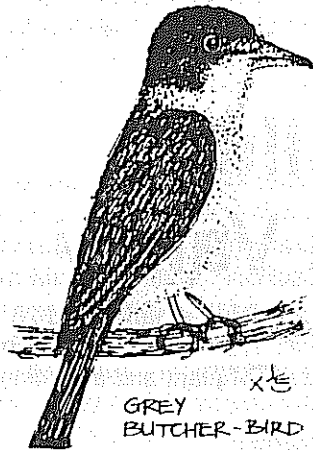
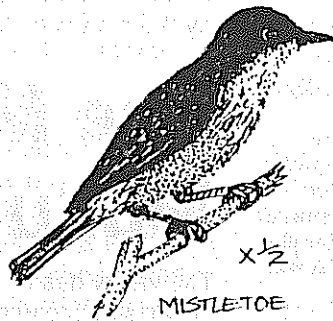


INDIGENOTES



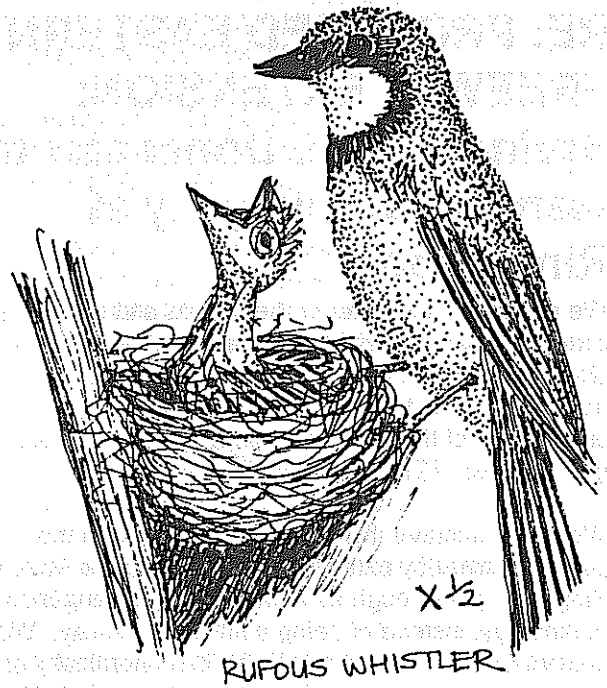
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MISTLETOE BIRD

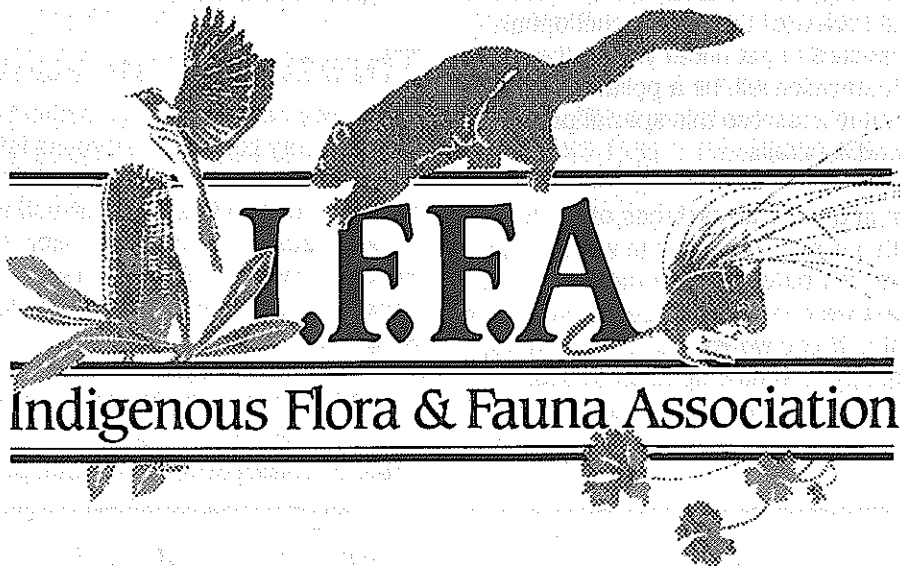


SPOTTED PARDALOTE



RUFIOUS WHISTLER

Eastern Freeway to go down Mullum Mullum Creek Valley with its Powerful Owls and much more....



Eastern Freeway Extension to Ringwood Now Funded

Editor's Note: All of the info reproduced below originally came to me before the recent announcement of the Victorian State Budget. Well, the announcement of the funding for the Eastern Freeway extension was anticipated by concerned citizens and groups but their requests for support are certainly more important now. The long tunnel option would save the Mullum Mullum Creek Valley for the most part; perhaps the extra cost would be covered if it was a toll road like CityLink??

RE: PROPOSED EASTERN FREEWAY EXTENSION: Springvale rd. Doncaster to Maroondah Highway at Ringwood

We represent a number of the groups and residents concerned with the Proposed Eastern Freeway Extension, working with the Australian Conservation Foundation. Our aim is to preserve the integrity of the biodiversity of the Mullum Mullum Valley for future generations:

We would achieve this by having as much of the proposed freeway extension from Springvale Road to Ringwood put through as a drilled tunnel using modern technology, instead of being a surface freeway. We believe that this tunnel can be built economically and it would save a rare example of Australia close to Melbourne. This tunnel would run from west of Park Road to south and east of Deep Creek Road, thus avoiding destruction of the Valley.

The Minister for Planning, Mr. MacLellan, has agreed to an independent cost review of this long tunnel option, and this study is expected to get under way in the near future. The ultimate decision will be a political one and we need your support to preserve this special part of Melbourne, Victoria and Australia.

I enclose information about the advantages of a 2.6 km tunnel, together with a list of addresses to write to, and a pamphlet we have distributed to raise money for our campaign and so that we can obtain expert advice from technical consultants. If you would like to learn more, we would be very happy to send a speaker to your group to provide more information and to answer questions.

We can be contacted at this address.-
11 Olympiad Crescent. Box Hill North 3129, Phone (03)
9898 1364

Yours sincerely
Mary Symons Representing Groups and Residents
Concerned with the Eastern Freeway Extension

PLEASE HELP ME? The Mullum Mullum Valley is a unique urban valley that is threatened with destruction by the extension to the Eastern Freeway.

The Mullum Mullum Valley

The valley has more than 22 ha of native and 26.5 ha of semi-native vegetation. The value to the community is based on the biodiversity of plant and animal species found there, including:

- regionally significant plants,
- more than 200 species of flowering plants,
- more than 120 species of birds (some of State & Regional significance), and
- mammals such as platypus, kangaroo, koala, echidna and sugar glider.

In December 1998 a Flora & Fauna report was released by VicRoads. This report recognised a vegetation community of 'National Significance' in the Mullum Mullum Valley, ie "VALLEY HEATHY FOREST". This Nationally Significant and Victorian endangered vegetation community was identified from two sites along the proposed surface freeway alignment.

There have also been confirmed sightings of the Powerful Owl (*Ninox strenua*), an endangered species listed on the Flora & Fauna Guarantee Act 1988. This species is resident in the valley and it is possible that may also be breeding in the area. This biodiversity represents a unique genetic reservoir and cultural resource in the Melbourne metropolitan area. The valley provides welcome relief from the pressures of urban living and is used extensively by many people for all types of passive recreation.

Threats to the Valley

The valley has some of the highest quality groundstorey bushland remnants left in Melbourne. However it does not have the resilience to survive the massive surface freeway construction works proposed by VicRoads for their \$250 million extension of the Eastern Freeway. This extension from Springvale Road, Nunawading to the Maroondah Highway, Ringwood would:

- cut a swathe through the environmentally sensitive valley and result in gross fragmentation of the valley's ecological resources,
- have a catastrophic impact on bird populations due to loss

- of tree hollows for nesting or roosting,
- affect the long-term maintenance of species, increase noise pollution in the valley, and
- lead to a major increase in air pollution.

What Is Being Done?

The Australian Conservation Foundation, and the Mullum Branch are opposed to freeways and to any extension of the eastern freeway. The Victorian Government and VicRoads seem determined to proceed with the freeway.

However ACF, the Mullum Branch, Greenlink Box Hill, a number of local conservation groups and individuals are advocating that a long tunnel could bypass the Mullum Mullum Valley. VicRoads' position is that a long tunnel is too expensive. A properly constructed long tunnel would result in a win/win situation by providing people with a freeway yet saving the Mullum Mullum Valley and its vegetation and animals from destruction. Thanks to our lobbying activities, a review of the VicRoads costings for a tunnel is currently being undertaken. [A tunnel would also concentrate the pollution from cars and allow it to be filtered.]

