

INDIGENOTES

VOLUME 2, NUMBER 1, JANUARY 1989.

January Meeting

Tuesday 31 January at 8 p.m. on the 3rd floor, Ross House, 247 Flinders Lane, Melbourne (between Swanston and Elizabeth Streets). To get in, press the doorbell.

February Meeting

Tuesday 28 February.

Mud Island Weeding Weekend

Saturday 2 April. A chance to have a good look at the island and remove some Boxthorn and Mirror-bush. See coming events for details.

Articles

Contributions to Indigenotes should be sent to the Editor, Tony Faithfull, 10 Alsace Street, Brunswick East 3057 (03) 3860264. The deadline for the next issue is 10 February.

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The Autumn Greenhood - *Pterostylis revoluta* R.Br. (Orchidaceae)

By G.W. Carr.*

The accompanying drawing illustrates one of the more common and widespread of Victoria's 220 odd orchid species (Forbes and Ross 1988, Carr unpubl. data). It was drawn from cultivated plants originally collected near Steiglitz in the Brisbane Ranges to the west of Melbourne.

The genus *Pterostylis* (Greenhood Orchids) contains about 130 species. The majority - over 100 - occur in Australia (Jones 1988), while New Zealand has 23 species (Johns and Molloy 1983). A few also occur in New Guinea and New Caledonia (Halle 1977). About 50 species are found in Victoria including several which are undescribed (Forbes and Ross 1988, Carr unpubl. data).

The Autumn Greenhood (*P. revoluta*) is one of the largest and most beautiful in the genus. It belongs to a group of summer and autumn flowering species which in Victoria includes species such as *P. longipetala* Rupp (Small Autumn Greenhood), *P. coccinea* Fitzg. (Prawn Greenhood) and *P. truncata* Fitzg. (Brittle Greenhood). These are characterised by precocious, early flowering stimulated by summer or autumn rains. Fertile plants bear a solitary flower on an erect scape without a rosette of leaves; the rosette is only produced by sterile or juvenile plants. Both fertile (a) and sterile plants (b) are seen in the illustration. The flowers appear in April or May and remain open for three or four weeks.

The species is widely distributed in Victoria from the far west to East Gippsland and Beaglehole (in prep.) recorded it for 14 of the major state distribution-grids. It also occurs in New South Wales, Queensland and the Australian Capital Territory (Jones 1988). *Pterostylis revoluta* is principally found on drier inland ranges, particularly the auriferous, box - ironbark forest region of northern Victoria and on granite hills. The species rarely occurs near the coast, such as at Anglesea, where it is known from one colony. Soils on which it occurs are usually shallow, clay loams or sandy loams derived from sandstone, shale and related geology or from granite. Ridgetops are its preferred location.

Like many *Pterostylis* species, *P. revoluta* is colonial and may form large aggregations containing hundreds of plants. Vegetative reproduction to

form colonies is like that in many *Pterostylis* species. New tuberoids (root-stem tubers) are borne on the ends of long underground stolons arising from the axils of stem bracts or scale leaves at a distance of up to about 25 cm from the underground stem. These (in an early stage of development) are seen in the plants illustrated (a and b). The sterile plant with a leaf rosette (b) has four such stolons and two are seen on the flowering plant (a). Normal roots, which are much thinner than the stolons, are also present.

Tuberoids are also seen in the illustration. Mother tuberoids produce either the leaf rosette or the inflorescence when growth commences in mid to late summer. Very shortly afterwards the daughter tuberoid commences development and in the plants shown is a small, irregular swelling at the base of the stem (adjacent to the mother tuberoid). This will increase in size, and by the end of the growing season in late October or November it will be as large, or larger than, the mother tuberoid.

