed community input (which is why I encourage everyone to read and comment on the draft plan).

In this, atypically long, *Plains Wanderer*, I want to discuss some of these issues, and to present what I believe is a valuable perspective from which to view species conservation in grassland regions. From the start, I wish to stress that this is a personal view, which may or may not be shared by other grassland ecologists and conservationists. However, I decided to write this article as it is becoming increasingly obvious that some management decisions are in danger of being stalled indefinitely, simply because we haven't properly articulated practical approaches for dealing with many of the above issues. When faced with such an uncertain, ideological environment, most management agencies prefer to do nothing rather than be criticised for doing the "wrong" thing. This article is intended as an early step towards resolving these issues, and I encourage readers to submit their own views to the editors (supporting or criticising my views) so that a general approach can be developed and espoused.

### Grassland remnants - arks or museums?

Are our grassland remnants to be treated as arks or museums? Should we retain them in their current condition (the museum option) or pack them full of

additional species which are endangered elsewhere (the ark)? In practice, I doubt that a single decision can ever apply to all remnants in all ecosystems, and different remnants with different attributes will have different roles to play. (Although Victoria's National Parks & Wildlife Division does have a blanket practice of not allowing any species to be introduced to a National Park unless there is an early record from within the park boundaries. This blanket policy has been criticised elsewhere?).

The Derrimut Draft Management Plan avoids a decision on this critical issue, and reads, "species... which are in imminent danger *might* be translocated to appropriate habitat in the Derrimut Grassland Reserve" (p.30), which hardly delivers a clear message to planners, managers or the community. In practice, the conditions imposed are so cumbersome that I imagine that few species are ever likely to be planted there in the near future. (I gather that DCE didn't want to stick it's neck out either way on the issue, and is "fishing" for responses, so get your ark vs. museum votes in fast.).

Should we treat Derrimut and other reserves on the Kellor plains as museums or arks? My belief is that, if we wish to save all of the surviving species on the Kellor plains "in the wild" (i.e. in grasslands not garden-beds), then we really have only one option available to us: to introduce lots of species to these reserves, fast. A policy which treats the reserves as museums effectively spells regional extinction for up to perhaps half of the species on the Kellor plains. Let me explain.

The Derrimut Grassland Reserve contains only one quarter of the 400-odd indigenous species on the Kellor basalt plains<sup>3</sup>. Collectively, all of the reserves on the Kellor plains (Derrimut, Organ Pipes, Laverton North, etc) are unlikely to contain more than half of the species in the region, and many of the species that are in these reserves occur in very low numbers.

So, how do we save the other, unreserved 150 - 200 species? Do we want to?. What role should the reserves play? Should we plant as many species in the reserves as we can? Will this damage the "integrity" of the reserves? What if the closest reserve is miles and miles away? Is this still "local"?

As you can see this is quite a can of worms (which is why, I imagine, DCE refrained from opening it). But we can cut through some of these problems if we take a regional view of grassland conservation.

\* Botany Dept, LaTrobe University, Bundoora 3083

### A regional species rescue plan

One of the most important issues in grassland conservation that we have hardly begun to tackle is the insidious process of species extinctions at a regional level. Many species occur in many regions, but since nobody really knows how well conserved any particular species is in all other regions, many species are going to become extinct, not by some big developmental bang, but by a quiet whimper as they gradually disappear from one region after another, without anyone noticing<sup>4</sup>. The most effective way to stop this process is to aim to save every species in every region. If we take this approach, then perhaps the most pressing issue on the Keilor plains becomes, how can we save all of the surviving indigenous species?<sup>5</sup>

We can save species by many means, including saving all of the sites where they occur, lobbying for more remnants, establishing plants in secure sites, growing them in gardens and storing seeds in seed banks. All of these mechanisms are important, but here I wish to focus on just one aspect, saving species "in the wild" by establishing viable populations in secure remnants (assuming, pessimistically perhaps, that we are never going to save as many remnants as we would like).

As I see it, the only way that we have any chance of saving the majority of the species on the Keilor plains (and in all other grassland regions) in the wild, is to start propagating as many species as possible and planting them in secure reserves (such as Derrimut) immediately<sup>6</sup>. We should aim to get a viable population of every species in at least one secure reserve within the next decade.

But what about local provenances, you ask? I believe that the prognosis for many species is now so grim that concerns about "local provenances" within a relatively uniform botanical region such as the Keilor plains are fast becoming an irrelevant distraction. We need to try to save **regional** provenances, fast. We fail to tackle this issue if we devote our efforts to saving (putative) local provenances of species that are adequately conserved in the region, while other unreserved species are disappearing forever. Our highest priority for the immediate future should simply be to save as many **species** as we can. This in itself will be a mammoth undertaking, given that there are perhaps 150-200 unreserved species on the Keilor plains alone.

### Reserve integrity

One potential problem with this approach is the possibility that introducing lots of new species to secure remnants could perhaps damage the "integrity" of these remnants. There is, I believe, some merit in **not** planting lots of new species in some of the best quality remnants, particularly when these are very small (e.g. some rail-line sites). But I don't see much sense in refusing to plant species in "large" remnants that have been partially degraded by 100 years of

stock grazing, and all of the major reserves on the Keilor plains fall into this category. The Derrimut reserve is very large, and very valuable, but it was grazed by stock for over 100 years, and undoubtedly has lost many species<sup>3</sup>. Those species that are now common in the reserve are those which coped with continual grazing. Those which couldn't cope have disappeared or are now extremely rare. Therefore, it seems desirable to plant other species, which occur in the same habitats elsewhere on the Keilor plains, within specified parts of the reserve.

But what if species weren't there originally, you ask? Clearly we'll never know for sure, as the first graziers weren't all that committed to writing up their plant lists. On the other hand, does it really matter if we put in a species that didn't grow in that precise spot 100 years ago? Some species may not have grown at Derrimut because it didn't provide suitable habitat. If we try to introduce them now, two outcomes are possible. Either they die out, in which case we will (hopefully) learn something about their habitat requirements, and can try to establish populations elsewhere, without having damaged the "integrity" of the reserve in any way. Alternatively, the ecology of the Keilor plains may have changed so much during the past century, that some of these species may now be able to grow at Derrimut. In which case, who cares, since we'll never know anyway. We have saved a grassland species in a grassland habitat. We can only determine habitat suitability by trying to plant species in particular sites. This process, if done carefully, does not have to damage reserve integrity. If anything, it is likely to increase integrity by replacing species that have been lost during the past century.

### How far away?

The next question that frequently arises is, how close should a species be to a reserve for it to be planted there? The Derrimut Draft Management Plan suggests that plants should only come from "the immediate vicinity", within a "10-15 km radius".