What We Would Like To Do

To ensure that this review is as rigorous and independent as possible, we have engaged the services of an independent expert in tunnelling technology. We anticipate that this will cost up to \$8000 and we need your help to fund this.

What You Can Do

- Donate money to the Mullum Branch to assist with the campaign. Donations are tax deductible.
- Volunteer your assistance with our campaign. Phone Diana on (03) 9890 5366 or Jim on (03) 9802 0794 for more information.
- Lobby your local Councillor and Member of Parliament to get them to support the tunnel campaign.
- Visit the valley for yourself!

Local Members of Parliament

Kevin Andrews LP MHR Menzies
1 st Floor Friends Provident Building 651-653
Doncaster Road, Doncaster, 3108
Tel : 9848 9900 Fax : 9848-2741

Gordon Ashley LP MLA Bayswater
2/40 Station street, Bayswater, 3153
Tel : 9729-1622 Fax : 9729-0912

Phil Barresi LP MHR Deakin
Unit 5, 602 Whitehorse Road, Mitcham, 3132
Tel : 9873-8351 Fax : 9873-8356

Robert Clark LP MLA Box Hill
24 Rutland Road, Box Hill, 3128
Tel : 9898-6606 Fax : 9890 7180

David Davis LP MLC East Yarra
Suite 1, 79 High street, Kew, 3101
Tel : 9853-3955 Fax : 9853-3960

Bill Forwood Parliamentary Secretary to the
Premier & LP MLC Templestowe
93 Upper Heidelberg Road, Ivanhoe
Tel : 9497-4300 Fax : 9497-4096

David Perrin LP MLA
Bulleen Shop 26, Bulleen Plaza Shopping Centre 89
Manningham Road, Bulleen, 3105
Tel : 9850-2319 Fax : 9852-0059

Tony Robinson ALP MLA Mitcham
9 Blackburn Road, Blackburn, 3130
Tel : 9878-4113 Fax : 9878-9135

Bruce Atkinson LP MLC Koonung
347-349 Mitcham Road, Mitcham, 3132
Tel : 9874-6005 Fax : 9872-3488

Gerald Ashman LP MLC Koonung
Unit 1, 426-430 Burwood Highway,
Wantirna South, 3152
Tel : 9887-0255 Fax : 9887-1559

Mark Birrell Minister for Industry Science &
Technology LP MLC East Yarra
173 Canterbury Street, Canterbury, 3126
Tel : 9888-6244 Fax : 9888-6529

Sue Craven ALP candidate for MLA Bayswater
Tel : 9326-8147

Carlo Furletti LP MLC Templestowe Shop 5, 101
Burgundy Street, Heidelberg 3084
Tel : 9457-6188 Fax : 9457 6037

Phil Honeywood LP MLA Warrandyte and Minister
for Tertiary Education et al
2 Treasury Place, East Melbourne, 3002
Tel : 9637-3194 Fax : 9637-2800

Victor Perton LP MLA Doncaster
Suite 1, 861 Doncaster Road, Doncaster East, 3109
Tel : 9840-1566 Fax : 9840-1534

Worth Repeating: Development Focus on National Parks

By Claire Miller - environment reporter

Victoria's National Parks have been earmarked for commercial development in an internal State Government document that discusses the desirability of guided walking tours and "comfortable accommodation" in huts along trails. The 1995 document - a confidential consultant's brief from Tourism Victoria and the then Department of Conservation and Natural Resources - specifically identifies the Alpine National Park as an "appropriate potential location for such development".

While the two routes identified for assessment in the brief were ultimately ruled out, the State Opposition says the document proves the Government has development plans for National Parks other than Wilsons Promontory, which critics say is increasingly being run as a resort.

The Opposition's environment spokeswoman, Ms Sherryl Garbutt, said the Government was keeping Victorians in the dark by refusing to release the report, its formal response and other documents relating to its plans for the State's National Parks. "Our suspicion is that they are still searching for places where they can put more huts in and approve commercialisation at the expense of conservation principles."

A Government spokesman, Mr James Martin, said yesterday that the Environment Minister at the time, Mr Mark Birrell, accepted the consultant's recommendation that huts not be built along either of the two routes.

The consultant was Ken Latona, the director of Cradle Mountain Huts in Tasmania, the only string of private huts along a bushwalk in an Australian national park. In 1996, Mr Latona, an architect, designed lodges for the Tidal River campground at Wilsons Promontory.

Mr Martin said the Government had no intention of revisiting the matter, but was unaware whether the Government had plans in mind for elsewhere in the Alpine National Park. In late 1997, 285 hectares was excised to allow a massive expansion of the Falls Creek ski resort.

Ms Garbutt, who today is seeking further documents in the Civil and Administrative Tribunal said the 1995 brief illustrated the department's pro-development philosophy in which the environment was a commercial product.

The brief says private operators seeking to fill the niche in eco-tourism "are developing tours which utilise Victoria's National Parks and public lands as the setting for their travel product".

It says Victoria is recognised as having a wealth of world-class natural attractions but its lack of accommodation on public land is a "key gap in Victoria's tourism infrastructure".

Source: The Age 15/2/99

Dear Editor

A recent issue of *Indigenotes* (Vol.1 No. 6) featured an article entitled "Parks Victoria: Managing Public Parks and Natural Areas as a Business". We wish to congratulate the anonymous contributor on the erudite exposition of Parks Victoria's role in delivering the Government's economic rationalist policies to the obvious detriment of our Parks, Crown Land and open space.

Alienation of parkland for commercial development is now common especially around Port Phillip Bay as a result of the Victorian Coastal Strategy - a pro-development document in which environmental values will be ignored in favour of commercial exploitation whenever that opportunity is perceived. As the anonymous contributor states, PV's attempt to push the Round the Bay recreational cycling track through the foreshore dune areas from Aspendale to Frankston and along the cliff tops in Mordialloc, highlights the complete lack of concern for the fragile coastal eco-system.

It was depressing recently to listen to a Parks Victoria apparatchik at a panel hearing, supporting Kingston Council's request to re-locate the boundary of the green wedge to allow a proposed residential over-development to proceed on a flood plain in the green wedge thus setting a precedent for further incursions into, and incisions of this non-urban land by predatory developers in adjoining municipalities.

We understand that in the present economic climate, when Parks on the ground staff are simply contracted labour, they cannot be expected to openly state their opposition to the exploitation of our parklands... We can only hope that when the tide finally turns, as turn it must, that there will be sufficient numbers of committed staff left in this once respected service to return our parks to the role of acting as our "living - living rooms".

To quote Patrick White, "Your parks are your breathing spaces. Guard them. Cherish them."

Yours faithfully,
Mary Rimington, Secretary, Mordiallic Bayside Conservation League

River Red Gums On Sydney Rd.?

At the 1999 Sydney Rd Street Party, the Brunswick Tree Group collected a petition, from people visiting its table, requesting the Council to plant River Red Gums (*Eucalyptus camaldulensis*) along the street as once grew there in great numbers before they were chopped down by the white invaders. The petition was presented at the first meeting of the newly elected 1999 Moreland Council. The following week's local paper reported disparaging remarks from council sources before any assessment of the proposal had been made, with one comment describing the petition as "foolish".

So how foolish is the petitioners' request?

Sydney Rd already has Red Gums. In Parkville (where the road is called Royal Parade) a line of 91 Red Gums stretches from the corner of the Melbourne General Cemetery, along a heavily used running track, to Park Street. At the northern end 13 Red Gums line up in front of Pentridge Gaol.

Between Brunswick Rd and Victoria St Brunswick, along side streets within 100 metres or so of Sydney Rd ten well established Red Gums are growing.

Formerly companions of the Red Gums growing on the plains and hills of Brunswick would have included Manna Gums (*Eucalyptus viminalis*) and Yellow Box (*Eucalyptus melliodora*) trees. Perhaps there were places, like in Yarra Bend Park, where Red Gums and Yellow Gums grew side-by-side. A view from the North bank of the Yarra across to Galatea Point in the Park includes big (by Melbourne not Murray River standards) old Red and Yellow Gums of much the same size and form.

Yellow Gums also adorn parts of Sydney Rd in Brunswick, at Hooper Reserve between Park St and Brunswick Rd., and opposite the old CES, Post Office, Town Hall and Police Station. These trees were planted in the last years of the Brunswick Council. When a group of traders organized a small petition claiming indigenous trees were unsuitable and would, unlike Elms, grow poorly, the Council politely wrote back explaining the virtues of indigenous planting. The success of the Gums planted then, despite neglect after the Council sacking, attests to the wisdom of their approach.