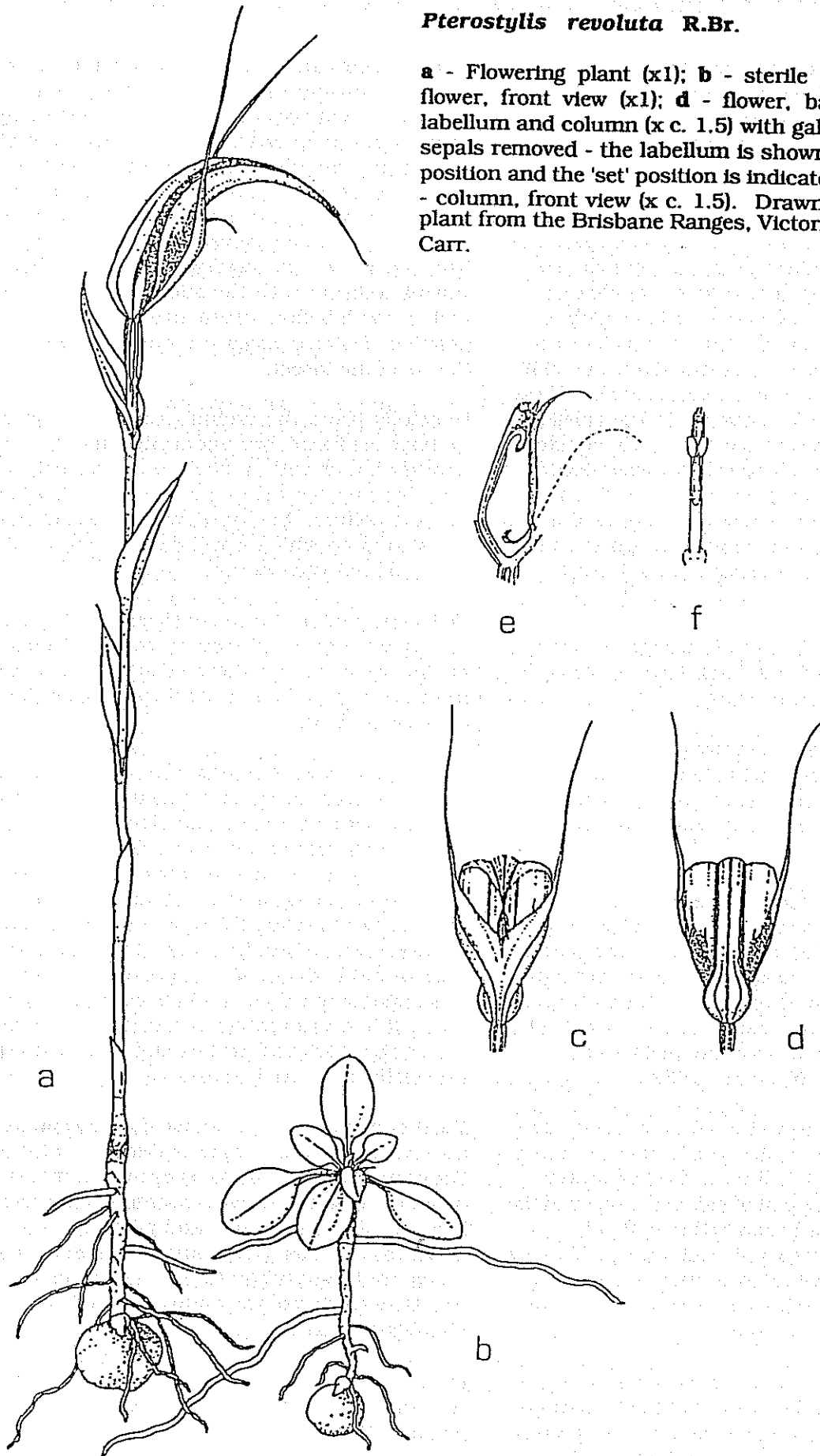
At the onset of summer dormancy the mother tuberoid withers away along with all the other parts of the plant except the daughter tuberoid and tuberoids produced on the ends of stolons. In this way the orchid plant - and this applies to the vast majority of Australian terrestrial orchids - has perpetual somatic youth: it is in theory immortal, without senescence and death arising from endogenous factors. Unfortunately data concerning longevity are unavailable and we know next to nothing about causes of death in plants - whether by disease, drought, predation, accident (e.g. unearthing by echidnas) or competition from other members of the vegetation community. There is good evidence to suggest several such causes of death in other orchids e.g. the spider-orchid *Caladenia hastata* (Carr and Kinhill Engineers 1988).