I see great problems with this approach, and suggest that if our major concern is to save all of the species in the region, then we shouldn't be asking this question at all. Instead of asking, "which species can we allow into this reserve?", we should be asking, "into which reserves can we put this species?"

The major problem with the fixed-radius approach is well known and easy to demonstrate. The Keilor plains occupy over 2000 sq kms. There are only a handful of major reserves (Derrimut, Laverton North, Organ Pipes, etc.) in the region. If we draw a 15 km radius around each of these reserves, then about 40% of the region is not covered by a circle<sup>7</sup>. Species surviving only in this 40% are doomed to extinction.

Continued on page ???

# Good works for grasslands

From Michele Arundell

The plight of the critically endangered Victorian western basalt plains grasslands is of great concern, and recent news has not been good as the battle still rages over the fate of the remaining Angliss grassland or for the grasslands at Cooper St Campbellfield, where the state government is proceeding with purchase of only 24 hectares out of the 72, losing out on an opportunity to maintain the link between the strip along the Merri Creek to Kangaroo Grass grassland along the F2 freeway reserve.

However, at last native grasslands have been receiving a lot more attention from the Melbourne Region of the Department of Conservation and Environment. Two Grassland Planners were employed in early 1992, and have launched a strong effort to manage native grasslands in the Melbourne area.

A kit of Management Guidelines for Native Grasslands in the Melbourne Area has been prepared and is shortly to be released. The kit consists of an introduction sheet, which discusses the precarious conservation status of basalt plains Themeda grasslands and their identification, and nine specific management guidelines on the following topics: Restoration and Revegetation; Weed control and management; Soil disturbance and rock removal; Recreation; Tree planting/urban forestry; Grazing by introduced animals; Mowing and slashing; Community involvement; and Fire Management. The kit is presented in a full colour folder, and is jointly funded by DCE, the Victorian National Parks Association and a National Estate grant. The kit aims to educate the public on the values and conservation significance of native grasslands, and is targeted to private landholders and public land managers.

The draft Management Plan for the Derrimut Grassland Reserve has been released and is available for public comment until the 14 August 1992. Copies may be obtained from Vanessa Craigie on (03) 651 3658.

Derrimut has been the subject of a recent intensive works program by the Department. Infestations of the actively invading *Nassella neesiana* (Chilean Needle-grass) around the margins of the Reserve have been sprayed with Roundup and fencing on the southern and western sides of the Reserve has had some repairs. About 20 hectares of the Reserve north of Andersons Swamp were burnt in April 1992, to reduce *Themeda* cover and provide increased inter-tussock spaces for native forbs. The fire was achieved with minimal

vehicle traffic on the reserve, and no fire retardants or other chemicals were used. Fire breaks were cut using a light hand-held whipper-snipper, which was efficient, easy to handle and caused far less soil damage than a heavy motorised slasher or mower.

Growth was rapid after the fire. Nineteen days later, the entire burnt area was covered with several centimetres of green growth, primarily *Themeda triandra* (Kangaroo Grass) and *Nassella neesiana*. Other new growth appeared to be *Eryngium* spp (Blue Devil), *Dichondra repens* (Kidney Weed), *Acaena echinata* (Sheep's Burr), *Solenogyne dominii* (*Solenogyne*), *Schoenus apogon* (Common Bog-sedge), *Trichoryne elatior* (Yellow Rush-lily) and *Calotis scapigera* (Tufted Burr-daisy). A great deal of seed of introduced *Romulea rosea* was visible on the ground straight after the fire, and there is now an amazingly dense growth. From a distance, patches of *N. neesiana* could be clearly seen; they were distinctly higher (i.e. about 6-8 cm high compared with *Themeda* shoots which were about 4 cm high) and a brighter green. Most *Nassella* was along the swamp where soil had been ripped for tree planting in 1986. Very little occurred in the rocky areas further north. The height and colour difference appeared to be distinct enough to spot individual *Nassella* plants among other species. This observation was verified a number of times by a close examination.

Selective weed control on the burnt area was carried out by the Department in May and early June, using Roundup on emerging *Nassella* and *Phalaris*. Trial plots were also set up to investigate the effects of Atrazine (which is selective for grasses with a C3 photosynthetic pathway) on *Themeda* (C4) and *Nassella neesiana* (C3). The latest observation (early June) seems to indicate that *Themeda* is unaffected and that *Nassella* is still deciding whether it is tolerant to Atrazine or not.

Work is underway in other areas too. Railway grassland reserves at Hoppers Crossing, St Albans and Sydenham are currently being sign-posted and fenced. Work has begun on Management Plans for the Laverton North Grassland Reserve and for native grasslands on rail reserves on the Melbourne - Bendigo rail line.

It's good to see something being done about grasslands at last.

## Weed of the month:

# Mechanical suppression of *Allium triquetrum* (Angled Onion) using carpet underlay

By Mark Gardner

Three years ago I embarked on the task of controlling *Allium triquetrum* by mechanical means.

First it was important to know the life cycle of *Allium triquetrum*. Being a bulb (food storage organ), the plant uses the stored food at the beginning of the growing season to produce leaf and root. During this process the bulb is exhausted. Around the time of seed set the plant reverses the cycle and begins to store food in the bulb for the next season. This is done by pulling food from the green leaf matter down to the bulb. With this knowledge I planned my assault.

The idea of using carpet underlay came to me while doing house renovations. I have used a number of different smother techniques, all involving slashing first. The idea was to remove as much of the green leaf and flower as possible before the seed set, then smother to prevent regrowth and in turn reduce the ability of the bulb to store food. With the assistance of Friends of Warrandyte State Park, DCE and Eltham Council I was able to acquire large quantities of hemp underlay, newspaper, pine mulch and native mulch. The following results were obtained using different materials:

1. Thick newspaper, 6 sheets at least and pine mulch 50 mm thick. Success was limited due to the number of overlapping joints where the plants found their way through. As a result continuous follow-up hand pulling and mulching was necessary. Newspaper makes it easy to work around any desirable plants, e.g. grass clumps.

2. Underlay with dense planting, every 300mm. This gave a good result but follow-up was required due to weeds growing through the holes made for planting. Once the plants were established this problem was reduced.

3. Underlay only. Good results were achieved with a 50-80% reduction in weed numbers in the first season. Follow-up slashing and either more underlay or mulch (or preferably both), was necessary. An unexpected problem was caused by anglers, who when looking for worms damaged the underlay by lifting it.

4. Underlay with 50-75mm native mulch. No regrowth had occurred after 4 months, but this site is still being monitored.

All the test sites were in a similar area close to Stony Creek, Warrandyte (Melway ref 23 C9).