Other trees planted fared far worse. All but one of the Blackwood Wattle (*Acacia melliodora*) trees died, perhaps from dryness, as these drought intolerant trees prefer to grow by streams and damp places in this district.

Detractors of the dominant tree of our district come up with various objections to the trees which they do not

apply to exotic plants:

- "Their trunks grow too wide" - The tall council officer responsible for plant selection indicated as much as he stretched his hands over two metres wide. When asked how old such a tree might be his hands came towards each other stopping at 40cm as he said after 50 years a Red Gum could be that wide.

- "They are too tall and must be cut and become unshapely where buildings and powerlines are nearby".
- Compared to Blue Gums, which are widely (if unwisely) planted in Brunswick parks, one tree reference book indicates Red Gums grow 20m in 30 years while Blue Gums grow 30m in 20 years. (i.e Blue Gums grow two and a half times as fast as Red Gums). So Red Gums are not so very big and where they grow near buildings they tend to lean away towards the road providing a lovely arched effect and the main trunk often avoids power lines altogether. Most of the old existing Red Gums referred to above have had some pruning in the past but are still very attractive and look far more natural than the Plane trees along most of Melbourne's streets. In other municipalities e.g. City of Yarra or City of Sydney electric wires are either bundled to prevent the need for tree lopping or placed underground. This kind of expense is justified in a major activity area like Sydney Rd.

- "Red Gums drop limbs unexpectedly" - A great many trees drop limbs and storm damage is not uncommon. Recent years have seen much storm damage to many of the Eucalypts planted in Brunswick - Red Ironbarks, Yellow Gums, Yellow Boxes but the Red Gums of Brunswick and Parkville mentioned above have suffered far less. When trees get very old some cabling to provide extra safety is cost effective and not uncommon. The Princes Park trees, which are also inspected annually and pruned if need be, produce very little branch drop.

No doubt if Red Gums were to be planted along with the other medium sized Eucalypts in some of the more open sections along Sydney Rd there will be some maintenance problems and costs. Undergrounding of powerlines might need to be accelerated, pervious paving might aid tree growth and perhaps underpinning the foundations of the facades of a few old buildings would be a wise, if expensive precaution in reactive clay soil of Brunswick.

Red Gums would thrive and bring a distinctive beauty and character to Melbourne's major northern gateway which plantings of horticulturally popular exotics will never achieve.

To describe as foolish the petition of a hundred or more citizens and visitors to Sydney Rd and the former Brunswick Mayor and the two authorities on the region's flora who signed it is unworthy of a municipality that champions the planting of indigenous trees.

Eric Ward

A Study of Woodland Birds

Simon Kennedy currently works for the Ballarat Department of Natural Resources and Environment. He is in charge of the Swift Parrot survey. Simon agreed to talk to the group on some work that he conducted on woodland birds when he was growing up in Marliston in the Western District.

Simon commenced a study of a remnant bushland reserve near his home at the tender age of fourteen in 1989! He continued the study of the 10-acre block for four and a half years doing transects of the area approximately once a month. The aim of the study was to detect patterns of movement of the different bird species in and out of the reserve. Yellow Box, Long-leaved Box, River Red gum woodlands, Scent Bark and Mickets of Hedge Wattle dominate the reserve. Simon counted every bird encountered in a transect and made estimates of relative abundance. His efforts revealed many interesting seasonal changes and trends in the bird population of the small area, which is surrounded by farmland. The surrounding land was cleared in the 1890's.

Of particular note was the arrival every year of a large non-breeding population of Tree Martins. They always arrived in March but by April they had departed. Also of interest were the whistlers; the Rufous Whistler was present from September to March while the Golden Whistler was present from March to September. They were very rarely observed together suggesting that they virtually swapped places twice a year.

Amongst the nectar feeders, Simon noted no particular set patterns mainly because they seemed to arrive and depart in response to Eucalyptus flowering, which is generally irregular. Purple-crowned Lorikeets showed a huge peak in numbers in response to flowering of the Red Gum but less so in response to Scent Bark flowering. Musk Lorikeets also appeared in response to flowering events.

Eastern Spinebills are not usually found in the study area, but in March 1991 they arrived in very large numbers when there was a Scent Bark flowering event. This occurred only once during Simon's study.

Simon believes that his study highlights the importance of remnant woodland as a food resource for local populations of birds. Simon also noted another, rather disturbing, trend in bird populations during his study. A number of species that were present at the beginning of the study are now no longer present in the area. For example, Diamond Firetail was last observed in 1992, as was Speckled Warbler; Hooded Robin disappeared in 1992 and Buff-rumped Thornbill has not been observed since 1995.

These local extinctions were noted despite the fact that during the course of the study no major land clearing or habitat destruction occurred. However, these processes obviously have occurred in the past and it is probable that the effects are continuing to be felt. Predators such as foxes, cats and currawongs have not significantly increased so it is unlikely that this is the cause of the declines. All the above species are poor dispersers even through corridors; they generally require large blocks of relatively intact forest. None are currently regarded as Endangered (Speckled Warbler has recently been listed as Vulnerable) although if present trends continue it is likely that they will be in the future. Interestingly, a small number of species such as White-browed Scrubwren have increased in numbers.

The value of studies such as that carried out by Simon lies in the fact that they often help to identify the ways in which different species utilise an area and what species may be of local concern. Longterm studies of an area are especially useful as they reveal temporal and spatial patterns that can assist in planning conservation strategies.

From the Babbler, Newsletter of the Birds Australia Victorian Group, January 1999

From Your Editor:

Well, I am getting further ahead on time and maybe in a couple of months I will even get Indigenotes done early... I hope you continue it but I must again point that you all help me make it what it is. I would love lots more original material from out. I know you are all doing interesting things; well Indigenotes is the venue to spread the word. I believe the newsletter has a few purposes:

- to provide information about places, activities, techniques etc.;
- to discuss important issues regarding indigenous flora and fauna and its restoration and
- to inspire people by sharing stories about all of the various works and activities.

So, please keep contributing newsletters, graphics, original writing etc. It can get to me in many ways but I am getting more and more used to email: Impittle@ozemail.com.au.

Thanks, Lincoln Kern

Coming Events: Conferences / Workshops / Talks / Seminars

June, Thursday 3, 7:30 PM. **Green Wedge Seminar Series: The Distribution, habitat and breeding habits of Snakes** by John Birket from the Melbourne Zoo. Currawong Bush Park Conference Room, Reynolds Rd., Doncaster East, Melways 34 H6.

June, Sunday 6. Port Phillip Community Training Program. **Landscape Design for Revegetation Projects Using Indigenous Plants.** Contact the Training Coordinator on 9457 3024

June, Sunday 6 11am to 3:30pm. **Establishing Shelter Belts**, a workshop at the Creswick Landcare Centre, Creswick. Trish Kevin and Michelle Butler will explain/demonstrate design features, establishment techniques, plant selection and take participants to two sites. Cost \$20/10 concession. Please book on (03) 5345 2200 or via website: <http://users.netconnect.com.au/~gpark/>

June 12-14 Queen's Birthday Weekend. **Grantville Native Orchid Festival.** Friends of Bass Valley Bush sponsor this festival to celebrate the local flora, including workshops, guided walks, displays, videos and market stalls. For more info call (03) 5678 8483

June, Saturday 19. Port Phillip Community Training Program. **Propagating Native Plants.** Contact the Training Coordinator on 9457 3024

June, Tuesday 29. Greening Australia Environment Industry Training Program. **Biodiversity & Environmental Law.** Contact Mary Trigger, Industry Training Program Coordinator on (03) 94573024.

June. Date to be finalised. Greening Australia Regional Training Program. **Seed Treatment & Direct Seeding Methods. Corangamite.** Contact: the Training Coordinator on 9457 3024.

July, Thursday 1, 7:30 PM. **Green Wedge Seminar Series: Aboriginal Plant Use** by Beth Gott from Monash University. Currawong Bush Park Conference Room, Reynolds Rd., Doncaster East, Melways 34 H6.

July, Monday 12 - Tuesday 13. **SA Community Landcare Conference.** Victor Harbour. Contact Conference Secretary PO Box 51, Highgate, SA 5063. Telephone (08) 8303 9347.

