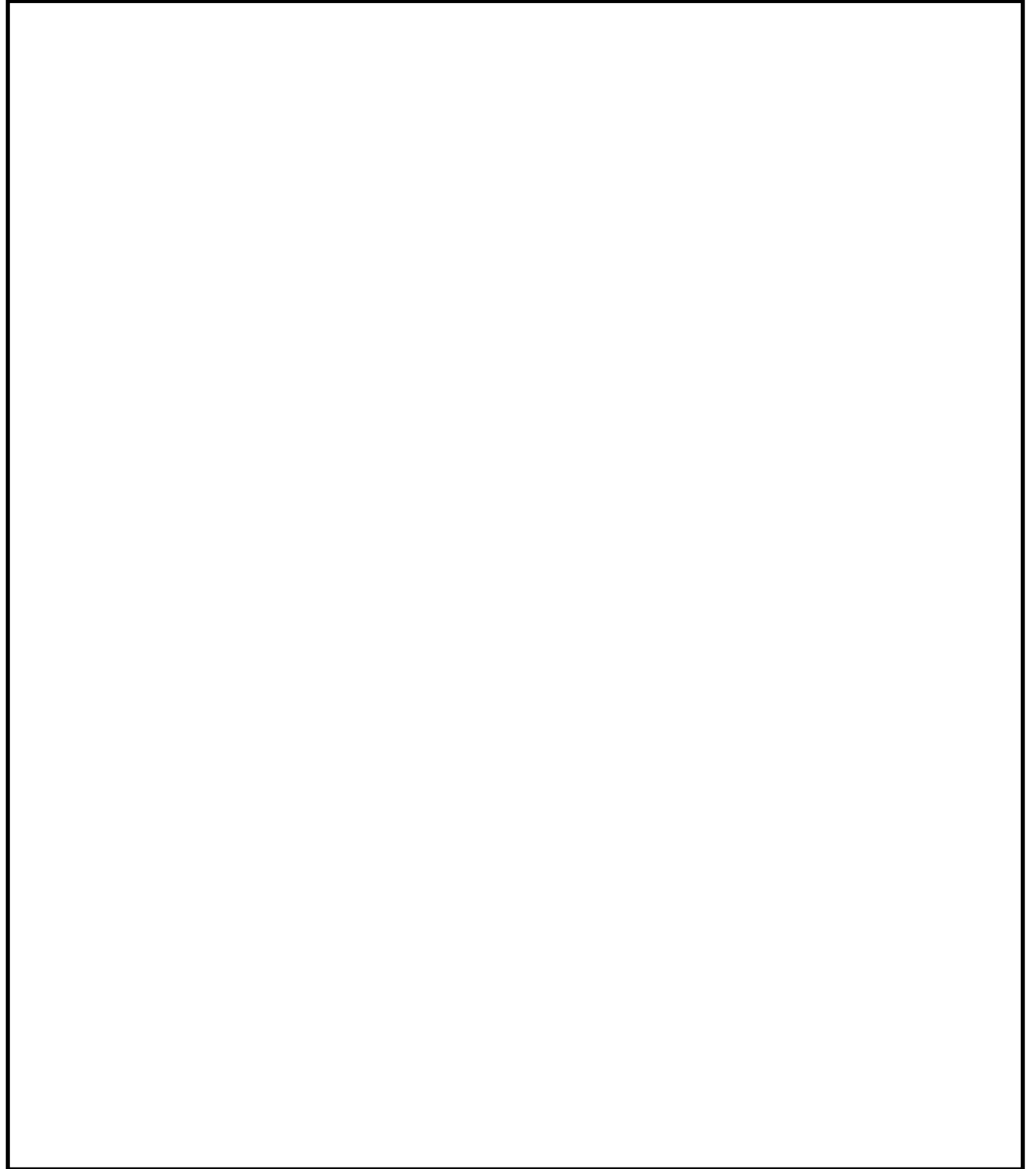


INDIGENOTES



A Grassland Park for Melbourne's Plains?

**James Ross - Grassland Project Officer,
Victorian National Parks Association**

In this article I use the term "grassland" to include both open treeless Grassland communities (e.g. Western Plains Grasslands) and Woody Grassland communities (e.g. Grey Box Grassy Woodlands, Plains Red Gum Grassy Woodlands). I also include Grassy Wetland communities where they naturally occur within "grassland" communities. I heartily recommend the use of the term 'Woody Grassland' to others writing in this field!

Native grasslands are widely recognised as being the most threatened communities in Victoria¹, yet they remain virtually unrepresented in our 'world class' conservation reserve system². The future conservation of native grasslands has become a complex conundrum - their endangered status apparently paralysing action rather than inspiring it.

The obvious appeal of Victoria's plains for agriculture has left very few areas in public ownership. While this is the most basic reason for the poor conservation status of grassland ecosystems, I believe that their continuing lack of representation in reserves is a more complex issue.

Proponents for the conservation of grassland communities struggle against a plethora of circumstances and entrenched beliefs. Grasslands remnants are "too small", "compromised" or simply "unviable" as reserves; they are regarded by various parts of government with amusement, surprise and even suspicion; and, that most damning of statements, we are told that "grasslands are not sexy". [Grasslands are sexy! (There, I've said it.)] By pretending they are unattractive or unimportant, major conservation decisions and actions can be, and are, avoided.

Conservation initiatives and campaigns are usually focused on individual sites. This "one-block-at-a-time" syndrome works against grassland conservation in two ways. The traditional argument runs that there is no need to save this remnant because there is another over there. Secondly, it is virtually impossible to adequately convey the significance of an individual remnant. Only the most stunning of road and rail reserves will impress the lay observer and on paper the value of a two hectare strip protecting fifty individual plants appears low.

In developing a grassland reserve system we must recognise these inherent prejudices and barriers. Hopefully, such a proposal will also help to eliminate these obstacles to conservation.

What Sort of Reserve System Do We Want?
Lunt's Triad states that the basis for grassland conservation is:

1. The protection and management of all remnants including those containing rare or threatened species.
2. Establishment of large reserves in all grassland regions.
3. Restoration of communities and re-establishment of rare and threatened flora & fauna within secure reserves.³

According to conventional conservation theory our reserve system should include representative examples of grassland communities in each region and a high proportion of the known populations and habitats of rare or threatened species. The challenge is to employ a structure that makes these outcomes possible for grasslands.