Flowering is highly erratic. In some years few or no flowers are produced though the tuberoids if of sufficient size will have produced embryonic flower buds. In this case - when inadequate moisture is available at this critical developmental time - the flower bud will abort and the plant will produce a rosette of leaves instead. Often the rosette leaves are intermediate in form between a typical, sterile leaf rosette and the sterile bracts of the flower scape. A favourable season will stimulate abundant flowering and it is with great

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Pterostylis revoluta R.Br.

a - Flowering plant (x1); **b** - sterile plant (x1); **c** - flower, front view (x1); **d** - flower, back view (x1); **e** - labellum and column (x c. 1.5) with galea and lateral sepals removed - the labellum is shown in the 'triggered' position and the 'set' position is indicated by a dotted line; **f** - column, front view (x c. 1.5). Drawn from a cultivated plant from the Brisbane Ranges, Victoria, April 1970, G.W. Carr.



The Autumn Greenhood (continued)

interest that orchid students await the autumn of 1989. This, of all years, is shaping up to be exceptionally good for autumn-flowering orchid species because of the extraordinarily wet summer.

One of the most fascinating aspects of the genus *Pterostylis* is its pollination biology and there are few parallels in the plant kingdom. *Pterostylis* bear myophilous (fly attracting) trap-flowers with a highly specialised construction which is basically similar in all species. *P. revoluta* belongs to the group of species (the majority) with erect, often long filamentous lateral sepals. These embrace the galea to form the trap. The galea (or 'hood') (a,c,d) consists of the intimately coherent dorsal sepal (produced forward as a long, decurved filament) and the lateral petals (a,c,d). The third petal (highly modified in nearly all orchids) is the labellum or lip which protrudes through the sinus - i.e. over the top of the partly united lateral sepals (d).

The labellum is mobile and when triggered from the 'set' position (a) flicks back into the galea (e) to lie against the column wings.

The column (e,f) bears a terminal anther partly enclosed by the two wings in the upper quarter (e). A large, raised, narrow stigmatic surface (e,f) is situated on the slender axis of the column below the wings.

The pollination of *P. revoluta* has not been described but is doubtless similar to that in other species. A pollinating insect (presumably a gnat) is attracted to the flower in response to unknown cues. If there is a floral reward attracting the insect such as nectar or pollen then it is not evident. Many orchids however are pollinated by deceit mechanisms (Dressler 1981).

A visiting insect lands on the labellum protruding through the sinus or walks onto it from the joined lateral sepals. The labellum is finely counterpoised and when the point of balance is reached the labellum tips suddenly and rather violently, springing into the triggered position (e). There it will remain for 20 minutes or more (depending upon the temperature), when it resets, ready to receive another insect visitor.

The insect now finds itself imprisoned in a trap formed by the galea, the labellum and the column axis and wings. The only escape route is upwards and out through a narrow passage between the

column wings and the upper part of the labellum. Its escape upwards is assumed to be encouraged by light cues from above as the galea has strongly translucent zones on the dorsal sepal and petals and heavily pigmented zones on the column wings. In escaping, the insect must brush against the pollen masses (pollinia) with its thorax. It has by this stage presumably received a liberal coating of 'glue' on its thorax resulting from its rather violent collision with the sticky stigmatic surface - when the labellum arced into the triggered position. Pollen masses are thus deposited on the thorax of the insect.

Hopefully (from the orchid's point of view) the perhaps confused, but undaunted insect will visit another flower with a labellum in the 'set' position; the process will be repeated but this time, bearing pollinia, the insect will be hurled against the stigma on which it will deposit pollen. Fertilization will thus ensue.

Following pollination or fertilization the flower rapidly withers and the ovary swells. Thousands of ripe seeds will be liberated within four weeks from the narrow longitudinal openings in the ripe capsule or fruit.