July, Sunday 18, 10:30am to 3:30pm. **Building Nest Boxes**, a workshop at the Creswick Landcare Centre, Creswick. Nick Jaschenko will take participants through the steps of building, placing and attaching nest boxes - you get to take one home. Cost \$35/20 concession. Please book on (03) 5345 2200 or via website: <http://users.netconnect.com.au/~gpark/>

August 6 - Sep 3 one day a week. **Soil and Water.** "Certificate of Attainment in Soil & Water Management for Urban Development". Five day course for professionals. For info contact Alison Frost on (02) 4570 1690.

19-23 January 2000. The Australian Raptor Society presents: **the Third International Symposium - Owls 2000 - the biology, conservation and cultural significance of owls.** Manning Clark Centre, Australian National University, Canberra. Including sessions on

Breeding biology, Captive management, Cultural significance, Capture, marking and monitoring techniques, ecology, Habitat management and conservation, Parasitology, Taxonomy, Toxicology. Contact Conference Solutions PO Box 238, Deakin West ACT 2600, Ph. (02) 6285 3000, Fax (02) 6285 3001. Check out the website at: <http://www.tasweb.com.au/owls2000/index.htm>

Field Trips/Walks/ Excursions

May, Date to be finalised. Port Phillip Bus Tour. **Hills to Ocean Vegetation.** Leongatha. Contact the Training Coordinator at GAV on 9457 3024.

Restoration Activities

June, Sunday 5, 10am-12noon. **Working Bee with Friends of Koolunga Reserve, Knox.** Contact Gordon Carter (03) 9762 2117.

June, Sunday 5 and 12, 9:30am. **Friends of Kinglake National Park: Placement of Nest boxes constructed by Ivanhoe Grammar students.** Meet at Park Visitor Centre... Contact Roger Cook (03) 5786 5453.

June, Sunday 19, 9:30am. **Friends of Werribee Gorge and Long Forest Mallee Working Bee: Tree planting at Northwest Block of Long Forest Mallee.** Contact Janet Laversha (03) 5367 4229

June, Saturday 19, 10am. **Sword-grass Brown Butterfly Project - Habitat Planting at Miller Park (Mel 65 E5).** Planting site along embankment adjoining oval. Contact Maria Belvedere (03) 9739 8575.

June, Sunday 20. **Blackburn Lake Sanctuary. Working Bee.** Time: 10am - noon. For info contact Sue Lockwood on (03) 98780736.

June, Wednesday 9. **FO Sherbrooke Forest Inc. Project Morning.** Hardy Gulley Nature Trail site. Meet at Grants Picnic Ground (Melways 75 K4). 9.30am.

July, Sunday 4, **FO Evans Street Grasslands Inc. Working Bee.** Place: Grasslands. Time: 9.30 - Noon. For info contact Helen Graesser on (03) 9744 4097.

'Global weed problems: local and global solutions for the beginning of the Century' 6-11 June 2000

Foz do Iguassu, State of Parana, Brazil

The International Weed Science Society, the Brazilian Weed Science Society and the Host Organizing Committee invite you to participate in the Third International Weed Science Congress. The Congress will be held in Foz do Iguassu in the south-west State of Parana, in the south of Brazil, on the border with Argentina and Paraguay.

To be included on the mailing list for circulars and call for contribution; contact the Secretariat:

P.J. Eventos - Feiras e Congressos Rua Jose Risseto, 1023 Santa Felicidade - CEP 82.015-O10 Curitiba - Parana - Brazil Phone/Fax 55 (0)41 372 1177 Email: pj@datasoft.com.br

Home page: <http://www.foztur.com.br/iwsc>

Regular Restoration

Activities:

1st Saturday of the Month

- FO Bay Rd Sanctuary, Sandringham. Every 3rd month on Saturdays. 2 - 4pm. Adele Richardson (03) 9585 4755.
- FO Braeside Park Inc. 10am -12pm. Propagation, seeds, cuttings etc. Friends Nursery, (Melways 88 D10) Contact: Ron Pearson (03) 9584 7443.
- FO Bushy Creek Wetlands. Working bee. 9am - lunchtime. Meet at Village School (melways 37 B6). Info contact Kay Vine on (03) 97272771.
- FO Hampton Foreshore. 9am -12pm. Fernando Gardens. Joe Farrugia (03) 9598 9521.
- FO Kinglake National Park. 9:30am - 12 noon or so. Usually meet at Masons Falls Visitor Centre. Contact: Roger Cook (03) 5786 5453.
- FO Loughies Bushland, Kubis Drv, N. Ringwood. 9.30 am Meet Cnr Kubis & Werac Drv. (Melways 49 E/F39) Contact: Carole Clarke 870 8126.
- Yarra Valley Tree Group. Saturday 9am - 12pm & Sunday 10am - 1pm once or twice a month in planting season. Contact: Stephen Fletcher (03) 9730 1517.

1st Sunday of the Month

Pending our re-establishment at a yet-to-be-determined new location, Working Bees for Greenlink Oakleigh will be conducted on Sundays as arranged. They are likely to still be from 11:00am to 2:00pm. For details contact Doug Evans 9568 4090 (ah) or 9556 4433(bh), or Louise Dorr 9543 6113 (ah).

Black Rock & Sandringham Conservation Ass. 9.30am - 11.30am. Every Sunday. Contact: Janet Ablitt (03) 9589 6646.

Breamlea Association. Coastal Working Bee. Contact: David Hooker (03) 5264 1085.

Candlebark Community Nursery. 10am - 4pm. Every Sunday. Variety of nursery activities. Contact: Debbie McGrath 0419 362 254.

FO Bushy Ck Wetlands. 9am - 12pm. Village School, 9-13, Holloway Rd, Croydon Nth.(Melways 37 B6). Contact: Kay Vine (03) 9727 2771.

FO Old Pound Reserve. Working Bee. 10am - 12pm. Meet main entrance (Melways 38 C1) Info contact Peter Goegan on (03) 9735 1052.

FO Cheltenham Park. 10am - 12pm. Park Rd, Cheltenham. Contact: Andrew Mason (03) 9584 5301.

FO Donald MacDonald Reserve. 10am - 12pm. Haydens Rd. Beaumaris. Contact: Alison Johnston (03) 9589 5459

FO Evans St Grasslands. 10am - 1pm. Working Bee usually 1st Sunday. Contact: Veronica Burgess (03) 9744 4669.

FO Gramattan Ave Reserve. 2pm - 4pm. Beaumaris. Contact: Fran Goninan (03) 9585 4755.

Heathmont Bushlinks. 10am - 1pm. Different bushland sites.

Contact: Roger Lord (03) 9870 5262.

Riverlands Conservation Society. 10am. Yarra Flats, The Boulevarde, Heidelberg (Melways 32 C6). Contact Yarra Valley Parklands (03) 9846 4499.

2nd Saturday of the Month

- FO Brighton Dune. 10am - 12pm. Also every Tuesday morning 8am - 10am. Foreshore, north of Greens Point Gardens. Contact: Elizabeth Mcquire (03) 9589 6474.
- FO Bungalook Conservation Reserve. Meet Tereddan Drive entrance to Reserve, Kilsyth South. Contact: Graham Lorimer (03) 9728 5841.
- FO French Island. Weeding, bird counts, monitoring wetlands. Contact: Francis Garner (03) 9766 1009; Geoff Lacey (03) 9578 2873.
- FO The Grange Inc. Working Bee. 9am - 12pm. The Grange Heathland Reserve. Osborne Avenue. South Clayton. (Melways 79 F8). Contact: Gloria Fleming (03) 9568 8146.
- Hughes Creek Group. 1.30pm - 5pm. Variety of activities. Hughes Creek Reserve (Melways 66 D10). Contact: Jenny Francis (03) 9755 1398.
- Kingston Conservation and Environment Coalition. Working Bees held every 2nd Saturday morning of each month. Contact Penny McGuire White (03) 95463116.

2nd Sunday of the Month

Black Rock and Sandringham Assoc. 9am - 12pm. Fore-shore between Red Bluff Street and Potter Street. Contact: Chris Kettle (03) 9589 6584.

FO George Street. Sandringham. 10am - 12pm. Contact: Pauline Reynolds (03) 9598 8062.

FO Plenty River. 10am - 12pm. Variety of sites. Contact: Alice and Kevin Ley (03) 9435 3840.

FO The Point (Nepean). 2pm. Information centre car park. Contact: Stuart Sherren (03) 5984 1953.

Sundays

Candlebark Community Nursery. Open Session 10am - 4pm. For info ph. 0419 362 254.