If we decide that all remnants must be in single ownership, properly reserved and managed by a single agency to be part of a grassland reserve system, then we risk losing most of the resource before we even start. Government has a clear responsibility to provide mechanisms for conservation, to co-ordinate planning and management and to implement major actions on behalf of the community (e.g. acquire & manage large reserves). But the fact is pure and simple that they are unable to look after every grassland remnant on their own. Whatever framework we devise for our grassland park, it must be flexible enough to allow everyone to participate.

The Melbourne Plains Grassland Park - [An attempt to put all this into practice]

The Melbourne Plains support populations of at least 22 plant species of conservation significance in Victoria (plus others whose taxonomic or conservation status is uncertain), and 17 animal species that are rare or threatened in Victoria. The populations of the Striped Legless Lizard, Southern Lined Earless Dragon, *Rutidosia leptorrhyncoides* and *Diuris fragrantissima* are vital to the future survival of these species nationally.

Using currently available biological reports I have attempted to synthesize an adequate grassland reserve system for the Melbourne Plains⁴. Areas have been selected to ensure that the Park includes a range of both existing and potential habitat, representation of the major grassland community types and known habitat for rare or threatened species.

The land base of the proposed Melbourne Plains Grassland Park consists of:

- 1) Native Grassland Reserves
- 2) Native Grassland Reference Reserves
- 3) Native Grassland Protected Areas
- 4) Native Grassland Management Areas

A key aspect of the proposed Melbourne Plains Grassland Park is that it will be actively managed as an integrated unit: although fragmented spatially the Park will be united by common objectives and a common management plan.

1. Native Grassland Reserves

To be effective and adequate for nature conservation the Grassland Park must include examples of the major community types of the Melbourne Plains. Five core reserves have been identified in the region that together include the range of rainfall, soils, landforms, habitats and vegetation communities. They provide broadacre habitat and an opportunity for ecological processes to continue. Over time these core reserves will be rehabilitated to recreate natural grassland communities as far as possible.

2. Native Grassland Reference Reserves

Very high quality grasslands on the Keilor-Werribee Plains are largely restricted to rail reserves, cemeteries and roadsides. The protection and management of such sites is essential to the future conservation of grasslands as a whole. It is proposed that these areas be managed as Native Grassland Reference Reserves. Portions of Grassland Reserves and other areas that are of high quality or contain threatened species could also be included in this category.

3. Native Grassland Protection Areas

There are many mid-sized grassland remnants in various forms of public ownership that contain significant grassland values. Native Grassland Protection Areas will have the conservation of native grasslands as a major objective but will also provide opportunities for education and recreation, a source of plant material for use in restoration and educational projects, and opportunities for management techniques to be evaluated.

4. Native Grassland Management Areas

Privately owned grasslands on rural or vacant industrial land can be included within the grassland reserve system. Inclusion within the Grassland Park as a Native Grassland Management Area may involve the use of a Land Management Agreement or Conservation Covenant and will hopefully allow the owner to obtain rate relief or tax concessions for the area concerned. Advice

and management assistance would also be provided.

Management

A Native Grassland Unit will be established within the National Parks Service dedicated to the Melbourne Plains Grassland Park. The NGU should consist of a biologist, a planning officer, an education officer and a works co-ordinator. They will be responsible for assessments of sites, maintaining a Register of grassland values and developing an overall works and management strategy including weed control, burning, fencing and restoration works. This program would be implemented for each site in conjunction with Rangers, works crews, specialist biologists, local conservation groups, the Country Fire Authority, tertiary institutions, and so forth.

This proposal will not immediately protect all the grasslands identified - individual campaigns may still have to be fought, but these battles will at least be given a broader context. Similarly it will not instantly solve the funding dilemma for grasslands but again it will be easier to attract funding for an overall package than on a site-by-site basis.

While I have only looked in depth at the Melbourne Region I have no doubt that this approach can be used successfully in other areas of Victoria and indeed for other fragmented ecosystems. In NSW Suzanne Prober and Kevin Thiele have also proposed a radical reserve format for White Box Grassy Woodlands.⁵

Several projects have recently been submitted to the Federal Government for funding under the National Reserve System Program. Two of these relate to land purchase for grassland conservation at Terrick-Terrick and Cressy. The acquisition of these areas would be a dramatic and timely advance in the status of Victoria's native grassland communities. The conservation values of these sites, while high in themselves (exceptional in the case of Terrick-Terrick), will be considerably enhanced if they too are viewed as part of a broader conservation network for the grasslands of Victoria's Northern and Western Plains.

1. Department of Conservation and Environment, 1992. *Draft Conservation Program for Native Grasslands and Grassy Woodlands in Victoria.*
2. Frood, D. & Calder, M., (1987). *Nature Conservation in Victoria. Study Report.* VNPA, Melbourne.
3. Lunt, I.D., (1992). "Rare or threatened plants of lowland grasslands and grassy woodlands in Victoria." *Advances in Nature Conservation* 1: 7-13.
4. Ross, J., (unpub). "The Melbourne Plains Grassland Park: a conservation reserve system for the native grasslands and grassy woodlands of the Keilor-Werribee Plains." VNPA, Melbourne.
5. Prober, S. & Thiele, K., (1993). "Surviving in Cemeteries - the Grassy White Box Woodlands." *National Parks Journal* Vol 37 No. 1: 13-15.

Weed of the Month:

“Watsonia” and its control

by Peter Day

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Eastern Hills Branch

The contents of this article whilst specifically referring to control of watsonia contain information that may be of interest and relevance to all bush regenerators.

Watsonia

1. “Watsonia”, in this article is the vernacular name used not only for several species of the genus *Watsonia*, but also for similar plants such as *Chasmanthe* and *Gladiolus*. *Watsonia* are weeds of southern African origin, which have the typical characteristics of a below ground corm and wide, flat strap-like leaves arising from the base. They are dormant in late summer and autumn, and flower in spring on tall stems or stalks. Regeneration is by corm reproduction below ground around the parent corm, and also by seed or cormel production on the flower stems. Flowers are typically red/orange, but also include white, pinks, and mauve.

2. *Watsonia* are not significant agricultural weeds, and will not normally survive grazing. They are regarded as ‘waste-land plants’, often growing profusely on road and stream verges but stopping abruptly at the farm fence where grazing or cropping starts. Because they are not an agricultural problem, there is very little literature available. *Watsonia* have been (and still are in some quarters) regarded as attractive garden plants, and this, no doubt is the underlying reason for their spread, especially in the South - West of Western Australia. Our Mediterranean climate is ideal, and there appear to be no significant predators here to effect control.

The following notes on control are based on experience gained controlling *watsonia* in and around Darlington in Western Australia.