It is important to choose a site or sites of a size that can be worked easily without putting too much demand on valuable volunteer labour. It is also important that the site will be recolonised by indigenous plants rather than weeds.

The sites I chose were 4m x 6m approximately, bordered by remnant vegetation and dotted with clumps of *Poa* spp (Tussock Grass), *Acaena anserinifolia* (Bidgee-widgee), *Prunella vulgaris* (self-heal), Native Raspberry etc.

Underlay comes in many different types: hemp, horse-hair, combination and one with a nylon mesh through it. The nylon will not break down so looks ugly and is a potential threat to wildlife. The underlay also comes in a variety of thicknesses, the thicker the underlay the better. Underlay cuts very easily with household scissors.

Insect and worm activity has been found very noticeable on soil surface just below the underlay.

Note: On a quite different site now three years old, I could find no traces of bulbs in a recent inspection of the site. This site was treated by slashing and covered with underlay only for three consecutive seasons. This site is a steep west slope with runoff from a neighbour's property. The runoff has recently been redirected which I hope will be a benefit in my efforts to remove the rest of the Onion Weed and revegetate with indigenous species.

A new site adjacent to this with its first cover revealed a dramatic reduction in bulb size; the bulbs in the treated area varied between 10-15mm with tight outer skins. It was very obvious from observation of these bulbs that the bulbs in the treated area were quickly being depleted of their reserves whilst the untreated were growing and multiplying healthily.

It is important to stop seed falling into plots if they are bounded by Onion Weed. This is fairly easily achieved by pulling away seed heads before they have fallen.

## Coming events:

**THE MELBOURNE WILDFLOWER SHOW:** 15 & 16 August 9am-5pm. Special feature: Easy-to-grow (indigenous) plants for the Melbourne area. Organised by the Society for Growing Australian Plants Maroondah Inc. IFFA's exhibition will be the central display. Ringwood Convention Centre. Enquiries: (03) 872 442, 844 3987.

**SPRING PLANTING FESTIVAL:** 12 & 13 September.

**ANGAIR WILDFLOWER SHOW:** 19 & 20 September.

**WESTERN AUSTRALIAN WILDFLOWER FESTIVAL:** Kings Park, Perth, 25 - 29 September

## Conferences/Seminars

24-25 August. **Box and Ironbark Woodland Conservation.** The Victorian National Parks Association is hosting a conference on the inland forests and grassy woodlands extending from northern New South Wales to western Victoria. The Box and Ironbark woodlands of Eastern Australia have been mostly cleared and the remnants continue to be degraded by poor management. Conservation management of these woodlands suffers from both lack of basic ecological information and insufficient public and government interest.

This important conference will bring together all people interested in preventing further degradation of these woodlands - naturalists, biologists, farmers, conservationists, land managers and others, to hear the latest information and to discuss what is required to conserve the plants and animals of the Box and Ironbark country. At Benalla Town Hall. For further details contact Charles Sherwin, VNPA (03) 650 8296.

3-4 October. **Grasslands Conference.** see enclosed leaflet

7-28 October - Wednesdays 6.45pm-9.45pm. **Environmental Restoration Seminars 1992.** A series of four seminars. Six speakers, all leaders in their respective fields, have been chosen to provide practical and theoretical knowledge to all those interested in environmental restoration in the Geelong region.

The series has been designed to develop an understanding of natural areas and areas being restored for conservation purposes. As well, the four seminars stress the importance of ecologically sound management practices when dealing with environmental restoration.

This rapidly developing field is of critical importance for the short and long-term survival of our indigenous biota. The widest possible audience is encouraged to attend. At Gordon Technical College. For further information contact Trish Edwards (052) 22 2936.

9-14 November. **Towards a Better Understanding of Australian Plants.** A symposium on Australian plants that ensures to cover the topic of indigenous plants, especially with the seminar for landscapers. Kalorama, Victoria. Contact: Marilyn Gray (03) 728 5891. More details next issue.

## Workshops/Talks

July 27, Monday 7.45pm. **Victorian Brown Algae,** by Dr Julie Phillips, Botany, Monash University. Marine Research Group meeting, Theatrette, Museum of Victoria (off Latrobe St.). Clarrie Handreck (03) 870 3647 (evenings).

August 3, Monday 6pm. **Astelia (Liliaceae),** by Vivienne Turner, Dept. of Ecology and Evolutionary Biology, Monash University. Astronomer's Residence, Royal Botanic Gardens, Birdwood Ave, Sth Yarra. Tim Entwisle (03) 655 2313.

August 4, Tuesday 8pm. **Statistical design of wildlife surveys** by Nick Keogh (Biometrician, Melbourne University). Organised by Fauna Survey Group of Field Naturalist's Club of Victoria. National Herbarium. Felicity Garde (03) 808 2625.

August 13, Thurs 8pm. **Mosses and Liverworts** by Arthur Thiess. Botany Group meeting of FNCV. National Herbarium. Win Bennet (03) 435 1921.

August 16, Sun 2pm (or following planting). **Flora and Fauna - Interactive Dynamics.** Revegetation information session organised by Men of The Trees. Yarra Bend Centre (Mel 2D G4). Virginia Brook (03) 347 5487.

August 17, Monday 7.45pm. **Live Displays and the Conservation of Invertebrates,** by Dr Alan Yen, Invertebrate Surveys, Museum of Victoria. Marine Research Group of Victoria meeting, Theatrette, Museum of Victoria (off Latrobe St). Clarrie Handreck (03) 870 3647 (evenings).

August 17, Monday 8pm. **New species of Eucalypts in Victoria** an illustrated talk by Kevin J. Rule. Society for Growing Australian Plants - Victoria. Enid Bowman (03) 882 5297.

## Excursions and field trips

25 July, Sat. Botany Group of FNCV excursion to **Monash Library and Botany School Garden.** Leader: Annabel Cahill. Contact Joan Harry (03) 850 1347.

26 July Sun. **Walk, Talk & Gawk: Yarra Valley M.P.** with Jane Calder. Easy, full day excursion through Yarra Valley park, part of the Metropolitan Parks system which retains many natural features. Bookings: W. Branagan (03) 818 6102.

26 July Sun 11am-4pm. **LaTrobe University OPEN DAY with tours through the Wildlife Reserves.** Hourly tours will be conducted, with a chance to observe ornithological research (bird-banding and mist-netting) in action as well as the wetland and woodland restoration project. George Paras (03)479 2871.

9 August. Sun. **Walk, Talk & Gawk: Ironbark Basin - Point Addis.** A spectacular coastline, historic ochre mine, regeneration after fire and interesting vegetation are only some of the attractions. Leader: Joan Lindros (052) 43 4301

22 August. **Mosses and Liverworts,** Central Highlands, Leader: Arthur Thiess. Botany Group of FNCV excursion. Joan Harry (03) 850 1347.