Pending our re-establishment at a yet-to-be-determined new location, Working Bees for Greenlink Oakleigh will be conducted on Sundays as arranged. They are likely to still be from 11:00am to 2:00pm. For details contact Doug Evans 9568 4090 (ah) or 9556 4433(bh), or Louise Dorr 9543 6113 (ah).

Tuesdays

Candlebark Community Nursery. Propagation Session. 10am - 3pm. For info ph. 0419 362 254.

Thursdays

FO Warrandyte State Park. Nursery Activities. 10am at depot. Info contact Jan Tindale on (03) 9844 3719.

Saturdays

Carrum Indigenous Nursery, Brixton St., Bob Beach/Carrum at TAFE College (Mel 97 D5). Propagation work every Saturday. Contact: Anne (03) 9773 2614 or Norma 8772 1939.

FO the Yarra. 10am - 3pm. Also Wednesdays. Galatea Point (Melways 2D D7). Contact: Judy Rutherford (03) 9347 2252.

FO Yandell Reserve. 10am. Meet in Community Drive, off St Helena Road. (Melways 21 B1) Contact: Graham Patterson (03) 9432 0163.

Greenlink Camberwell. 3pm. Propagation activities at nursery. (Melways 60 E7). Contact: Diana Burgess (03) 9809 2092.

Jan Juc Coast Action. Coastline from Rocky Point to "The Wave" near Bells Beach. Contact: Ian Edwards (03) 5261 4861.

3rd Saturday of the Month

FO Bradshaw Park. 10am - 9pm. (Melways 87 E10) Contact: Dave Vainbridge (03) 9580 5992.

FO Custer Grove Reserve. Custer Grove. 2pm - 5pm. Contact: David and Alison (03) 9729 2475.

3rd Sunday of the Month

Alex Wilkie Nature Reserve. 1pm - 3pm. Mackay Street Springvale South (Melways 88 K3). Contact: Geoff Smith (03) 9547 9549.

FO Pigeon Bank Creek Reserve. 2pm. (Melways 23 J6). Contact: Linda Bromilow (03) 9844 4707.

FO Tyndals Wildflower Reserve. 10am. (Melways 34 K3). Contact: Rosemary Buxton (03) 9842 3268.

FO Wilson Reserve. 10am. Meet Irvine car park. (Melways 31 G10). Contact: Robert Bender (03) 9499 2413.

Meander. 10am. Menzies Creek and Emerald Tourist Track. (Melways 125 F12). Contact: Kate Forster (03) 5968 5828.

Men of the Trees. 10am. Planting etc. (Melways 2D D6). Contact: Minette Russell-Young (03) 9898 1364.

Surfers Appreciating the Natural Environment. (SANE) Bells Beach Surfing Reserve. Whie Wave, Torquay, Sundays 10.30am. Contact: Charles (0352) 612160.

Warrigal Conservation Society. 10am. Around Banyule Flats, Heidelberg. Contact: Karen (03) 9485 4152.

FO Braeside Park Inc. 10am -12pm. Propagation, seeds, cuttings etc. Friends Nursery, (Melways 88 D10) Contact: Ron Pearson (03) 9584 7443.

Balcombe Estuary Rehabilitation Group Inc. Meet at Rotunda BBQ 10.00am. (Melways 144 K11) Info contact Mary Stemp on 5977 1098.

4th Saturday of the Month.

FO Sherbrooke Forest. 2pm. Contact: Vivian Freshwater (03) 9754 3093.

4th Sunday of the Month

FO Collins Settlement Historic Site, Sorrento. 2pm. Meet in car park. Contact: Stuart Sherrin (03) 5984 1953.

JB Hubbard Reserve. North Ringwood. Contact: Carol Clarke (03) 9870 8126.

FO Mud Island. Mud Island State Wildlife Reserve. (Melways

511 J8). Contact: Steve Smithyman (03) 5226 4667. (03) 5223 1854.

FO St Helena Bushland Reserve. 10.30am. Meet Eskdale Court. (Melways 11 G11). Contact: Lawrie Rigg (03) 9434 6685.

Nunawading Indigenous Plant Project (NIPP). 10am - 1pm. Contact: Liz (03) 9890 4542; Tina (03) 9878 0948; Margaret (03) 9878 5998.

Torquay Coast Action. Spring Creek to Thompsons Creek. Contact: Glenda Shomaly (03) 5261 6266.

Last Saturday of the Month.

FO Hampton Foreshore. 9am - 12pm. North of Ferdinando Gardens. Contact: Ian Houston (03) 9598 7221.

FOP Koolunga Bushland reserve. 10am - 12pm. Contact: Gordon Carter (03) 9762 2117.

FO Organ Pipes National Park. 10am. (Melways 3 D4) Contact: Carl Rayner (03) 9331 2810.

Last Sunday of the Month

FO Balcombe park. 10am - 12pm. Balcombe Road, Beaumaris. Contact: Joan Couzoff (03) 9589 1060.

FO Beaumaris Heathland. 2pm - 4pm. Beaumaris 2ndary College, Reserve Road. Contact: Ken Rendall 9589 4452.

FO The Helmeted Honeyeater. 11am. Nursery activities. Healesville Sanctuary. Contact: Jeff Dickinson (03) 9568 2768

FO Pecks Dam. Montmorency. 10am. Meet at end of Pederson Way. (Mel 21 G7). Contact: Trina 9439 9642.

FO Warrandyte State Park. Family activities in and out of the State Park. Park Depot for nursery activities. (Melways 23 C10). Contact: Mike Coupar (03) 9844 1650.

FO Watkins Bay. Beaumaris. 10am - 12pm. Contact: Moira Longden (03) 9589 2725.

1st Monday of the Month

FO Braeside Park Inc. 10am -12pm. Propagation, seeds, cuttings etc. Friends Nursery, (Melways 88 D10) Contact: Ron Pearson (03) 9584 7443.

1st Tuesday of the Month

Hawthorn Historical Soc. Inc & Friends. 10 - 12 noon. Always followed by a cuppa. (Melways 45 A11) Contact Dorothy Sutherland. (03) 9818 4706.

1st Wednesday of the Month

Fred Rogers Reserve. Heathmont. 12pm - 2pm. Contact: Gwen Elliot (03) 9879 1427.

3rd Wednesday of the Month

FO Braeside Park Inc. 10am -12pm. Propagation, seeds, cuttings etc. Friends Nursery, (Melways 88 D10) Contact: Ron Pearson (03) 9584 7443.

Keep the Bush Grassy

It has been a long held view that Australia 'rode to riches on the sheep's back'. Much of this 'riding' occurred on the grassy plains of south-eastern Australia (from South Australia to the Darling Downs in Queensland), where more than 99% of the original native grassland, and nearly as much grassy woodland, has been destroyed. It can thus be argued that such riches have been derived at the expense of the biodiversity (or natural capital) of the plains. Indeed, temperate lowland native grassy ecosystems are considered to be Australia's most threatened ecosystem.

In years past, much emphasis has been directed to tree-planting and the management of remnant bushland. And rightly so, but what about the grassy understorey and the treeless grasslands? Bushcare recognises that grassy ecosystems have been under-represented in conservation efforts and is working to redress this.

Protecting, restoring and managing these ecosystems requires a different approach. For a start, most of the areas where they occur are on private land used for agriculture principally stock grazing - and the economic pressure to shift to cropping or irrigation is immense. Many significant sites are also on roadsides, rail reserves, stock routes, small cemeteries and airfields in sparsely populated areas, where the sites' management objectives are anything but nature conservation.

Planting a thousand easily grown trees per hectare can make a major difference to the local landscape. Simply put 'em in the ground, fence them off, keep the weeds down for the first year, and ultimately, you will end up with a reasonably good patch. Planting a thousand hard-to-grow native grasses, on the other hand, would cover about 25 square metres, and weed control needs to be intensive and on-going. What's more, there are about 30 species of forbs and grasses per square metre in a healthy grassland, some of which we have no idea of how to grow, or what conditions they require.

We have a better idea of what we need to do to manage an existing grassland, but how to do this is another question. Basically, highly productive sites (but not all) require either grazing or burning to remove excess litter (the imperative for this action diminishes with decreasing productivity). This allows light to reach the ground, enabling the annual flush of growth to occur. Without it, the plants of the intertussock spaces that regenerate from buds or seeds at ground-level eventually 'starve' from lack of light. Other factors may be involved in preventing these plants from regenerating, such as accumulation of nitrogen to unfavourable levels as the supply of organic matter increases, and/or increases in numbers of slugs and other herbivorous invertebrates.