Control

1. The immediate objective of *watsonia* control is just that - control, not elimination. Each year that target must be kept firmly in view to avoid waste of effort and any sense of despair at the magnitude of the task. Control is achieved when there is no seed or cormel drop.

2. There are two principal means of control. (i) destroy as many plants as possible which are

mature enough to flower and set seed, and (ii) remove any seed stems from plants that escape destruction before they drop their seed in early summer. If these two processes are followed without fail each year, then eventually pseudo - elimination will be achieved as the total pre - existing seed stock will be used up.

3. As can be seen it is most important to remove any seed set. *Watsonia* are unusual amongst weeds in that such seed removal is in fact a practical possibility. If for any reason the plants in a controlled area cannot be destroyed in a particular year, nothing is lost provided all seed stems are cut off before seed dispersal. That is the “bottom line”. No new area of control should be started without that absolute commitment.

4. There will always be the possibility of re-introduction to controlled areas by people, animals and birds (perhaps), and water (streams and surface water flow from uncontrolled areas). People introduce and spread *watsonia* through gardening activities. There is some evidence that new outbreaks may have been caused by casual picking of a stem by humans who later discard it at a different location. There is also some evidence that kangaroos eat the seed pods and possibly spread the seeds in their droppings.

Plant destruction

1. *Watsonia* plants may be destroyed by physical or chemical means. The former is suitable for smaller infestations, and where the use of chemicals is not acceptable. Grubbing out can be back breaking, especially with larger clumps, but is effective provided the plants are carefully placed so that they do not re-root. Late in winter, and during or immediately after rain, *watsonia* plants will usually pop out of the ground with a gentle pull. Whether using physical or chemical means, always work from the highest infestation down - slope as the seeds generally move down hill with water movement.

2. Chemical destruction is best achieved by the relatively innocuous chemical glyphosate, sold as “Roundup” or “Zero”. (The latter is one-third the concentration of Roundup and not generally economical, but does the same job with appropriate mix strength).

3. Glyphosate kills by blocking a plant’s essential biochemical process. In effect, it starves to death, so signs may not be evident until a couple of

Continued from page 5

weeks after treatment. Treatment is most effective when the plant is growing vigorously. For watsonia, this is when the flower spike is emerging, usually September/October, depending on aspect. However experience has shown treatment to be effective from late July to mid December, with the more exposed drier areas treated first, and the shadier wetter areas last. Because plants must continue to try and function for the chemical to work, disturbance such as whipper-snipping must not take place until they are completely dead (several weeks or months after treatment).

4. The chemical can only be taken in by a plant through it's leaves, or by direct injection into the active parts of stems and trunks. It is then translocated to the root system. It is not taken up through the soil, and has no effect through dead wood or bark.

5. Glyphosate is not selective, and will kill or damage any plant. Naturally this is dependent on the quantity taken in, and a little spray on the leaves of a large tree will have no observable effect. It is particularly effective on the simpler plants such as grasses. Most small native plants are quite susceptible, including particularly, blackboys.

6. Glyphosate is not registered as a poison (has no "S" number), and is not known to have any effect on persons using it with normal good care, nor on animal life in general. There seems to be little veterinary concern, for example, over horses being enclosed with sprayed watsonia which they may nibble. However it is only sensible to handle the chemical, particularly the concentrate with caution. Keep it off the skin, and wash away any spillage with plenty of water. Follow the manufacturer's instructions.

7. Glyphosate is rapidly inactivated in soil, especially clayey soil. It becomes bound tightly to soil particles and is then broken down over a few weeks or months.

8. Glyphosate may be applied by spraying or "wiping". Spraying is suitable for larger areas, and where the watsonia is not interspersed with desirable plants. The most suitable sprayers are the 5l plastic pressure type with quick and reliable trigger on/off control. Experience shows it is best to buy a quality sprayer for long term reliable use in the field. One person can cover a remarkably large area with one of these, but another option for broad acre spraying is a micro-drop applicator as used in horticultural practice, the big saving being not having to cart water to the site. Do NOT use galvanised metal containers for glyphosate.

9. Dilute the concentrate 100:1 for spraying - ie.

50ml for a 5 litre container. Do not add wetting agent - it is already included. Fill the container with water first, then add the concentrate to avoid foaming.

10. Use a course spray jet and wet down into the centre of the plant. It is not necessary to wet the whole plant. Keep the spray nozzle low to avoid spray drift, and do not spray on windy days. The chemical must dry on the foilage for at least 2 - 3 hours. Do not spray if rain is expected in this time.

11. Chemical can be washed off any wanted plant which has been accidentally sprayed, without ill effect, provided it is done thoroughly and immediately.

12. The alternative means of chemical application is wiping a smear of glyphosate onto one side of one leaf. A "sticky" mix of about 10:1 is used, and a small (1/2 litre) trigger spay bottle fitted with a foam pad over the nozzle is ideal (see illustration). This method is essential when the watsonia are growing up through native plants in the bush, and are relatively few in number. It is extremely reliable, and suprisingly quick to do. This applicator can be carried on bush walks, with a plastic bag over the nozzle, and used to treat isolated plants as they are found quickly and easily. Rubber household gloves must be worn to avoid hand contact wih the concentrated solution.

Seed removal

1. Watsonia generally flowers from September to

November, depending on species, location and season. While flowering they are very visible, and this makes them easy to find and cut off stems which will later carry seeds or cormels. However, if done too early, the new stems will form causing a waste of effort. Furthermore, all plants do not flower at exactly the same time, so that a given patch might have to be worked over several times. Generally it is better to wait until all flowering is finished.

2. There are several main types of "seed" on watsonia species. The orange flowered species which has very tall stems and generally inhabits streams and wet areas has several dozen "cormels" which mature into brown spiky clusters along the stems. These often do not drop until the stem itself falls over, which may be a year after forming. These stems must be cut very low down to avoid cormels being formed on the remaining stump. All other species have a multitude of small seeds in pods along the stems. These pods swell while maturing then open from late December to mid January, spreading hundreds of seeds over an area of several square metres. From a control point of view, these pose a big problem.

3. Provided the seed stems are cut off well before seed or cormel maturity, there is no risk in dropping them where cut. Later in the season it is best to at least remove the stems to a single heap in a known safe place, preferably in a hollow so that any germination can be confined and dealt with in the following year. If time has got away and cutting is being done late in the season, the stems must be handled very gently to prevent seeds being shaken out.

4. Cutting is best done with a pair of single handled grass shears. In very large operations, hedge clippers can be used for dropping in situ. Secateurs, with their small opening and awkward hand position are too slow to be useful for any thing other than a limited amount of stem cutting.