23 August Sun. **Walk, Talk & Gawk: Lysterfield Lake Park.** a former reservoir has been developed as a high-use recreation park, but it also has varied conservation values. Leader: Geoff Durham (03) 523 5559.

24 October - 2 November. **Rainforest Riches - a botanical camping tour of Northern NSW** led by Ross Pearson and Tony Rodd. Part of the Australian Museum Society Program. Bookings: (02) 339 8225.

## Restoration Activities

### July

25 Sat 9am. **FO Organ Pipes.** Planting, rare & endangered spp. Robert Bender (03) 499 2314. Also on 15 August.

25 Sat. **FO French Island - Orange Bellied Parrot Count.** Last year the only life to be found on the saltmarshes was wet but exhilarated members of the Friends group. Hopefully this year the weather will be better and a few OBP's will put in an appearance. Fay or Clive (03) 772 9668.

25-26 Sat-Sun **Weekend Country Planting - Ancona Landcare Group, with Tree Project.** Contact Bill (03) 528 2615 or Tree Project (03) 654 1800.

26 Sun 10am-1pm. **Nunawading Indigenous Plants Project.** Nunawading Council Horticultural Centre. 82 Jolimont Rd., Forest Hill. Margaret Witherspoon 878 5998.

26 Sun 10am-1pm. **FO Braeside Park** working bee. Ron Pearson (03) 584 7443.

26 Sun 11am-4pm. **FO Royal Park West.** Mel 29, C12. Take turnoff from Manningham/Oak Sts, Parkville and continue 200m to carpark. Adam Muyt (03) 386 7491.

26 Sun 10am-12noon. **FO Diamond Creek.** Tree-planting. Tony Lock (03) 435 3305.

26 Sun 10am-4pm. **FO Wildlife Reserves, Campus Reserve working bee and OPEN DAY - La Trobe Uni.** Planting Tussock Grasses and conducting tours. George Paras (03) 479 2871.

30 Thurs 10am-12noon. **Sandringham Community Nursery** - volunteers propagation activities. Sandringham Council Depot, enter Reserve Rd or Tallinga Rd. This is on every Thursday and Saturday.

30 Thurs. **FO Warrandyte SP** propagation day. This event takes place every Thursday. Other revegetation activities on weekends. Ian or Margaret Burke (03) 844 2659.

### August

1 Sat 10am. **Green Link Box Hill.** Activities day. These events are also held every Tuesday morning and Monday morning is Nursery work. Council Nursery in Nelson Street, Box Hill, further details, contact Minette (03) 898 1364.

1 Sat. **FO French Island.** Preparation of nesting sites for Fairy Terns on Rams Island and then a walk back to the jetty via the coast. Fay or Clive

Gordes (03) 772 9668.

2 Sun 9am. **FO Buckley Falls.** Tony Woolford (052) 43 6340.

3 Monday **Toohy Forest Protection Society.** Shirley Walton (07) 848 1036.

8 Saturday 1.15pm. **Hughes Creek Work Parties.** Enquiries: (03) 755 1398.

9 Sun 10am-12noon. **City of Heidelberg, Community Revegetation Day.** Wilson's Reserve, Melways Map 31 F10, off the Boulevard. Conservation Officer (03) 490 4253.

9 Sun 10am-3pm. **FO the Yarra Galatea Pt,** Mel 2D, D7. Judy (03) 347 2252. Also Wed. 26 Aug.

9 Sun 9.30am. **Stony Ck weeding group.** Mark Gardner (03) 844 3799 (H), 844 2659 (W).

9 Sun 10am. **URAGE** (Upwey Regional Action Group for the Environment). Weeding to restore indigenous vegetation along Ferny Creek. Rob Stevens (03) 754 3792.

12 Wed, 9.30am. **FO Sherbrooke Forest.** Meet at Ridge Track entrance gate (Mel 75 E5). Weeding ivy. Vivien Freshwater (03) 754 3093.

15 Sat. **FO French Island. Survey day.** Fay or Clive (03) 772 9668.

15 Sat. **FO Bradshaw Park.** Weeding day. 580 2573.

15 Sat 1.30-4pm. **Mount Eliza Association for Environmental Care (MEAFEC).** Moorooduc Quarry Reserve revegetation. Melways map 106, ref A7. Anne Read (03) 787 2034. Also on Sunday 10am-12.30pm.

16 Sat 1.30-4pm. **Mount Eliza Association for Environmental Care.** Follow-up on Moorooduc Quarry Reserve revegetation work. Mel 106, A7. Also on Sunday 17/8 10am-12.30pm. Anne Read (03) 787 2034.

16 Sun. 10am-12noon. **Brunswick Tree Group** Moonee Ponds Ck. Eric Ward (03) 388 2123.

16 Sun 10am-1pm. **Friends of Merri Merri Park.** Planting day. Melways map 30, ref C9. Barb Miles (03) 482 1618.

16 Sun 10am **Men of the Trees.** Deep Rock, Yarra Bend Park. Minette Russell Young (03) 898 1364.

22 **FO Werribee Gorge & Long Forest Mallee.** Long Forest tree maintenance, fence removal, Prickly Pear control. Judy Douglas (053) 67 2672.

30 Sun 9.30am. **FO Warrandyte SP.** Broom pull at Yarra Brae followed by a walk. G. Roche (03) 722 1926.

### The Australian Trust for Conservation

**Volunteers** offer a wide variety of restoration activities throughout most of Australia. For further information contact ATCV: National Headquarters in Ballarat: (053) 33 1483.

**Thank you to all the people who contact us regarding on-coming events their groups are organising. If other people wish to have their events covered, please get in touch with Dimi Bouzalas, (03) 386 0264**

## THE PLAINS WANDERER: Saving regional provenances (continued from page 5)

The usual "solution" to this problem is to relax the rules to allow certain species to be introduced from further afield. But our attention is still focussed on the reserves, and not on all of the species. Every time we want to introduce another distant species, we have to justify its establishment in a particular reserve.

An alternative, but related, approach would be to forget about the "15 km rules" and to simply divide the region into zones, with a reserve in the centre of each zone. Thus, every species is put into the closest reserve, regardless of its distance from that reserve. This approach ensures that a site is available for each species. In practice, of course, it isn't this simple, as all reserves don't have suitable habitat for all species (e.g. shallow wetlands).

### A species-centred view

Another approach exists which I think is far better still: to forget for the moment which reserve is closest, and to focus once again on all of the species. If we really want to save every species on the Keilor plains (and in every other grassland region), then I believe this approach deserves active consideration.