The precautionary principle tells us that it is unwise, in

the absence of sound scientific knowledge, to change the management of a site that is still in good condition. However, without the necessary research we won't know if maintaining the status quo is the optimal way to manage a particular site. Nevertheless, as the 'Thurlgona' case study illustrates (see story below), an intelligent approach to management can yield valuable and successful results.

There are a few simple rules that one can follow to guide management of grassy ecosystems in the temperate lowlands of south-eastern Australia:

- fence the site so that it is given definition in management activities, and can be managed as a discrete unit for grazing, burning or slashing;
- unless there is sound scientific advice to the contrary, avoid substituting grazing for burning or vice versa;
- keep records of your management activities, including time of burn or grazing, as well as notes about seasonal conditions (eg. frosts, soaking rains or early autumn break);
- not all grassy ecosystems require grazing or burning - generally, the less productive the site (especially in regards to soil fertility and seasonal rainfall), the less will be the 'defoliation imperative';
- burning should preferably be carried out at a time of year that will allow for rapid growth following the burn - generally in mid to late summer - although burning per se is generally more important than the season of burn;
- it is best to avoid any biomassreduction activity such as grazing or burning during the period of active growth (ie. spring);
- use of fertiliser will lead to a loss of biodiversity as many species become out-competed by the increased growth of a few, mainly exotic, species.

For further information about grassy ecosystems and Bushcare, contact the Bushcare Grassy Ecosystems project officer, Tim Barlow, (03) 9650 8296 (w), 015 521 154 (m), or the Bushcare coordinator in your state/territory.

Source: Australian Farm Journal BUSH, February 1999 - Published by Rural Press Magazines in conjunction with Environment Australia.

Friday, 10 January 1840

Editor's Note: This is a short column written several years ago, late 80's or early 90's, before I was even editor. It has been hanging around in the files for a while and this seemed as good an excuse as any to print it.

"The country through which we travelled today consisted of green hills and valleys with a verdure of transparent green. The sun was hot and the bright

green of the grass, contrasted with the sombre foliage of the trees, had a delightful appearance. The roads and soil was good and the country on either side of the road as far as the eye could scan was truly luxuriant. Covered with rich and thick herbiage (kangaroo grass) and the trees sheoak and cherry tree and stunted gum.

The whole of the acacias are scented peppermint. Crossed the deep gully and halted at Mr Parker's station on the Salt Water River. A fine series of water holes and deep from which they supply themselves with fish - black and eels, the latter 2 feet long and fish, large, weighing many pounds. Eagles are abundant - saw 8 hovering over the station at one time".

Thus is the entry in George Augustus Robinson's diary of his travels to the interior of Victoria, as Chief Protector of Aborigines of the Port Phillip Settlement. My, how things have changed!

Last week I retraced a short stage of Robinson's trip, between Sydenham Park and the Organ Pipes National Park just north of Keilor, following the escarpment of the Maribymong River (which was then known as the Salt Water River). My objective was to ascertain the status of a native conifer, the White Cypress - pine, known to occur in the area.

Yes, we do have native conifers, but our horticultural cringe predetermines that we plant, northern hemisphere conifers in gardens and shelter-belts while exploiting and vastly depleting the natural resource. The White Cypress - pine is also known as the Turpentine Pine, containing such oils giving it unsurpassable resistance to termites. Thousands of miles of fences and many sheds were constructed from this timber in north-west Victoria and western NSW. Many still stand today, termite free.

Gone are the Sheoaks and Cherry-trees (Cherry Ballart on Wild Cherry) - cut for fire wood. The luxuriant growth of Kangaroo grass has been degraded to impenetrable thickets of Artichoke - thistle, Serrated Tussock and Boxthorn. What price for a paddock of green, rich and thick 'herbiage' - and in the middle of January!?

I avoided the (sometimes inevitable) depressed mood as soon as I realised I was standing amongst the biggest patch of Silky Blue-grass I had ever seen, and proceeded with renewed enthusiasm. It pleases me more to discover a few natives amongst the weeds, than to discover weeds invading native vegetation.

Skinks and lizards darted to and fro (their engines 'hotted-up' in the heat of the sun) amongst the basalt. The rocks changed occasionally to shale and sandstone as I walked along the contour, revealing the events of a million years ago when the molten lava flowed and filled the depressions of this (once much hillier) terrain. The punk-like Purple Swamp-hens and Dusky Moor-hens scrambled raucously amongst the reed-beds lining the River, whose hydraulic forces over time have cut through the bedrock, opening the pages

of geologic history. Black ducks moved silently through the red film of Azolla fern, intermittently dipping their heads in for a feed of the fern and insects which live on the foliage. A pair of Goshawks wheeled acrobatically up and down the valley; one of them dropped dramatically to ground, to rise a minute later with a small rabbit gripped in its talons.

A typical Wednesday morning along the Maribymong River - if you're prepared to look. Along the banks of the River grew Bottlebrushes (*Callistemon paludosus*), Kangaroo Apple (*Solanum laciniatum*), Woolly Tea - tree (*Leptospermum lanigerum*), Silver Wattle (*Acacia dealbata*) and the ubiquitous Red Gums, all in flower. I couldn't get close enough to investigate the bird-life of this vegetation.

I proceeded up a small tributary which revealed its own mini-version of the famous Organ Pipes nearby. This rock formation is resulted from stress-fractures set up in the laval rock as it cooled - the hexagonal cross-section of the columns being the points of least resistance as the rock contracted, during the cooling process. The lush green growth surrounding a small rock-pool contrasted with the surrounding harshness of the escarpment. I startled a Green and Golden Bell-frog from its basking-spot and eye-balled a Water Skink which wasn't too sure whether to run or freeze, apparently choosing the latter option until I moved again. The prevalence of Native Bramble was a welcome observation, but to the untrained eye would probably be mistaken as a delicate form of the loathesome Blackberry. So far I had listed 24 species of indigenous plants all of which (with the possible exclusion of Red Gum and Silver Wattle) are holding on to survival by tenderhooks in the Melbourne area.

I headed straight up the side of tributary's gully to the top of the escarpment, to be met at the top by a rather formidable wall of basalt some 4 metres high. I anticipated some interesting finds, as these are the places the rabbits, sheep and ploughs never got to. I almost fell flat on my back (which is a long way on this slope!) as a buck goat bulleted out from the shelter of the rocks and down the escarpment. I hadn't counted on bloody goats!

As I walked around the base of the rocks I could see (even beyond the reach of goats!) two prized components of the Basalt Plains flora - Blanket Fern (*Pleurosorus rutifolius*) and Rock Fern (*Cheilanthes austrotenuifolia*). These plants are as tough as cactus; grown men have cried at the sight of such delicate looking life-forms in the blistering heat and debilitating winds. Boots have melted on the same rocks. One thing they can't handle is being eaten, repeatedly!

A White Cypress-pine stood a few hundred metres away, with the restored landscape of the Organ Pipes N.P beyond. As I approached, another emerged over the rise; three more were above me - a grand total of

Continued next page.

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Continued...

five fully grown specimens. Not a seedling to be seen - probably not since the 1880's, when rabbits assumed their dominance. It is known that this vermin finds the White Cypress - pine seedlings extremely palatable. Few cones were present, but this is not a good indicator of their viability, as the cones generally drop once seed has been set; in this case they'd probably roll to the River!

Three other populations of a small number of individuals are known from Melton and Bacchus Marsh. Seed from these plants is being collected and grown to increase the viability of these populations. Youth Attendees have placed tree guards around 120 seedlings so far, with more to be done. With all the (valid) concern about the use of chemicals for termite-proofing houses, it would be plain stupid to lose a termite-proof natural resource such as the White Cypress - pine.

For reasons of environmental protection, economics, social welfare and aesthetics, there are solid grounds to link Organ Pipes N.P., Sydenham Park, Brimbank Park using the valley of the Maribyrnong (not just the river) and back up Taylors Creek. The eastern suburbs have parks of such size (e.g. Yarra Valley); why not one for the West?

Tym Barlow

Pennisetum and the Olympic Millenium

By Eric Ward

Purveyors of the ornamental *Pennisetum* grasses will be rubbing their hands together with anticipation of world wide record sales in the coming millenium unless Sydney's Olympic organisers change their landscaping around the Homebush Bay games site in coming months. On a visit there on the weekend after the great hailstorm which hit Sydney this April I noticed thousands of ornamental *Pennisetums* are planted along with other plants indigenous to the Sydney region. Their beauty will not go unnoticed by many of the thousands of visitors and hence the sales boom.