Pterostylis revoluta exemplifies the conservation status of many plant species particularly orchids in the Melbourne region and elsewhere in the state. It was fairly common in areas close to Melbourne, particularly in the foothill forests and woodlands on silurian geology to the east and northeast of the city e.g. Warrandyte, Eltham, Hurstbridge and Cottles Bridge (Beardsell and Beardsell 1983, Carr unpubl. data). Now it is sadly depleted in this region and will no doubt become a great deal rarer. It has succumbed to housing developments, grazing by stock and rabbits and to weed invasions, especially by annual grasses.

Further afield, I used to know of good populations on granite-derived soils near Geelong - at the Dog Rocks and the You Yangs. They no longer exist, despite the nominal reserve status of the areas, because of weed invasion and rabbit grazing. Far and away the most important weed species in these cases are the shrubby *Chrysanthemoides monilifera* (Boneseed) and the annual grass *Briza maxima* (Quaking Grass).

Descriptions and coloured illustrations of *P. revoluta* may be found in Nicholls (1979) and Jones (1988).

(continued on page 9.)

Tasmania's Grassy Remnants

City parks and cemeteries: Tasmania's remnant grasslands and grassy woodlands, a book written by Jamie Kirkpatrick, Louise Gilfedder and Rod Fensham, illustrated by Richard Hale. Published by Tasmanian Conservation Trust, 102 Bathurst St, Hobart, Tasmania 7000, 1988. Price \$10 including postage and handling.

Reviewed by R.F.Parsons*

This paperback gives an up-to-date account of the history, ecology and conservation of Tasmania's grasslands and grassy woodlands. It starts off with clear, convenient literature reviews of the history and ecology of grassy vegetation. It then describes all extinct, endangered, vulnerable and unreserved Tasmanian plant species from those habitats, using both written descriptions and useful line drawings. Chapter 4 classifies and describes the 37 plant communities involved; these are documented by 2x2 tables and maps for each in the appendices. The final chapter is a 20 page section on the conservation of these communities.

There is a discordance between the tables and the text; the table shows 38% grasses and graminoids, not 30% (see page 33). The table somehow omits the annual species yet its percentages total 107% instead of 100%.

In the main section on accounts of individual species, an approximate guide to the range of each on the mainland would have been handy perspective for the reader. There are some occasional errors - e.g. on p.55 *Calocephalus citreus* is described as 'usually a desert species'. The paucity of habitat and plant community data in this section shows how much we still have to do on the subject.

Given the importance of railway line reserves as refugia for native grassland in the mainland states, mainland readers will be surprised to find that Tasmanian rail reserves are not mentioned at all. It would have been worthwhile to explain the reasons for this. Given the horrific problems posed by aliens like *Phalaris* and *Stipa neesiana* on the mainland, it is surprising and pleasing to find that introduced herbaceous species do not generally supplant Tasmanian grasslands except after extreme disturbance or nutrient enrichment

Many of the species and communities dealt with occur in other parts of south-east Australia or have close analogues there. Similar books are badly needed for the other southern Australian states. This book is highly recommended for anyone with a passing interest in the biology and conservation of the grasslands and grassy woodlands, dealing as it does with the most pressing terrestrial conservation issue in southern Australia at the present time.

Regeneration of Basalt Plains Grasses

By Carl Rayner*

An interesting re-establishment of native grasses has occurred in my backyard.

In spring 1972 I rotary-hoed my backyard in East Keilor to a depth of approx 12 cm, to a fine tilth and sowed the normal mixture of exotic grasses. I am afraid I was part of that mentality that brainwashed you into planting lawn in your front and backyard. Initially the lawn seemed to grow successfully but after a few years it became very tussocky, not very good for World Series Cricket.

In the last few years since I have become interested in native grasses, I have found that the back lawn consists mainly of the following grasses:-
Stipa neesiana - introduced from South America
Chloris truncata (Windmill grass)
Bothriochloa ambigua (Red-leg grass)
Danthonia caespitosa (Common wallaby grass)

Judging by the vacant allotments nearby these grasses were present before I rotary hoed and with my subsequent management they have re-established. My backyard slopes down to the north therefore getting the full brunt of the sun, the soil is clay derived from basalt. I have never watered the grass in summer and it is cut high (approx 7cm) particularly in summer with the clippings remaining in the lawn.