There are so many threatened species on the Keilor plains today that we need to revolutionise our thinking on species introductions. Instead of having to justify why every particular species should be introduced to every particular reserve, we should have to justify why a species should **not** be introduced to every reserve. The primary justification of excluding a species from a site should be ecological; e.g. "wrong soil type, put it into Reserve B instead". If we change our emphasis in this way, then we are actively encouraging, rather than discouraging, the conservation of all grassland species in grasslands in the region.

So, let me present my "Eight-fold Path to Species Survival":

1. **Aim: to maintain viable populations of every grassland species, in grasslands, in every region** (e.g. the Keilor plains).
2. **Action:** viable populations of every species in the region should be established in (at least) one secure reserve in the region.
3. **Premise:** significant sections of the major reserves should act as arks, not museums, into which additional species are to be established.
4. **Action:** a complete list of indigenous species for each region (e.g. the Keilor plains) should be compiled immediately.
5. **Action:** a supplementary "red list" of regionally depleted species and poorly reserved species should be compiled urgently, and be annotated with suggested establishment sites for every species.
6. **Action:** All species on the "red list" should be propagated from remnant plants in the region and large populations should be established in suitable reserves as soon as possible.
7. **Premise:** the distance of a target species from a

donor reserve in the same region is not critical - all species should be introduced to suitable habitats regardless of distance.

8. **Attitude:** we should be actively promoting the establishment of large numbers of species into secure reserves, not discouraging it.

### Problems

When outlined in this manner, this approach seems very straight-forward and clear-cut. However, some readers may perhaps object to different aspects of the plan.

For instance, the approach perhaps invites the response that we should be doing our best to save unreserved remnants, and not merely ransacking them to plant species into secure sites. I fully agree with the first part of this argument (we desperately need more reserves), but I don't agree with the second. Collecting seed from depleted species and introducing plants into secure reserves does not diminish the values of the unsecured sites. In practice, many of the species that are endangered on the Keilor plains are not recognised as being rare or threatened throughout Victoria or Australia, and therefore they receive little attention in the political decision-making process. Adding these species to a secure reserve won't change the land-use decisions on the insecure sites. If some people still think I'm being politically naive, then may I suggest a simple remedy: do it, but don't tell anyone until after the political decisions are made.

Secondly, I imagine that some readers may object to my suggestion that considerations of local provenance are not the highest priority within a region. My reason for proposing this is simple. We currently have no evidence that local provenances actually exist within a relatively uniform, botanical region such as the Keilor plains. The ecosystem was continuous and unfragmented prior to European settlement, and gene flow must have occurred across the region. Unfortunately, geneticists are not likely to answer this question for us; two prominent geneticists recently wrote, "probably much less than 1% of plant species in Australia could be studied genetically in the foreseeable future"<sup>8</sup>, and they were referring to broad continental studies, not detailed studies of species within every region. But most importantly, the **only** way to save the maximum genetic diversity in a region is to save all of the species. We lose far more genetic information when we lose a single species than when we lose every provenance but one of all remaining species.

I am not proclaiming that the concept of local provenance is a furphy. Instead, I am proposing that, in most if not all regions, the only level of "local provenance" at which we can achieve practical results is at a **regional level** - thus, our provenance becomes the **entire** Keilor plains. I suggest that we should re-direct our attention to saving regional, rather than local, provenances. If enough resources are available to save additional (putative) local provenances within this region, then well and good, but this shouldn't take

place at the expense of saving **all of the species** in this region. Personally, I'd much prefer to see 100 species saved (even if we only save one "provenance" of each from the region), than to see three or four putative provenances of 50 to 60 species saved, while the others disappear forever. I repeat, the extinction of species from a region represents the biggest loss to the genetic diversity of the indigenous flora.

If this argument is considered by some to be reactionary, let me place it in another regional context. Despite impending residential and industrial development, I believe we have a greater chance of saving all of the surviving species on the Keilor plains than we have in any other grassland or woodland region in south-east Australia (except perhaps Tasmania), simply because there are more concerned and active people in Melbourne than in all other regions combined. We probably have little hope of saving all of the species on the Gippsland plains, where I currently work, simply because there aren't enough people finding rare plants and remnants, lobbying for their protection, propagating plants, etc. Sadly, it just isn't possible to save all species in all rural areas at a finer, more "local" scale than a regional level. If we act fast, we might have a chance of saving "regional provenances" of most species in most regions, and this I believe is the most appropriate first course of action. If we can implement a "regional species rescue operation" in every grassland region, we can save a lot of species. But even at this level, we have a hell of a lot of work to do.

So, in closing, may I quote (in my defence) the old adage, "if everybody thinks the same, nobody's thinking", before I incur the wrath of some readers, by deliberately omitting "local" when I extol, "think regional, think species".

We desperately need a vision for saving all of the species on the Keilor plains and other grassland regions, and right now, beyond our repeated calls for more reserves, I don't believe we have much of a vision at all. And without a clear vision from the community, we won't get any action from a government. So please think, and act, fast.

#### References and footnotes

1. Craigle, V. & Stuwe, J. (1992). "Derrimut Grassland Reserve Draft Management Plan." (DCE: Melbourne). Copies are available from DCE Melbourne Region, phone (03) 651 3658.
2. Scarlett, N. & Parsons, R.F. (1992). Conservation of Victorian grassland species. In "Conservation of Rare or Threatened Plants in Australasia". (Eds. G. Butler et al.), pp. 107-112. (Australian National Botanic Gardens: Canberra).
3. Lunt, I.D. (1990). A floristic survey of the Derrimut Grassland Reserve, Melbourne. *Proc.R.Soc.Vic.* 102, 41-52.
4. See S. McIntyre (1992) for a good analysis of this problem in the article, Risks associated with the setting of conservation priorities from rare plant species lists. *Biological Conservation* 60, 31-37.
5. For brevity, I've used the word "species" throughout this article, but I use it in a broad sense to encompass all taxonomic levels, including sub-species, varieties, recognised ecotypes and undescribed taxa.
6. Good record keeping is imperative for all species introductions, including the collection site and date, the number of plants from which seed was collected, the number of propagated plants, and the planting date, etc.
7. The 15 km circles centred upon the Derrimut and Laverton North Reserves, which are only 2 kms apart, cover virtually the same area.
8. Moran, G.F. & Hopper, S.D. (1987). Conservation of the genetic resources of rare and widespread eucalypts in remnant vegetation. In "Nature Conservation: The Role of Remnants of Native Vegetation". (Eds. D.A. Saunders et al.), pp. 151-162. (Surrey Beatty & Sons: Sydney).