Considering discussion of the problems of the weediness of Swamp Foxtail (*Pennisetum alopecurioides*) and Fountain Grass (*P. setaceum*) raised by Adam Muyt in *Indigenotes* some years ago and revisited by Ken Duxbury this year I was shocked, if not surprised, by the Homebush Bay plantings.

Sydney's Olympics is being hailed as the Green Olym-

pics and a great deal of effort and expense in cleaning up a highly polluted former tip and industrial site. Impressive work has been undertaken to retain and treat polluted soil on-site rather than move it to be a problem in someone else's back yard. Important woodland and mangrove remnants are being restored and protected and tens of thousands of indigenous plants have been planted. An example cited in contrast to current park and land management issues in Melbourne.

So why the problem with *Pennisetum* I wondered? Being a weekend visitor, the helpful staff at the visitor centre could not provide me with an explanation of such a fine technicality. So the following day, a Sunday, I wandered down to view the Woolemi Pine in the Sydney Botanical Gardens and to peruse books about the local flora.

While *The Flora of New South Wales* (1993) records *P. alopecurioides* as native to swampy areas around Sydney, all the more recent publications differ. In *Flora of the Sydney Region* it bears the exotic * with a note that it is widespread along floodways and wet places. *Riverside Plants of the Hawkesbury-Nepean* and *Field Guide to the Native Plants of Sydney* make no mention of *Pennisetum* species (while a book dealing with the flora inland of the Great Dividing Range records an occurrence at only one location).

Ken Duxbury quotes Roger Spencer suggesting *P. alopecurioides* "as more likely a ring-in...", adding "...however, the jury is still out on this one. *The Flora of New South Wales* treats it as native, the *Flora of Victoria* exotic." My reading in the Gardens suggests that the Sydney jury has given an unequivocal verdict of "exotic as charged".

This now leaves yet another problem for the Olympic organizers. Having cleaned up their site of pollution and the Olympic bid process, what can they do about the suggestion that they harbour and promote environmental weeds? We can scarcely blame them for a mistake which may well go back to the early nineties, but the spending of yet more money to rectify it seems more than desirable. A highly publicized program of removal of their *Pennisetums*, applauded by the environment movement, perhaps with some financial help from the Natural Heritage Trust and sellers of indigenous plants, could both further raise the public esteem for the Olympic movement while raising the profile of environmental weeds.

References

Carolin, Roger & Tinsdale, Mary (1994) *Flora of the Sydney Region*. Reed p. 793.

Robinson, Les (1994) *Field Guide to the Native Plants of Sydney*, 2nd ed.

Howell, J. McDougal, L. & Benson D. (199?) *Riverside Plants of the Hawkesbury*.

Duxbury, Ken (February 1999) "Grasses with Class? *Pennisetum* and the Green Revolution" in *Indigenotes* Vol. 12, No. 1

Weed Snippets:

Cyber Weeding

Due to an extensive weed problem the Shire of Melton has become strongly involved in promoting more sustainable land management. For four years the Shire has been implementing an Environmental Enhancement Policy [EEP]. This policy provides a rate rebate to rural land owners for works that they undertake to manage land degradation. This can include control of erosion or rabbits or for revegetation projects, but the main issue for the area is the control of the noxious weeds Serrated Tussock, Artichoke Thistle, Prairie Ground Cherry and Paterson's Curse.

The most significant feature of this program is that the Shire is able to contact all land owners in the region through the rates system. This means the Shire can communicate to all land owners their responsibilities for land management. The Shire of Melton can then build an agreement with each land owner to undertake control works where required.

The Shire has adopted two technologies to help implement the EEP; a database management system and a weed mapping system both based on computer software written specifically for the Shire. The database technologies used by the Shire of Melton have been developed to simplify the process of contacting people and providing them with information about their land management responsibilities under the rebate scheme and the Catchment and Land Protection Act.

Landowners fill out a form at the beginning of the rate year outlining their land management problems. The majority of land owners do not have significant land management problems, and so filling out the form is simple. Where people have land management issues to deal with, the form is also relatively simple, requiring people to tick boxes on a questionnaire. In the same way they outline their works plans for the coming year. Effectively in two months the Shire developed about 1100 management agreements with landowners in rural Melton.

The Shire employs an inspection officer who assesses each form. Often forms are amended after negotiation with the land owner if they have not identified an issue, or are not suggesting an acceptable works program relative to the value of their rebate or the severity of the problem. A genuine attempt is made by the Shire to assist land owners retain their rebate resulting in 98% of properties retaining the rebate most years.

The key to the implementation of this policy is the use of specific database software designed to council specifications by an Australian company Neumaflo. The system has now been operating for four years. This year has been the smoothest to date with most people now familiar with the form and the rebate process. Ninety five per cent of land owners retain their

rebate and those with problems undertake work to improve their land management. In the Shire of Melton all rural land holders are aware of regional land degradation issues and most have some sort of program in place to address them.

To evaluate the effectiveness of the EEP as a weed management strategy the Shire sought funding under the State Weed Initiative to develop a weed mapping system. This system utilises a combination of Global Position System (GPS), Geographic Information System (GIS) and databases technologies. Field work is carried out using a hand held computer connected to the GPS unit. The computer runs Weedmap, which is a combination of database and GIS. The database contains all the details of land owners in the Shire and details of mapping schedule. The GIS provides a digital map of the Shire showing property boundaries.

In the field, the GPS gives a signal to Weedmap which calculates the users position and displays it on the computer screen. The user then has various options for mapping including walking or driving around a weed infestation. Once mapped the position of the infestation is saved in association with the details of the property owner. Any number of infestations can be mapped to a high level of accuracy. Not only weeds can be mapped but any feature, from paths in parks to remnant vegetation.

In the office data is down-loaded and maps of the whole Shire or individual properties can be produced. Statistics of the area affected by weeds can easily be calculated providing a unique perspective on weeds in the area. Reports on weed infestations on each property can be produced for use by land owners. As mapping occurs over several years, changes in weed populations will become apparent, hopefully showing a massive decline in infestations due to the efforts of land owners and the influence of the EEP. Weed mapping data can also be compared to the responses made by land owners on their EEP forms to explore their perceptions, and therefore monitor changes in attitude and behavior.

Lachlan Milne says that, 'It is very important to understand that adopting new technologies may solve particular problems but it may not address others or it may create new issues altogether. In Melton Shire we can now communicate more easily with people about their land management responsibilities and we are implementing one of the best regional weed control strategies in Australia, but the difficulties of the work of managing land successfully remain.'

For more information contact Lachlan Milne at the Shire of Melton on (03) 9747 7376

Source: *Enviro Australia Newsletter* March 1999 (?)

Weed Snippets Cont:

Effective thermal weed control

Before brushcutters and herbicides, kerosene burns along fence lines and burn-offs of grassland were common practice in weed control. LPG powered thermal weed control is a more recent technology in Australia. Originally thermal weeding relied upon a naked flame, a technique which had seasonal limitations here compared to Europe, where the technology was developed. Thermal weed control has proven to be the most useful of many alternative weeding technologies, including infra red heat, microwave and electrical current machines.

Thermal weeding usually works by applying enough heat, for a very short period, to expand and rupture plant cells or coagulate proteins, without totally burning the plant and destroying the organic matter. This is probably a minimum temperature of 90 to 100 degrees celsius for one tenth of a second, with ideal results from temperatures of 130 to 140 degrees.

Monocotyledonous plants (which includes grasses) may have a slightly higher temperature tolerance than dicots; this permits some careful selective weeding. Shielded burners conserve energy and provide control for both direct flame contact and radiated heat. Successful flame weeding depends upon good design of the burners, height of the burner above the weed, the angle of the flame, gas pressure and the forward speed of travel of the tractor. A significant advantage of thermal weeding is that it may be used when the soil is too wet for mechanical cultivation.

For Australia's dry conditions hot water techniques are preferred over the earlier naked flame burners. Steam weeding is now used by many councils as the method of choice for most weed control on roadsides and centre strips. Examples of councils relying only on thermal weeding include Leichhardt (Sydney) and Noosa Shire (Queensland). These councils report satisfactory weed control with the technique, although it costs more than herbicide treatments.

Basically the system uses pressurised water pumped through a hearing chamber and sprayed directly onto weeds. The system has several advantages over chemical control. With careful use there is no off target damage (unless the lance is pointed directly at a plant); it can be used in all weather; it meets occupational health and safety standards and it kills weeds immediately. Because of these advantages it can be used in sensitive areas such as around park benches, footpaths, stream banks, canals, road verges and parklands.