I suspect that such re-establishment of native grasses in lawns is common as I first noticed Red-leg Grass in my lawn after seeing substantial flowering inflorescences of this grass in my neighbour's lawn while they were on holidays.

* 13 Judith Street, East Keilor, Victoria 3033.

Coming Events

JANUARY

- 28 - 30 Saturday - Monday. FNCV Fauna Survey Group, **excursion to Bamganic State Forest**. Continuing survey of forest isolates on the western plains. Contact Lawrie Conole (03) 481 4926.
- 31 Tuesday, 8 p.m. **IFFA meeting**. On 3rd Floor, Ross House, 247 Flinders Lane, Melbourne (between Swanston and Elizabeth Streets). To get in, press the doorbell.

FEBRUARY

- 5 Sunday, 10 a.m. La Trobe University Wildlife Reserves Gresswell Forest Project Day: **Weeding of succulent garden escapes**. Contact George Paras (03) 479 2871.
- 7 Tuesday, 8 p.m. **FNCV Fauna Survey Group meeting**. Astronomers Residence, Birdwood Ave., South Yarra. Contact Julian Grusovin (03) 898 7493.
- 9 Thursday, 8.00 p.m. FNCV Botany Group meeting. **"Alpine Plants and their Habitats"**. Hilary Weatherhead with Andy Blackburn, Ilma Dunn and Ian Morrison. Meetings held at the Astronomers Residence, Birdwood Ave., South Yarra. Contact Margaret Potter (03) 29 2779.
- 11 Saturday. **Leadbeaters Possum stag watch**. FNCV Fauna Survey Group. Contact Raymond Gibson (03) 874 4408 (A.H.) (03) 328 2441 (B.H.).
- 12 Sunday, 10 a.m. Friends of the Yarra **working bee at Galatea Point**, Yarra Bend Park, Melways map 2D reference D7. Contact Max Dean (03) 489 2154.
- 18 -19 Saturday - Sunday. **Water Rats at Werribee**. FNCV Fauna Survey Group. Contact Julian Grusovin (03)898 7493.
- 22 Wednesday, 10 a.m. Friends of the Yarra **working bee at Galatea Point**, Yarra Bend Park, Melways map 2D reference D7. Contact Max Dean (03) 489 2154.
- 24 Saturday. Field Naturalists Club of Victoria, Botany group excursion. **Lake Mountain**. Excursion will tie in with February meeting on alpine flora. Contact Margaret Potter (03) 29 2779.
- 25 Saturday, 2 p.m. **Weed pull, Temple Hill, Hurstbridge**. Melway map 185 reference

J12. Contact Lawrie Rigg (03) 434 6685. (Some participants are planning to stay in the area for the evening and have a barbeque; weather permitting).

- 28 Tuesday, 8 p.m. **IFFA meeting**. On 3rd Floor, Ross House, 247 Flinders Lane, Melbourne (between Swanston and Elizabeth Streets). To get in, press the doorbell.

March

- 5 Sunday 10 a.m. La Trobe University Wildlife Reserves Campus Reserve Project Day. **Poa labillardieri community establishment on carpet-mulched areas**. Contact George Paras (03) 479 2871.
- 9 Thursday, 8 p.m. **"From the Kimberley to the Cooper - a contrast"**. FNCV Botany Group meeting. Win Bennet with slides. Meetings held at Astronomers Residence, Birdwood Ave., South Yarra.
- 11 -13 Saturday - Monday. **Imverleigh Common**. FNCV Fauna Survey Group, continuing survey of forest isolates on western plains. Contact Lawrie Conole (03) 481 4926.
- 12 Sunday, 10 a.m. Friends of the Yarra **working bee at Galatea Point**, Yarra Bend Park, Melways map 2D reference D7. Contact Max Dean (03) 489 2154.
- 18 Saturday. **Leadbeaters Possum stag watch**. FNCV Fauna Survey Group. Contact Raymond Gibson (03) 874 4408 (A.H.) (03) 328 2441 (B.H.).