## Letter:

### Index of Biological Reports

*Just a short comment on the letter by Ian Lunt re an Index of Biological Reports.*

*I agree with Ian's comments regarding a central access point for the many studies, reports and management plans that have been written in relation to indigenous flora and fauna.*

*While researching information on indigenous plants for the 'Flora of Melbourne' I would occasionally come across references to reports and theses on related topics. More often than not this was as a result of a chance question or a comment made in passing. We found that it was often not what reports you could obtain but who you knew when trying to locate elusive information. And we were gradually introduced to many people!*

*There is certainly a lot of information available if only one knew where to access it. If a list of these reports was available, either published through Indigenotes or as an index held by IFFA, much repetitious groundwork would be saved and many interesting studies would become more widely known. IFFA could possibly set up a library or database of this information. Its existence would need to be advertised so that both creators of reports and end users would have a common point of access.*

*The dissemination of information is vital as the interest in saving or re-establishing indigenous flora and fauna grows. Such an index would have been invaluable to our committee although we may still be writing the 'Flora' if we had been able to use all this 'hidden' information!*

*Thank you for the opportunity to comment on such an excellent idea.*

**From Marilyn Gray, convenor, Flora of Melbourne.**

# IFFA(NSW) June Meeting: **Mycorrhizal Fungi**

From Mariette Maclurcan\*

At the 1 June meeting held at the Botanical Gardens, Dr Anne Ashford's address "The Role of Mycorrhizal fungi in the Australian Plant Community" was appreciatively received by a large and keen audience.

"Mycorrhizae are associations between plant roots and fungi that help the plant to absorb nutrients and can also improve its resistance to drought and disease. In return the fungus benefits by being provided with a continuous supply of carbohydrate from the plant".

Mycorrhizae by increasing the efficiency of nutrient absorption accumulate higher levels of nutrients, especially phosphorus and nitrogen, particularly from nutrient poor soils. This is particularly relevant to the Australian environment. Plants with mycorrhizae are also known to be bigger, heavier and more endowed with leaves.

Most plants have mycorrhizae. They can be found in even the most unusual and unique Australian environments (85-95% of species are mycorrhizal). There are thousands of mycorrhizal fungi. However, the mycorrhizae on each group of plants is distinct and are classified according to their structure although their function appears to be the same.

## **Mycorrhizae of the forests**

All species of Eucalyptus are mycorrhizal and they often form associations with toadstool-forming fungi. In fact, many toadstools found in the forest are mycorrhizal. "Every tree has a mosaic of mycorrhizal roots, often with a variety of fungi. The mycorrhizal roots are completely covered with fine threads of fungus and the surface root is encircled by a thick tightly interwoven sheath of fungal tissue." Mycorrhizae with this type of structure are called **Ectomycorrhizae**. This network or cluster of fine fungal threads (hyphae) can grow out very large distances. They are well adapted to and believed to be the main absorbing surface of the trees mycorrhizal root system (better at this than the trees roots). Because they are so small and fine they have a very high surface area for absorption, can penetrate fine soil spaces, and grow very rapidly. They then channel material back to individual mycorrhizae for storage and transfer to the plant.

## **Mycorrhizae on grasses and other herbs**

These have a similar function to ones associated with forest trees but they are structurally different. These invade the root itself and multiply within the root from cell to cell. They are called **Endomycorrhizae**. These fungi do not extend as far away from the mycorrhizal roots. However, their structure enables them to more efficiently accumulate phosphorus from phosphorus deficient soils.

There are two other groups of endomycorrhizae which grow inside the root. One is found in the Orchidaceae family. Many adult orchids couldn't survive without this fungus. The mycorrhizal fungus penetrates the roots and coils up inside individual cells, growing from cell to cell. The other type are found in the Epacridaceae family of heath plants. These do not spread from cell to cell instead they form a coil in individual cells. Little more is known about their function so Dr Ashford is currently undertaking research in this area.

What are the effects of disturbance on external mycelia of mycorrhizal fungi? With disturbance the mycelia are likely to be fragmented and separated from the plant roots. As it is so highly dependent on the roots for its energy and it is very difficult to grow away from the plant it would be likely to die. The soil mycelia can re-grow out from the roots but the plant will have a less competitive edge because its nutrient intake will be lessened. In short, "the degree of disadvantage will depend on the importance of that mycorrhizal associate to that plant".

If anyone requires any further information, Dr. Ashford is happy to be contacted at the School of Biological Sciences, Uni. NSW, Kensington 2033, Ph (02) 697 2115. A limited number of copies of her talk are available by ringing Dannie Olbrich on (02) 953 7461.

Further suggested reading: Allen, M.F. "The Ecology of Mycorrhizae", Cambridge Studies in Biology, ISBN 0521 33551 1.

The next meeting on 3 August at the Maiden Theatre, Botanical Gardens will be presented by Tom Traski from the Australian Museum on the topic "What it takes to be an Australian Fish".

\*100 The Bulwark, Castlecrag NSW 2068

## Snippets:

### **Enrol now for next Bush Regen Techniques Course**

The next course run by the Save the Bush project of the National Trust starts on Wednesday 2nd September. Classes and field work will be held in North East Melbourne and in other bushland reserves in the metropolitan area.

The course covers practical and theoretical aspects of managing the bush, including species identification, plant form and function, bushland and fire ecology, vegetation surveys and mapping, soils and erosion control, weed ecology and weed control methods, management of bushland communities, seed collection and planting and occupational health and safety.

Applicants must pay the enrolment fee of \$375 by Friday 21st August to secure a place. Some discounts are available to unemployed people. For enrolment forms and further information contact Jenny Francis 654-4711.

### **Using Willows to control toxic algae???**

Experiments are underway to see if willow trees planted on river banks will help stop the spread of toxic blue-green algae, which plagues the Victorian and NSW waterways.

Researchers at the University of New England believe willows will stop the algae build-up by sucking up the nutrients from sewerage and fertilisers that feed the outbreaks.

The experiments are being carried out at a stream near Armidale, in the Mid-north of NSW. The CSIRO plans to become involved in the program.

Source: *The Herald-Sun* 4/6/92

### **VCT raising money to expand Pallister Reserve**

Pallister Reserve is a property near Orford in Southwestern Victoria owned by the VCT. The reserve is of major conservation significance in the region because it is one of the few areas of natural bushland left in the area. It contains several vegetation communities including open forests/woodlands, heathland and swamps providing habitat for rare flora and a haven for local fauna. The original 123 ha reserve was purchased in 1979. An adjacent block of high quality bushland of 130 ha was purchased at auction in June for \$109,000. DCE has promised \$20,000 and the VCT has asked for a \$20,000 contribution to be raised in a community fund

raising appeal. Please contribute if you can to this worthwhile cause. Donations are tax-deductible and cheques should be made out to the Pallister's Reserve Extension Appeal c/o Friends of Pallister Reserve, RMB 5355, Woodford via Warrnoombool, 3281.