Bush regeneration and burning

1. In most cases the reason for seeking to control watsonia is to allow regeneration of the previous natural plant communities. It is important there-

fore to be aware of the major factors governing this regeneration. These are the timing and frequency of burning, and the presence of all weeds.

2. Most people are familiar with the burst of new growth in the bush after a fire. This is of two types: growth from root-stock of burnt off plants, and new germination from the seed bank in the soil (fire cracks the hard seed coat). Once this has occurred, the area is vulnerable until new flowering and seed drop replenishes the soil seed bank over several years.

3. Consideration of this leads to the obvious conclusion that watsonia in bush should be treated (sprayed) only when the bush hasn't been burnt for some time. The spraying will in many cases kill or damage some of the native plants, but there will be a good store of seed in the soil. After spraying, a fire can be put through, preferably in the following Autumn. This will cause germination of that native seed bank to replace older, destroyed plants.

4. The following season, very careful chemical application should be undertaken on the remaining watsonia, to avoid any damage to the new germination of natives. No further burning must occur until the flowering/seeding cycle has replenished the soil seed bank. The big NO NO is to burn first, then broad-scale spray, even though it is tempting as it makes access much easier.

5. Where an area has for any reason been burnt ahead of proposed watsonia control, it is useful to thoroughly lop the flower stalks, (as described) for several years, while waiting for native plant seed to build up. This causes the progressive aging of the watsonia seed bank, reducing its viability and subsequent germination.

6. The presence of significant weed, other than watsonia, only makes the problem of bush regeneration more difficult. The correct timing of chemical treatment and burning, and the need for follow-up, is critical to a successful outcome.

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Eastern Hills Branch
Wildflower Society of Western Australia
Octagonal Hall
McGlew Road or P.O. Box 111
Glen Forest Western Australia 6071

Coming events:

For IFFA events see back cover

September 18 & 19. **ANGAIR WILDFLOWER SHOW.** Organised by the Anglesea and Aireys Inlet Society for the Protection of Flora and Fauna. Anglesea. Contact Mary D. White (052)631 975

Conferences/Workshops/Talks

7 September, Tues 8pm. **Fish Diversity in Victorian Marine Waters.** Speaker Dr. Martin Gomon is Curator of Ichthyology at the Museum of Victoria. Part of a meeting of the Fauna Survey Group. National Herbarium of Victoria, Birdwood Ave. Sth Yarra. Contact Ray Gibson (03)874 4408.

11 September. **Sites of Natural Significance workshop.** Dandenongs. Speakers will include: Andrew Bennett, Scott Seymour, Rob Wallis, John Groves, Vivian Freshwater. Workshop groups will visit sites in Sassafras, Upwey Menzies Creek, Sherbrooke Forest. Contact Jenny Francis on (03)755 1398.

12 September, 1-5pm. **BUSHCARE: Keeping The Bush In Our Backyard.** Organised by the Conservation Council of Victoria, this is a community workshop to discuss Bushcare and other approaches to community education for nature conservation on private land. Held at the Croydon Community Hall. For further information call Context Pty Ltd, (03)380 6933.

16-18 September. **Ecological Horticulture: Gardens of the future.** With Geoff Carr, Principal, Ecological Horticulture Pty Ltd; Botanical Horticultural Consultants. For further information or registrations contact: Ron Smith Symposium, Department of Geography and Environmental Studies, University of Tasmania, GPO Box 252C, Hobart, Tas, 7001.

23&24 September. **Partnerships for Change - environmental practice in the 1990's. 1993 National Conference.** Environment Institute of Australia. Looking towards environmental management and partnerships which achieve sustainable development. Sydney Convention Centre. Direct enquiries to (02)357 2600.

24&25 September. Fri & Sat. **Management of relict lowland grasslands.** Conference and workshop. Includes a field trip, public seminar and workshops include: "Aims of conservation" and "Management case studies". Contact Sarah Sharp, Wildlife Research Unit, ACT Parks and Conservation Service, PO Box 1119 Tuggeranong ACT 2901. Phone (06)207 2125.

6-9 December. **Australian network for plant**

conservation 1993 conference. Papers and workshops covering endangered species, germplasm storage, databasing, funding and education. Contact Australian Network for Plant Conservation, Australian National Botanic Gardens, PO Box 1777, Canberra, ACT, 2601.

Excursions and field trips

28 August. **Excursion to the Brisbane Ranges Northern End.** Botany Group excursion of FNCV. Distinguished botanist Gretna Weste will be the guide. Meet at carpark in Gell St, Bacchus Marsh at 10 am on Saturday. (Mel 219 H2) Contact Joan Harry (03)850 1347.

28 August. **VNPA Bushwalk-Werribee Gorge Circuit, Werribee Gorge State Park.** Wildflowers and views of the gorge from cliff tops and from the river level. An easy to medium walk, 10 km. Leader Doug Myers (03)306 6560.

29 August. **Walk, Talk and Gawk: Organ Pipes National Park.** The impressive Organ Pipes geological formation is only one of the attractions of a park which has been created out of a wasteland. Lunch by the river amidst flowering wattles. Contact Jane Calder (059)652 372.

4 September. **A Walk into the Brisbane Ranges.** Learn about the Brisbane Ranges' geological history, its wildflowers and birds of the Anakie Gorge with John Stewart. Families welcome. A bus will leave from Batman Ave. near St Kilda Rd in the city at 9am. For details on cost contact Dorothy Mahler on (03)435 8408.

5 September. **FO the Grey-Crowned Babbler.** Field trip to known Babbler site: Balnarring (Roadsides and Balnarring Beach) and another trip on September 19th attempting to discover a new site at Rye. For further details contact David Lockwood (03)558 1163.

11 September. **Leadbeaters Possum Stag Watch - Central Highlands of Victoria.** Fauna Survey Group excursion of FNCV. Part of continuing survey work to establish the full habitat range of this highly endangered and beautiful possum. Families most welcome. For details on location and meeting place, contact Ray Gibson on (03)874 4408.

11 September. **Walk, Talk and Gawk: Inverleigh Flora and Fauna Reserve.** What was the Inverleigh Common is now being appreciated for its remnant vegetation and natural habitat. Lunch under River Gums at a water hole, and koalas and kangaroos may be seen. Contact Geoff Durham (03)523 5559.