April

- 1 -2 Saturday - Sunday. **Mud Island Weeding Weekend**. 20 places available, first in first served. A chance to have a good look at the Island and remove some Boxthorn and Mirror Bush. Departs Queenscliffe 8 a.m. Saturday, returns Sunday evening. Bring your own food and camping gear. Tools, equipment and transport supplied by the amazing Department of Conservation, Forests and Lands Geelong Region. Ring Mark Trengove to book on (052) 98087.
- 2 Sunday, 10 a.m. La Trobe University Wildlife Reserves Gresswell Forest Project Day: **Nesting Box Erection**. Contact George Paras (03) 479 2871.

Snippets

A conservation strategy for Stawell

The Shire of Stawell has received \$30,000 from the State Government to employ a conservation officer for 2 years to produce a community-based local conservation strategy. - *Stawell Times-News* 25 November 1988.

Urban Wildlife Watch

The survey phase of Urban Wildlife Watch finished on December 31st, 1988. In early December, 212 bird, 31 mammal, 19 reptile, 8 frog, 10 fish, 168 invertebrate and 20 introduced vertebrate species had been recorded. Any outstanding records should be returned as soon as possible to Urban Wildlife Watch, Arthur Rylah Institute, 123 Brown Street, Heidelberg Vic 3084.

Wildlife Watch - a new group consisting of residents watching out for the safety of wildlife in the Dandenong Ranges, and not to be confused with Urban Wildlife Watch - launched its newsletter *Inside Out* in December. Graham Kenneday, IFFA member, has spearheaded this group, to educate local residents, lobby local land managers, and as a vehicle for encouraging residents to act themselves. Contact Wildlife Watch, 14 Kalulu Rd., Belgrave 3160, Phone 754 2423.

Moonee Ponds Creek, Brunswick

The Brunswick Tree Group has met twice to weed the indigenous vegetation remnant on the east bank of the Moonee Ponds Creek near Union Street. Removal of succulent weeds, cutting back Cottoneasters and Boxthorn and weed wanding exotic grasses was carried out. \$6000 worth of stolen fire arms was found, and the group is hoping for a reward from the insurance company. Contact Eric Ward, 119 Edward St, Brunswick 3056, Tel (03) 387 9490 (a.h.) or (03) 412 4768 (b.h.).

Boneseed Beserk!

Heavenly conditions for plant growth this spring and summer have led to prolific germination of soil-stored seed of Boneseed around Melbourne and the Mornington Peninsula. The hard seed can lie dormant in the soil for many years. Since plants can set seed within a year of germination, weeded areas must be reweeded annually to ensure long term eradication. Prolific germination this year means that this task is herculean. Your efforts, however small or large, to help weed infested areas will be valuable. Contact reserve managers near you.

Colac's 'urban forest'

An "urban forest" of mainly native shrubs and ornamental trees will be planted along the railway reserve in Colac. The planting is to be done in Autumn with the help of community groups in Colac. - *Colac Herald* 21 November 1988.

Cooper Street Grassland

Prior to the last state election the Labour Government made a commitment to purchase the Themeda grassland site at Cooper Street in Campbellfield, virtually the last patch of Themeda in the northern metropolitan area. It has not yet been purchased. Darcy Duggan urges all IFFA members to write to the Minister for Conservation, Forests and Lands emphasising the importance of acquiring this site and requesting progress towards its acquisition.

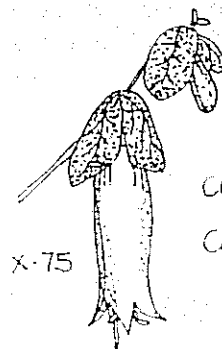
Willsmere and Yarra Bend Park

Submissions close before the end of January on options for formalizing the boundaries between the park and areas of Willsmere to be subdivided.