### **Grassland search is ON**

Despite several reports and "Action" plans we still don't know much about Victoria's most threatened natural communities - native grasslands and grassy woodlands. DCE staff are planning a statewide survey of grassland remnants this spring and summer. They're hoping to identify previously unknown remnants on the plains of Victoria and re-survey known sites that have only been glanced at in the past. If you are aware of a promising remnant on either public or private land then why not have it checked out. Contact John Stuwe or Cathy Molnar on (03) 412-6110. Source: *VNPA Newsletter* July 1992

### **Wattle Park News**

A public meeting was held on 25/6/92 with the aim of establishing a "friends" group for the park. Over 100 people attended and elected a committee of 12 people. The same day was the time that Melbourne Water chose to announce the "American Playground" would not be constructed at Wattle Park. This is considered a great victory by the Defenders of Wattle Park and they consider the \$500,000 spent during the last three years on consultants and bureaucracy a massive waste of funds that should have been spent enhancing the park. A Management Plan is also promised by March/April 1993. The Defenders hope it will show a "perspective grasp of the entire park, especially its' natural attributes". The hope is that a "new and positive relationship" will now develop between Melbourne Water and the community.

### **Reveg in Scotland**

Scotland used to be 70-80% covered with Caledonian Forest dominated by Scots Pine (*Pinus sylvestris*) interspersed with deciduous trees such as Birch, Rowan, Aspen, Alder and Willow. Now only 1% of Scotland still holds remnants of this forest. Trees for Life are starting a program of fencing out deer (which are in unnaturally high numbers since the extinction of the wolf in Scotland) and replanting/regenerating the forest, and removing non-native trees. Perhaps in the future wolves and bears will be re-introduced.

Trees for Life, Findhorn Foundation, The Park, Forres IV36OTZ, Scotland

- Source: *Habitat Australia* Vol 20 no 2, April 1992.

# IFFA(Vic) Annual Report 1991-2

## PUBLICATIONS REPORT:

### Indigenotes:

From Tony Faithfull

Due to a severe lack of space in this issue, the Indigenotes report will be included in the next issue.

### Advances in Nature Conservation:

From Graeme Lorimer

Vol. 1, No. 1, now available:

Reviewed Scientific Articles: Wilderness Assessment - Kathy Preece; Rare Plants of Victorian Grasslands and Grassy Woodlands - Ian Lunt; Project Reports: Mining and Conservation of the North West Aust Islands - Harry Butler; The Vic Rare or Threatened Species Data Base - Simon Cropper;

Technical Note: Fire and Management of the Rare Plant *Discaria pubescens* - Fiona Coates;

Book Review, a reading list and some flora and fauna artwork.

Annual subscription for two issues per year of \$20.00.  
Individual issues \$12.00.

## SECRETARY'S REPORT:

From Michele Arundell

### Meetings:

Some of the good news from 1991-92 meetings:

The Flora of Victoria Volume 1 should be in press by the end of 1992 - eagerly awaited, the Flora of Sydney Volumes 1&2 are available now; farmers protecting and enhancing areas of native vegetation; local councils supporting indigenous plantings; discoveries of new species and new sites of regeneration.

Meetings however still have their full complement of depressing news; about houses being built on or horses trampling orchid colonies; weed invasions; cattle grazing remnants; mis-identification of significant flora leading to its loss; over-collection of seed and stripping of seed before its even ripe!

Bob Stanic and Martin Eade from Wright Stevenson Seeds spoke on their interest in commercial seed orchards using indigenous grasses; considering conservation and genetic aspects.

June Loves from Ripponlea Primary School spoke on Growing Indigenous Plants in the Schoolground, a project to develop an information kit and green database for use in schools. A brochure is available. Contact June on 592 7209.

Meyer Idleston spoke on Penguins - an interesting insight into the St. Kilda Breakwater penguin colony, it's formation, sensitive ecological balance and measures for research and protection.

Roger Lord spoke on the Vegetation Management Database. The project aims to simplify recording the characteristics, vegetation, events and management actions occurring at a site. The program consists of three major databases: a site database, a plant distribution database, and a management action database. The project will provide information on species distri-

bution, description, cultivation and cultural notes, propagation and other criteria which will improve environmental management. For more information contact Roger Lord on 615 5736 or Rob Scott on 536 1491.

Show & Tell: A tradition within IFFA meetings to end the evenings with a range of items of interest; from orchids in pots and growing hints, to environmental weeds for identification, & tips on eradication; from specimen collection books & boxes, to books & cassettes of frogs, from reports on symposiums & workshops, to camel races & feral turkeys.

### Project funding:

Indigenous Promontory - Royal Botanic Gardens: IFFA has allocated grant funding, for the collection and propagation of indigenous plants to restore this area. With the aim of providing further funding for interpretations signs and materials for public education.

Victoria's Unnatural Flora - Environmental Weed Invasion: IFFA has provided funding for co-sponsorship with DCE, National Trust and Ecological Horticulture to publish this book which should provide an invaluable reference for land managers.

Grants received for funding projects:  
Environmental Weeds - K. Robinson

Educational video and display material on indigenous flora and fauna - SPIFFA

Previous Grant for Advances in Nature Conservation: \$2,000

### Activities/events:

Spring Garden Festival - Involvement of many of the member organisations and members of IFFA, to provide an indigenous information and flora display at Holmesglen College of TAFE. A successful day to be repeated this year. Thanks to Victorian Indigenous Nurseries Co-operative, Sandringham & St Kilda City Councils, Greenlink Boxhill, Michele Arundell and Peter Tucker, Jane Pammer, Peter and Kathy Strickland, Tony Faithfull, Dimi Bouzalas, Peter Horsfall, Mark Adams, Rob Scott, Ann-marie Tenni, Jason Stewart & Damien Cook.

Weerama Festival - Werribee Environment Week - A week-long display of IFFA material co-ordinated by IFFA member Frances Overmars.

IFFA - CCV Raffle: - IFFA participated in this major conservation raffle selling over 500 tickets. We raised over \$500 for the purchase of display materials for IFFA. Thanks to all who helped especially Peter Tucker for co-ordinating our efforts.

IFFA Grasslands Conference: - IFFA and the VNPA are holding a conference on October 3rd & 4th 1992 to describe the natural history of grasslands and grassy woodlands and to determine what should be done to ensure their future. The venue is the Victorian University of Technology, Footscray.

## Major issues:

Department of Conservation and Environment Restructure - IFFA involvement in the public meeting, publicity and lobbying, with the Victorian Public Service Association, to prevent the implementation of the proposed restructure. A successful campaign.