23rd - 26th September. **Fauna Survey Camp at Kinglake.** Eucalypt Stag watching, trapping and spotlighting in Box-stringybark forest. Families most welcome. Bring own vehicles and

camping gear. Contact Ray Gibson from the Fauna Survey Group of FNCV on (03)874 4408 for details on campsite and activities.

25th September. Excursion to Currawong Bush Park, East Doncaster. Join naturalist Cecily Falkingham to search for wildflowers in this unique area of open forest and wetland. Meet at main carpark at 10.30am. (Mel 34 H7). Contact Joan Harry (03)850 1347.

Restoration Activities

August

- 21 Sat 9.30am. **FO Werribee Gorge & the Long Forest Mallee.** Project day. Janet Leversha (053)674 229. Next Project day September 18.
- 21 Sat. **Doncaster and Templestowe Conservation Society** activity day at Candlebark grasslands - 20 hectares of undulating hill adjacent to southern bank of the Yarra, east of Fitzsimmons Lane. Judy Zimmerman (03)850 4116 or Judy Jones (03)850 2554.
- 28 Sat 1.00pm **FO Sherbrooke** project afternoon. Weeding honeysuckle on Neumann's Track. Bring mattock, secateurs, drill and fill apparatus. Meet at Grantulla/Neumanns track entrance Kallista. Mel 124 C6. Vivian Freshwater (03)754 3093.
- 28 Sat. 10.00-12.00noon. **Sandringham Community Nursery** volunteers. Propagation and planting activities every Thursday and Saturday. Sandringham Council Depot Talinga Rd/ Reserve Rd. Contact Lisa Carty (03)584 5255.
- 29 Sun. 1.00pm **FO Warrandyte.** A guided walk through the wattles at Timber Reserve. This will be followed by the building of a rabbit exclusion plot. Mel 35 H3. Enquiries Fay Valcanis (03)844 2659 or (03)844 1060.

September

- 1 Wed. 1.30-4.30pm. **Friends of the Wildlife Reserves.** Working bee at La Trobe University Wildlife Reserve. Come and help plant out one of the pondside mounds in the eastern extension with an array of local flora of dry sites. Contact George Paras (03)479 2871 (w).
- 4 Sat. 10 am **Green Link Box Hill** activity day. Koonung Valley and Bushy Creek-planting, weeding. Mel 47 A3 to C4. Contact Minette Russell Young (03)898 1364
- 5 Sun. 2-4pm. **Gramatan Ave Heathland Sanctuary** Beaumaris. Handweeding in area burnt late March. Contact Lisa Carty (03)584 5255.
- 5 Sun 1.30 pm. **FO Langwarrin Flora and Fauna Reserve.** Wildflower time! Track work and weeding. Meet at carpark. Mel ref 103 D9. Contact Anne Read (03)787 2034.
- 12 Sun 10 am. **Meander...**a group caring for the

Menzies Creek and Emerald Tourist Track including weeding, planting and track work in the creek Reserve. Meet at Avard Picnic Ground. Melways 125 F 12. Contact Kate Forster (059)685 828

- 12 Sun 10 am - 12 noon. **FO George St Reserve** Working bee. Handweeding and rubbish removal. Meet in Tulip St, Sandringham. Pauline Reynolds (03)598 8062.
- 18 Sat 9.30 am. **FO Werribee Gorge and Long Forest Mallee.** Weeding of herbaceous plants, followed by a walk with SGAP Keilor. Meet Happy Valley Car Park. Contact Janet Laversha (053)674 229
- 19 Sun 10 am. **FO Wright Forest and Wattle Creek.** Spring Planting Festival at Emerald Lake. Contact Dudley Gross (059)684 780.
- 19 Sun 10 am. **Men of the Trees.** Deep Rock, Yarra Bend Park; Mel 2D D6. Minette Russell-Young (03)898 1364.
- 19 Sun 10am-12 noon. **Brunswick Tree Group.** Moonee Ponds Creek. Eric Ward (03)388 2123.
- 25 1.30pm & 26th 10am. **Mount Eliza Association for Environmental Care.** Sun 26th is Spring Planting Festival Follow up planting and maintenance at Mooraduc Quarry Picnic Reserve followed by a walk of the Flora and Fauna Reserve. Meet Two Bays Rd Car Park. Mel 106 A7. Contact Anne Read (03)787 2034.
- 26 Sun 10.30 am. **Merricks Foreshore Committee** Planting day. Meet above the cave. Mel 192 K12. Contact Jo Ferguson (03)481 4286 or Nick Williams (03)347 0758

For other **Victorian National Parks Association** activities, call (03)650 8296.

A large range of activities such as bushwalks and "Friends" activities are published by the **Victorian National Parks Association** in their newsletter. For details contact VNPA on (03)650 8296.

Visitors/participants are welcome to all events listed in Indigenotes.

Thank you to all the people who contact us regarding on-coming events their groups are organising. If you wish to have your events covered, or you can see corrections that need attention, please get in touch with Jo Ferguson (see back cover).

5 October. Thurs 8pm. The Wandering Albatross. Ecologist Dr. Neville Nicholls will talk about his recent work in satellite tracking the intriguing Wandering Albatross. Part of a meeting of the Fauna Survey Group. National Herbarium, Birdwood Ave. Sth Yarra. Contact Ray Gibson (03)874 4408.

9 October. Sites of Significance Workshop. Southern Dandenongs. Speakers will include:

Weeds, savages and journalism (mostly a book review).

By Patrick Driver

Environmental weeds “invade native vegetation, usually adversely affecting survival of the indigenous flora” (p.4). Carr *et al.* (1992) is aimed at identifying these threatening exotic plants. As this small technical book explains, weeds through competition can destroy individual plants as well as whole biomes (e.g. tropical wetlands). Lists and discussion are provided to identify the types of weeds and the processes threatening indigenous wildlife in this manner. Most significantly, the subject material is novel and important for land managers as it is about Victorian environmental weeds. Another reviewer's response to this book is also discussed because it raises some issues concerned with public perception of material, such as this book, concerned with the preservation of indigenous vegetation.

In Carr *et al.* (1992) relevant lists for early environmental weed identification and control are provided. It has an extensive list of weedy plants threatening Victorian indigenous communities, with relevant summary background information on each plant (such as life form, place of origin and method of dispersal). A preliminary list of endangered, vulnerable, rare or depleted indigenous plants threatened by these weeds is also provided.

For activities by community groups and government there is a strong emphasis on weed prevention being better than weed eradication in planning and policy. The authors encourage a reduction of the current disproportionate emphasis of infrastructure (e.g. tracks and visitor facilities) for public and private land management in favour of resource protection.