Recently the technique has been further improved with the addition of a foaming agent to reduce water use, achieve better coverage, insulate the heat and provide

longer contact with the plant at a temperature designed to kill it.

Steam weeding, however, is limited by the need for a large water tank and involves downtime to refill the tanker. Super heated air has the potential to improve the efficiency of thermal weeding. Air systems are not yet commercially available in Australia but their development should result in a safer technique that is more water and fuel efficient and uses a more mobile plant, without the requirement for a large tank.

Steam weeding is used by many local councils including Brisbane; Sydney City and Leichhardt; Banyule, Kingston, Maroondah and Stonnington (Melbourne); Geelong, Shepparton; Devonport, Clarence and Central Highlands (Tasmania).

For further information contact Tim Marshall environmental training officer at the Local Government Training Authority in South Australia on (08) 8388 5116.
Source: *Enviro Australia Newsletter* March 1999

Weed Warning

Parrot's Feather (*Myriophyllum aquaticum*), also known as Brazilian Water-milfoil or Thread-of life, is considered to have the potential to be a major weed of wetlands (*Waterplants of Australia* Sainty & Jacobs). In New South Wales, where it causes major problems blocking creeks, drains and channels, it has been declared a noxious weed. Not so in Victoria, yet. Earlier this year Parrot's Feather was discovered growing in the Yarra River at Mount Lofty. We have no previous record of its occurrence in the Warrandyte district.

This South American introduction is an attractive, distinctive plant with whorls of soft greyish-green, feathery leaves around a central stem. It belongs to the milfoil family (Haloragaceae) and can be distinguished from the local native species by the colour and appearance of its emergent foliage. Male and female flowers occur on separate plants, fortunately however, male plants are not found in Australia. But this aggressive coloniser does not need seed to reproduce, new plants grow vigorously from stem fragments and form extensive colonies. The plant grows extremely rapidly and is tolerant of a wide temperature range (8C to 30C).

Parrot's Feather is used in the aquarium trade and, according to *Noxious Weeds of Australia* (Parsons & Cuthbertson), its increased spread is probably the result of people dumping aquarium plants in waterways.

The Mount Lofty occurrence consists of three isolated patches, one large and two small, extending from the river's edge. Melbourne Water have been informed and have provided funds for the control, by whatever method is practical, of this troublesome weed, including the erection of a temporary fence to confine the largest patch and prevent further spread. Because of the fragile nature of its stems, removal by hand must be

carried out with extreme care. Future monitoring is important and will be carried out. Urgent action is required to ensure that this plant does not become a major problem in the Yarra River and nearby wetlands.

A recent survey by canoe carried out by Park staff confirmed the Parrots Feather is confined to Mount Lofty. However, if you think you may have seen Parrots Feather in the area (also found in ponds and dams), or if you would like to be shown a living sample of the weed, please contact Warrandyte State Park. on 9844 2659.

Source: Friends of Warrandyte State Park Newsletter March 1999

Bird Snippet:

Grey Crowned Babbler Update

Well, it's more than two years since I last reported on the state of the Grey-crowned Babbler in Victoria. So, what's the news, how are they faring? Are babblers on the move? Are their odds of surviving improving?

Overall, the news is good. When we published the first management plan for the Grey-crowned Babbler in 1992 (Flora and Fauna Guarantee Action Statement No. 34) we knew of approximately 200 groups across the State. Seven years and five surveys later, we know of 480 groups in Victoria and believe that there are at least 500 groups out there. As a consequence of this intensive survey effort, we therefore have achieved the major conservation objective of the 1992 Action Statement, which was to increase the number of known birds to 2000 within ten years.

But, before any of you begin counting your chickens, etc. and think that we're home and dry, let me add a quick dampener by telling you that at least thirty groups have become extinct since the publication of the Action Statement. Moreover, in the most recent survey done in 1998 in the central Murray Valley, Gary Deayton discovered that:

The district's population had declined by 9% in the past ten years and average group size had decreased. The percentage of groups in the 1-3 size range (which have poor breeding success) increased from one third to one half, and one local population had become extinct (G. Deayton, 1998, Field survey for Grey-crowned Babblers in the Echuca to Tocumwal section of the central Murray Valley. Report to DNRE. Copies in BA and BOCA libraries).

Accordingly, although we know of many more groups than before, we still can't pretend that the species is secure in Victoria, especially given that more than 70% of all known groups depend on roadside vegetation and less than 5% of all known groups live in conservation reserves. But, efforts are being made to save the bird.

In 1998, in northern Victoria, various community groups, including Birds Australia, undertook the fencing of 30 kilometres of buffer strips to protect and widen existing babbler habitat in roadsides and unused roads. Volunteers also helped to revegetate nearly 15 kilometres of treeless roadside to help link isolated groups or isolated patches of suitable habitat. Such was the success of the latter operation that two of the sites connected by myriad rows of fruit juice cartons were colonized within three months of planting by teenager babblers. In future, therefore, we plan just to erect lines of cartons and forego the plants!

This year, four community groups in northeastern Victoria have collectively received enough Natural Heritage Trust funding to fence nearly 100 kilometres more of suitable habitat and revegetate another 15 or so kilometres of treeless gaps. A landcare group near Kerang has also received funding to protect babbler habitat in Black Box woodlands near the Loddon River. Needless to say, these various enterprises all need volunteers and do I have some dates for you!

On Sunday, May 30, we are going to survey the whole of Strathbogie Shire for GCBs. Strathbogie Shire contains one third of the State's babblers and it is difficult to keep up with the status of every group. This day will provide basic data to compare with the last Shire survey done in 1995. Meet at 9 am near the Seven Creeks crossing in Euroa, on the northwest side of the creek.

Saturday, 17 July, we are tree-planting in the Euroa district.

Saturday, 31 July, tree-planting in the Violet Town district.

Saturday, 7 August, and Sunday, 8 August, tree planting in the Rutherglen district.

For further details on any of these activities, please contact myself on (03) 5761 1680 (w), or Mick Fendley at the Birds Australia Office on (03) 9882 2622. We'll be delighted to see you at any of them.

Doug Robinson

Source: Newsletter of the Victorian Regional Group of Birds Australia, March 1999

IFFA activities:

IFFA (Vic) Meeting:

7:30 PM,

Monday 31 May 1999

Directions in Revegetation and Restoration

At the conclusion of the recent forum run by Greening Australia Victoria a small group of approximately 10 people was formed to consider setting standards for the industry, establishing a professional organisation or trade association which would provide an independent voice to provide critical comment on issues that affect the industry. IFFA invites people to our next meeting to contribute ideas to the process and discuss possible submissions. All are welcome

Venue: Thai Nee Cafe

150 Lygon St., Brunswick

Public Transport: Take Trams No. 1 or 22 to STop 122

IFFA'S Annual General Meeting will be on Monday June 29, 1999 at 7:30 PM at the Thai Nee Cafe, Brunswick

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.

Members should check the mailing label to ascertain the status of their membership. If people require an invoice, please send a purchase order and we will oblige accordingly.

Otherwise we do not issue reminders to members.

Cheques can be remitted to the Membership Secretary's P.O. Box as listed. A receipt will be attached to the front page of the following issue.

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Office Bearers:

President: Roger Jones, 20 Patterson St., Bon Beach 3197 Ph. (03) 9772 1707 (ah) or (03) 9239 4555 (bh). Fax (03) 9239 4688. Email: roger.jones@dar.csiro.au

Vice-President: Peter Tucker, (03) 9818 1537 (ah).

Secretary: Lill Roberts, P.O. Box 192, Blackburn South 3130, Ph. (03) 9878 0858 Email: lill@netspace.com.au

Membership Secretary and Treasurer: Neil Gardiner, P.O. Box 2055, East Ivanhoe 3079, (03) 9499 7048.

Committee members: Geoff Carr (03) 9481 7679(bh).

Editorial team:

c/o P.O. Box 228, Preston, Victoria, 3072.

Editor: Lincoln Kern, (03) 9480 4680 (ah).

Email: Impittle@ozemail.com.au

Coming Events: Marcus Bechley

Contributions to *Indigenotes* should be sent to the editor — the deadline for the next issue is June 5, 1999.

Contributions can be typed or hand written but computer disk copies on PC-compatible format is preferred.

The views expressed in Indigenotes are not necessarily those of the Indigenous Flora and Fauna Association.