Indigenous Nurseries Network - I.N.N. has developed its membership and strategies over the last year with regular meetings and communication.

Fitzgeralds Rd Grasslands - Werribee. A special thanks to Frances and Rudi Overmars, Michele Arundell and Peter Tucker for their concerted efforts and the many other IFFA members who are contributing to our campaign to save this grassland and its threatened communities. Thanks also to David Albrecht and Valentino Stasjic in the Herbarium for their assistance with the identifications; David Bellamy, Bob McDonald and David Cameron who assisted us with our media efforts.

Seed Bank: The Melbourne Indigenous Seed Bank now has Jane Robinson, a part-time officer employed under the Priority Victoria Program. IFFA looks forward to continued involvement with this project, guidelines being distributed and seed being lodged and made available.

Flora and Fauna Guarantee Nominations and Listings - Submissions for Hollow-Bearing Trees and the Hooded Plover have been successful and received final recommendation for listing. We look forward to several further contributions.

## Involvement in local issues:

Wattle Park, Herring Island, Oaks Avenue/Oakleigh, the Hunter Reserve/Marlo and Mt Buffalo.

## Submissions:

Benambra Copper Mine - M.Arundell/P.Tucker/R.Jones; Melbourne City Council / Indigenous planting - R.Jones; Oaks Avenue, Oakleigh - D.Cook; Hunter Reserve/Marlo- P.Tucker/M.Arundell; Mt Buffalo - D.Duggan/M.Arundell; William Angliss Grasslands - F.Overmars /M.Arundell /P.Tucker/ J.Ross/V.Stasjic./R.Jones and others.

## IFFA REPRESENTATION:

We hope to have IFFA liaison by the new committee members with the Threatened Species Network, Victorian National Parks Association. The Roadsides Conservation Committee representative will be Peter Tucker.

## ELECTION OF OFFICE BEARERS:

Our new Executive and Committee were elected as follows.

President: Dale Tonkinson

Vice President: Roger Jones

Secretary: Michele Arundell

Treasurer: Marita Sydes

Committee Members: David Bainbridge, Lincoln Kern, Geoff Carr, Jane Pammer, Valentino Stasjic, Jason Stewart, Peter Tucker.

IFFA thanks the following people for offering to do the following jobs:

Production of IFFA "Gene-Pool" pamphlet: Anne-Marie Tenni, Dale Tonkinson,

Plant Taxonomic Updates: Valentino Stasjic

IFFA Annual bibliography: Anne-Marie Tenni, Jason Stewart

IFFA activities reporter for *Indigenotes*: Lincoln Kern

Indigenous Nurseries Network funding applications: Sue Mills  
Advances in Nature Conservation assistant - Jason Stewart  
(references) Damien Cook (significance ratings)

Display Materials Co-ordinator: Matt Elliot

Library Officer: Sue Mills

Schools correspondence: David Bainbridge

Funding Applications: Mark Adams

Coordinating speakers: Lincoln Kern, Anne-Marie Tenni

Coordinating excursions: Damien Cook

Weed of the Month/Environmental Weed Notes editor for

*Indigenotes*: Tamzin Rollason

Significant plants of the Melbourne area editor for *Indigenotes*:  
Dale Tonkinson

Assistant for *Advances in Nature Conservation*: Scott Watson

## INDIGENOUS FLORA AND FAUNA ASSOCIATION INC.

### Financial Statement for the period ending 30 April 1992

|   |          |                 |
|---|----------|-----------------|
| Bank balance at 30 April 1992                         |          | 5524.30         |
| Less unpresented cheques                              |          |                 |
| 636643  | 200.00   |                 |
| 636645  | 37.50    |                 |
| 636649  | 500.00   |                 |
|   |          | <u>737.50</u>   |
|   |          | <u>4786.80</u>  |
| Cash book balance at 1 May 1991                       |          | 3839.43         |
| Add income  |          |                 |
| Membership subscriptions                              | 11109.00 |                 |
| "Indigenotes" - back copies<br>& Miscellaneous Papers | 893.30   |                 |
| Sundry  | 89.12    |                 |
|   |          | <u>12091.42</u> |
| Less expenditure                                      |          |                 |
| "Indigenotes" Printing                                | 5248.00  |                 |
| Postage and stationary                                | 2525.83  |                 |
| "Indigenotes" computer<br>time                        | 1272.80  |                 |
| Hall hire   | 676.50   |                 |
| Indigenous plants (VINC)                              | 500.00   |                 |
| Bank charges (includes<br>\$130 bounced cheques)      | 284.29   |                 |
| NSW IFFA - Petty cash                                 | 200.00   |                 |
| Seedbank  | 94.11    |                 |
| Posters and photos                                    | 145.00   |                 |
| Sundry  | 197.52   |                 |
|   |          | <u>11144.05</u> |
| Cash book balance at 30 April 1992                    |          | <u>4786.80</u>  |

# IFFA activities:

## IFFA(Vic)

### June Meeting:

Tuesday 28 July 8 pm at the Herbarium Hall, Birdwood Ave, South Yarra (Melways map 2G 12a). Jane Robinson will speak on the Melbourne Indigenous Seedbank.

### Indigenous Nurseries Network

6.30 p.m. 28 July at the Herbarium Hall, before the main IFFA meeting. Nurseries participating in the Wildflower show are requested to bring display materials including photos and slides.

### Committee

Next meeting Tuesday 4 August, at Lincoln Kern's place, 33 Dean St Preston. 7pm onwards. Bring a plate of food to share.

### SPIFFA

The Southern Peninsula IFFA group will meet on Monday 3 August at the Waterfall Gully Community Centre, Cnr Nixon and Bayview Roads Rosebud South. Contact Mark Adams (059) 851 122.

### Grasslands Conference

This conference is divided into two parts: the first is a summary of the natural history and status of grasslands in Victoria. The second is an assessment of management practices and a wider assessment of planning and land use. October 3&4. Contact James Ross, VNPA, (03)6546843

## NSW IFFA

The next meeting will be on 3 August at the Maiden Theatre, Mrs Macquarie's Rd, Royal Botanical Gardens, Sydney will be presented by Tom Traski from the Australian Museum on the topic "What it takes to be an Australian Fish".

Contact Sally Fisher (02) 970 6846 (work)  
Danie Olbrich (02) 953 7461 (home)

## Membership

IFFA membership costs

\$40 for non-profit organizations,

\$50 for corporations,

\$25 for individuals and families,

or \$20 concession.

Membership includes

11 issues of Indigenotes per year.

Memberships should be sent to the Secretary.

Include your name, address  
and phone numbers,  
and a bit about yourself.

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Contributions to Indigenotes should be sent to the editors — the deadline for the next issue will be 1 August

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