The theory of restoration and weed science is also developed. The concept that weeds can occupy vacant niches without causing any negative effects is considered outdated. The authors also argue against the notion that invasions can only occur with disturbance. The emphasis on manual techniques in the ‘Bradley technique’ (Bradley 1971, Bradley 1988, Buchanan 1989) is also criticised. It is not mentioned that the ‘Bradley technique’ was developed in the rainforest and wet gully communities in New South Wales (*Pers. comm.* Dale Tonkinson). The merits of this technique could have been discussed a little further within a Victorian context.

Usually the text is easy to follow, although some terms are either esoteric or unclear. What ‘grey literature’ (p.37) means is left to interpretation. I believe this term refers to literature provided by environmental consultancies (*Pers. comm.* Jason Stuart). I would also have replaced autecological studies with studies of single species (p.37).

Garnett (1993) who has a column in ‘The Age Extra’ gardening section has also reviewed this book. My main concern with his criticisms is that they go beyond the

contribution of the book to the protection of indigenous wildlife (be it useful or not). By presenting a smokescreen of inane arguments and scatty unsupported criticism he supports indifference to activities such as subdividing western Anglesea, dumping of rubbish in bush remnants and planting Plane trees in central Melbourne.

Garnett questions the concept of indigenous wildlife and the importance in the difference between the last ca. 200 years and the previous ca. 40,000 years in terms of effects on natural process occurring in the bush. Carr *et al.* (1992) clearly outline one example of how relatively recent changes severely threaten the quality of indigenous flora and fauna. It is explained how numerous plant species from other continents or states have gained an advantage by recently crossing large ecological barriers to grow in new environments. Some plants are also described which have had advantageous genetic change through artificial manipulation.

Somehow, through Garnett's criticisms the preservation of the pre-European landscape is also associated with (Rousseau's) sentimental belief in noble savages in harmony with their environment. I believe such a patronizing view of the diversity and character of the Australian environment and the many pre-European people (Wurundjeri, Bunurong, Watharung etc.) is uncommon in the indigenous movement. Instead, I would suggest that the views Garnett expresses are the result of a distanced and undeveloped appreciation of Australian wildlife and consequently also the people who have a passion for it. I was wondering whether sometimes Garnett feels a bit like D.H. Lawrence (1923) did when he wrote this:

“The strange *invisible* beauty of Australia which is undeniably there, but which seems to lurk just beyond the range of our white vision..It is so aboriginal, out of our ken, and it hangs back so aloof...And yet, when you don't have the feeling of ugliness or monotony, in landscape or in nigger, you get a sense of subtle, remote *formless* beauty more poignant than anything ever experienced before” (p.87)

This is appreciation without close involvement and without a sense of personal responsibility. Australian image makers such as journalists, authors, advertisers etc., possibly including Garnett, often seem to suffer from the ‘environmental cringe’ “.the hostility many writers have to nonurban Australia” (Grant 1992, 31; speaking specifically about Australian literature).

Carr *et al.* (1992) have produced an important book. Possibly the brevity of the text and amount of technical language leaves the reason for producing such information a bit understated. The response from Garnett (1992) could suggest this or that the ‘Country Gardener’ has a case of ‘environmental cringe’. More importantly, for a very reasonable price (ca. \$12) a book

Save the Bush Training Courses

is available that provides in-roads to an extensive database on how to cope with specific environmental weed problems. This small book also gives a very useful but general guideline of management options and discussion on how weeds displace indigenous plants.

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- Bradley, J. (1971). Bush Regeneration. Mosman Parklands and Ashton Park Association, Sydney.
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- Garnett, T.R. (1993) Space invaders from the garden. 'The Age Extra' 3.4.93, 15
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- Lawrence, D.H. (1923). Kangaroo. Penguin Books, Ringwood, Victoria.

Environmental Weed Invasions in Victoria is available from the National Trust of Australia (VIC) at Tasma Terrace, Parliament Place, East Melbourne 3002 for \$12 or \$15 mailorder as well as the Greens Bookshop, Flinders Lane Melbourne or the DCNR Bookshop, Victoria Parade, East Melbourne..

The National Trust, through its Save the Bush Project, offers specialist training in bushland management and regeneration. We are our courses again this Spring, one with our usual format of evening lectures and practical days and a new course based on a new format - a mixture of lectures and practical work offered during working hours.

Bush Regeneration Techniques Course

15 September to 13 November 1993:
Wednesday Evening Lectures in Collingwood and Saturday Practical Sessions throughout the northern and eastern suburbs.

This is the comprehensive course we have offered in the past. Experts will cover everything from plant identification to weed control to planning a regeneration project. The course is a detailed introduction to the theory and practice of bush regeneration as well a great way to connect with other people in the field and gain hands-on experience in many bushland reserves.

Short Course: Introduction to Bush Regeneration

30 September to 4 November 1993:
Thursdays 9:00am to 5:00pm
An intensive course introducing bush regeneration techniques and the basic principles of bushland management. It is offered during working hours and will be located in several venues in bushland reserves around the northern and eastern suburbs, including Currawong Bush Park in Doncaster and Yarra Bend Park. We will have the experts offering our usual mix of theory and practice.

These courses are enrolling now. The courses will concentrate on the bushland of the north and east of Melbourne and the special management issues facing it. However, the skills learned in these courses will be applicable anywhere - no matter what the vegetation or size of reserve.

To enquire or enrol, phone the National Trust on (03) 654 4711. If you are unemployed the Commonwealth Employment Service (CES) may even pay for the course, enquire at your local office after getting an application.

Save the Bush courses are designed to meet the requirements for a 'structured training program' as provided under the Training Guarantee Act 1990. Supporting documentation is available to employers.

Snippets:

The Timber Game's Now Up

On May 18th, the Auditor General's report on the success of the Timber Industry Strategy (TIS) was released. For years, it has been strikingly clear that many of the recommendations of the TIS have never been implemented. The Auditor General's report backs what conservationists have been trying to expose for years regarding the costly and crooked management of our forests. Up until now this has been vehemently denied by the timber industry and the government. Sheepish admissions are now emerging with much bombastic blusterings and toe-kicking mumblings as they defend themselves.

The reports findings include:

- 1) the \$13.2 million loss in 1990-91,
 - 2) despite supplies of high quality logs, the vast majority of the industry still sneers at the idea of value adding,
 - 3) high quality logs have consistently been downgraded by contractors, thereby returning less royalties to the Government,
 - 4) the government is way behind the TIS target of establishing 2,000 ha. of plantations a year,
 - 5) not all areas are being surveyed for conservation values before being logged and
 - 6) the Department's rainforest definition is inadequate.
- Richard Rawson, Director of the Forests Division staunchly defended the Department's forestry operations by blaming the lack of funding (do they want yet more public money?!) and replying that, well, they might not survey all areas before being clearfelled, but they still "do a better job than anyone else". Who else, for gawds sake, is there? It's a ridiculous sight to see them grasping at these straws while trying to stick the odd feather in their hat.

- Jill Redwood

Source: Potaroo Review No. 135 June-July 1993

Park Management Plans

The Department of Conservation and Natural Resources has released the following Draft Management Plans for public comment:

Snowy River National Park

Croajingolong National Park

Mt. Eccles National Park and Mt. Napier State Park

Steiglitz Historic Park

Gellibrand Hill Park (Proposed Woodlands Historic Park)

The Department invites comment on the plans which specify conservation and management practices, and further developments to be undertaken in the parks. Written submissions will be accepted until the end of September or October (as indicated in the plan).

Copies are available from local CNR offices and:

CNR Information Centre, 240 Victoria Parade, East Melbourne 3002, Tel: (03) 412 4795.

Information Victoria, 318 Little Bourke St., Melbourne 3000, Tel: (03) 651 4100.

Source: The Age, Saturday 17 July 1993

Catchment and Land Protection Legislation: Proposed Revisions

The Victorian Government is updating Victoria's legislation to control land degradation (including the *Soil Conservation and Land Utilisation Act* 1958 and the *Vermin and Noxious Weeds Act* 1958). The overall aim is to increase the priority and resources given to land protection and catchment management programs. The Department of Conservation and Natural Resources has been reformed to help achieve these objectives and the Government is now seeking wide public input on the best legislative framework to underpin these programs. Copies of a discussion paper on the proposed new legislation can be obtained from DCNR by telephoning (03)412 4622. Comments on these proposals are due by September 10, 1993.

Source: The Age, Saturday 7 August 1993

N.B. The IFFA Committee is committed to putting in a submission commenting on the Government's proposals. This is an important issue, especially considering IFFA's past involvement with the issue of environmental weeds. Is there anyone out there who is willing to co-ordinate a submission? Please contact Dale Tonkinson on (03)654 1800 or (03)499 3085 if you're interested in co-ordinating a submission or contributing comments.

Nomination for the Flora and

Fauna Guarantee

As a direct result of the Knox Environment Society sponsored public meeting on the Flora and Fauna Guarantee Act, an application has been submitted for a "potentially threatening process". The nominated process is that of "the spread of *Pittosporum undulatum* in areas outside its natural distribution". This well-known environmental weed is prolific throughout the areas of Sherbrooke, Knox and Lilydale and can be found invading most areas of remnant vegetation.

One aspect of the nomination criteria is that: "The potentially threatening process poses or has the potential to pose a significant threat to the survival of two or more taxa." This criteria is easily satisfied in the nomination with attention being drawn to two orchid species and a species of *Dianella* which are all under serious threat from *Pittosporum undulatum* invasion. Further to this, the local species, *Pittosporum bicolor*, (Banyalla) is under threat from hybridisation with *Pittosporum undulatum* throughout the Dandenong Ranges. The resultant hybrids are widespread within the Dandenongs and at this stage it appears that the future of *Pittosporum bicolor* is at serious risk from genetic pollution.

If the nomination is successful, an action statement will be drawn up by the Flora and Fauna Guarantee Unit outlining the problems, Intended Management Action and the wider conservation issues relevant to the threatening process. A successful nomination will make this the first environmental weed species to be tackled in this way. Enough speculating for now, its all up to the Scientific Advisory Committee to pass judgement. - Darren Wallace (Nominator)

Source: Kestrel, Knox Environment Society Newsletter

Brisbane Bushland Scheme Wins Award

The \$22.4 million, two year bushland acquisition program, coupled with laws to protect vegetation around the city, headed up Brisbane's winning entry in the local government category for the 1993 Banksia Foundation Awards. Brisbane City Council was among 48 finalists named in the fifth Banksias, which were judged in Melbourne in June.

In his submission to the judging panel, Lord Mayor Jim Soorley listed the bush acquisition program and the vegetation protection ordinances alongside the introduction of a city conservation zone, a \$1 million advertising campaign to use public transport, the introduction of what he said was Australia's single largest kerbside recycling program and a major capital investment in secondary sewage treatment. The bush buy-up has

been funded by a \$20 a year ratepayer levy, which raises \$4.7 million annually.

Source: Brisbane Sunday Mail 6 July 1993

Notes From Toohey Forest Protection Society, Brisbane

Those present at the June meeting, a cold night, found out why lizards like basking in the sun during the day. Patrick Coupar, Curator of Vertebrates at the Queensland Museum, showed some superb slides and gave a very interesting talk about the reptiles that probably inhabit Toohey Forest.

The reptile fauna has not been thoroughly surveyed, but is probably one of the largest and most diverse in urban Brisbane. 31 species have been recorded but Patrick thought that probably 40 could be found there. They range from the conspicuous small skinks and blue tongue lizards seen around the garden to the legless lizards (which feed exclusively on skinks) and their close relatives, the geckos. Although frilled lizards are no longer seen, the bearded dragon, the Eastern water dragon and the lace monitor are still there. A wide variety of snakes include the blind snake, the carpet snake, the green tree snake and the small eyed snake. If you wish to identify snakes look at their scales or facial pattern, and for skinks at their eyes and legs.

Source: Toohey Forest Protection Society Newsletter June 1993

Nature Search in Queensland

NatureSearch is a community nature conservation project, started in January 1992, within the Queensland Department of Environment and Heritage. It is made up of 2,300 registered volunteers who record information gained from surveys on flora and fauna in specified locations and cover areas both urban and rural. To date, NatureSearch has collected nearly 50,000 records and the existence of certain species, formerly thought to be extinct in south-east Queensland, have been uncovered. To complement the work of the volunteers, a small team of full-time survey scientists tabulate data and pass it on to scientists at the Queensland Museum and Queensland University. Volunteers are varied in experience; from amateur naturalists to people with extensive biological qualifications. The way is open for anyone to assist with NatureSearch. As Glen Ingram, Senior Curator of Vertebrate Zoology at the Queensland Museum, says, "Many species are disappearing and hundreds of human eyes must gather information on their habits and habitats." For more information on NatureSearch write to: NatureSearch, Dept. of Environment and Heritage, P.O. Box 155, North Quay QLD 4002.

Source: Simply Living Magazine March 1993

Snippets: Cont.

Echidna Watch

The Pelican Lagoon Research and Wildlife Centre on Kangaroo Island, South Australia is undertaking the first echidna census to coincide with The Year of the Echidna in 1992-93. The short-beaked Echidna, Australia's most common mammal is known to be ubiquitous and in no apparent danger of extinction. Although recorded scientifically in Australia for the last 200 years, research is yet to uncover the echidna's life-span in the wild, how old they are at sexual maturity or how frequently they reproduce. Through Echidna Watch, scientists hope to solve these mysteries as well pinpoint the exact population of the mammal in Australia. If you would like to take part in the 1992-93 Echidna Watch, please write to: Fund for Animals, PO Box 126, Terrey Hills NSW 2084.

Source: **Simply Living Magazine March 1993**

Sparrows Feeding on Lerps

Recently, during a study of the health of River Red Gums (*Eucalyptus camaldulensis*) in the City of Springvale, House Sparrows (*Passer domesticus*) were observed feeding on lerps, which are a sugary secretion produced by some nymphs of sap-sucking bugs of the family Psyllidae. Some dense stands of young Red Gums along the railway line have heavy infestations of an as yet unidentified species of psyllid which produces a small shell-shaped lerp. A small group of House Sparrows were observed gleaning lerps from the leaves of these trees in July 1993. On closer inspection it was noticed that only the lerp, or sugary housing, had been removed by the sparrows, leaving a homeless nymph.

Such gleaning behavior has been observed in Bell Miners and is believed to stimulate the psyllid nymphs to suck more sap, which in extreme cases may contribute to tree decline.

Has anyone else observed sparrows feeding on lerps? Does anyone know which of the birds that feed on lerps eat only the sugary housing and which eat both the lerp and the nymph? If so please contact Damien Cook on (03) 543 8227 or 12 Alexander Ave., Clayton VIC 3168.

Scrambled Eggs at La Trobe

Notices at La Trobe University warning students to stay off a grassed area to protect a nesting plover worked well - until a groundsman on a tractor-mower tidied it all up.

Source: **Age Odd Spot 30 July 1993**

Spring Wildflower Walks: Euroa

Euroa Environment Group is organising a program of walks that will show you some of the best of our local wildflowers in a great variety of beautiful natural settings. Last year participants were treated to some really spectacular displays of colour in wild rock gardens, native orchids of many types, magnificent panoramic views, and a surprise here and there when an unusual or rare species was discovered. This year the walks will explore some new areas in the district and beyond, as well as the well known local beauty spots. There will be a number of different leaders, both from Euroa and outside organisations such as the Benalla Bushwalking Club, Field Naturalists and IFFA.

The walks vary in duration and degree of difficulty but an effort has been made to select routes that are not too challenging. Leaders aim to make the trips enjoyable for all the family - it is important for all ages to feel connected to nature! Spring weather being its unpredictable self, it's hard to be sure of the best time to visit each wildflower area. However, there is always something in bloom and the fresh air, scenery, and good company alone make the outings worthwhile.

Please bring the usual gear for walks and meet at the rear of Euroa Secondary College for all the walks where the wildflower garden is well established. There will be informal sessions on plant identification before each walk, arrive half an hour early if you're interested. Contacts: Ray Thomas (03) 628 2373 (w) or Shirley Saywell (057) 952300 (w).

The walks:

Sun. Sept. 12 1:30 PM. **Wildflowers of the plains and Goldfields.** An easy walk on flat terrain in some examples of the original vegetation of the Euroa district.

Sun. Sept. 26 1:30 PM. **Wildflowers of the Strathbogrie Foothills.**

Sat. Oct. 9 1:30 PM and Sun. Oct. 10 1:30 PM.

Wildflowers of Wallaby Gully and local roadsides. If you like rock gardens, this will really turn you on.

Sun. Oct. 24 10 AM. **Wildflowers of Mt. Wombat - Garden Range - Charman's Falls.**

On this mostly downhill, all day walk you will encounter rock gardens, great views, orchids, everlastings and a magnificent waterfall.

Sun. Oct. 31 10 AM. **Wildflowers of Torour Rock Slabs and White's Rock.** Hidden in the Strathbogrie Ranges are some really delightful jewels....

Sun. Nov. 14 10 AM. **Wildflowers of Warrenbayne State Forest.** Lovely bushland, half on granite and half on sedimentary rock...a great variety of forest types and wildflowers.

Sun. Nov. 28 8:30 AM. **Wildflowers of Mt. Buffalo.** An amazing diversity of vegetation and great views! Some will be making a weekend of it by camping at Lake Catani.

Jan 15/16 1994. **Family Weekend at Mt. Cobbler.** Easy walks, cool weather, the highest waterfall in Victoria, unbelievable views...

IFFA activities:

IFFA (Vic)

Next meeting:

Tuesday 31 August at 7:30* pm at the Herbarium Hall, Birdwood Ave, South Yarra (Melways map 2G ref 12A). Frankie MacLennan of Gippsland will speak on "**Conservation Covenants, Land for Wildlife and Rural Land Protection**". All welcome.

*NOTE THE EARLIER MEETING TIME. Speakers will start at 8:00 promptly.

Committee meeting:

Thursday 10 Sept. Dale's house, 22 Stortford Ave, West Ivanhoe, 7:00pm onwards.

SPIFFA

Mon Sept. 6 Waterfall Gully Ctty Centre, Cnr Bayview Rd and Nixon St, Rosebud South at 7.30 pm. Gary Summers - Ranger at Pt. Nepean National Park will speak on "**The Intertidal Zones at Cape Schank**". Contact Mark Adams (059)851122.

Indigenous Nurseries Network:

Tuesday August 31 6.30pm. (before main IFFA meeting). Contact Murray Ralph (03) 419 3040 or Sue Mills (03) 383 2937.

NSW activities:

Next meeting:

Monday 4 October 7.30 - 10.00pm at the Maiden Theatre, Mrs Macquaries Rd, Royal Botanic Gardens Sydney. "**A Dynamic Partnership - Birds and a native Botanic Gardens**". Presented by Alan Leishman, Field Ornithologist and Bird Bander, will be speaking on the Mount Annan Botanic Gardens which has been developing from a cleared pastoral state into a large native Botanic Garden with a wide range of habitats. Alan will describe his 7 year study of the changes and increases in the birdlife of the gardens. Contact Sally Fisher (02)9706486 (work), Penny Brown or Andrew McGahey (02)9133681 (work).

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 Membership 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 September 6.

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