Option 3 - the consultants' preferred option adds only 200 square metres to the park, and fails to add significant segments of Willsmere - an area of high visibility from the park on the site of the nurses home, and an area with mature red gum overstorey near the laundry. Option 4, which would include these two areas, adding in total 15,200 square metres to the park, is preferred by the Yarra Bend Park Trust. Here is a priceless opportunity to regain some inner city parkland. Please write to the Minister for Planning and Environment, Attention Planning Co-ordination Branch, P.O. Box 2240-T, Melbourne 3001, supporting option 4.

Trees? No Thanks

In Brunswick, residents of Murdoch Street were asked whether trees should be planted in their treeless street. Forty out of 43 said no. - *Herald* 19 September 1988.



COMMON CORREA

Correa reflexa

Government mining approval spells doom for rare plant community

The Victorian National Parks Association learned that the new minister for Conservation, Forests and Lands, Kay Setches, has given government approval for the use of a unique montane swamp of State Conservation significance to deposit hazardous mining waste.

Macquarie Resources Pty. Ltd., a public company, is seeking approval for two mines on the border of the Cobberas Tingaring National Park. Critical to this is the approval for a tailings dam site in which highly toxic processing wastes are proposed to be deposited. Botanical reports show that this site is of state conservation significance - it contains 4 rare species of plants, two of which are listed for protection under the government's own Flora and Fauna Guarantee Act (1988). Three of the species were not recorded elsewhere. Of 16,000 sites sampled throughout Victoria, no floristic equivalent of this montane swamp complex has yet been recorded.

The reason for the use of this site for the tailings dam is largely economic. The company earlier proposed to use a cleared farmland site for the mining treatment plant and tailings dam. After the stock market crash the company admitted that the main reason for the change of site was economic and that the use of public land for the dam represented a public subsidy of the project.

Another curious side to the change in the tailings dam site is that the new treatment plant site is far closer to the area of the proposed mines. The company has lobbied the government to extend their operations into the National Park and has recently applied for mining development leases. These leases cover approximately 12,000 hectares, or 12% of the park area. This is of great concern as Macquarie Resources has in the past indicated to the government that the two sites adjacent to the park will not provide sufficient copper for proposed mining operations to be profitable. It is feared that the company will require access to copper deposits in environmentally sensitive areas within the neighbouring National Park for the operation to become economic. Government approval for the treatment plant and tailings dam site seems to make it far more likely that approval will be granted for mining to commence within the National Park.

Despite increasing pressure, the government has yet to proclaim all of Cobberas Tingaring National Park, passed in legislation over 10 years ago. Mining exploration within the park delayed its proclamation until June 1988, when exploration was to cease. After this time the government could at any stage have proclaimed the park, but has chosen not to do so.

Conservation in the Shire of Eltham

As a result of a public meeting on Conservation and the Environment for the Shire of Eltham, a group was formed aiming to further the cause of conservation of the Shire as a whole. The group consisted of representatives of the Australian Conservation Foundation - Diamond Valley branch, other conservation groups and concerned citizens. After a group meeting held in December 1988, eleven courses of action were put forward and it was decided that the one to take priority would be "The identification of areas of natural habitat in the Shire and their tenure". This was supported by the Shire Planner, Mr. Richard Allen who stated that the major problem confronting the Shire in matters relating to planning is the lack of knowledge about areas of natural bushland.

The group wishes to collate any relevant information to present to the Shire so that plans can be drawn up to protect areas where natural habitat exists. Hence they would greatly appreciate contact from people who have knowledge of the locality.

In addition, the need for immediate attention to the weed problem was brought up at the meeting. The group will be compiling a map of weed occurrence, and a weed pull has been organized for the 25th February, (for details see "Coming Events").

The group is determined to retain as much of the natural heritage of Eltham as possible and any responses from you would be welcome to make their aims successful. Contact ACF Diamond Valley Branch, c/o Mr Lawrie Rigg, 11 Dunbarton Drive, Eltham North 3095. Phone (03) 434 6685(h).



Leiolopisma guilfordi

The joy of not owning a cat

By Barbara Bloom*

Puss lived with our family in the suburbs for many years where she spent her days stalking and occasionally killing the introduced blackbirds and doves. At night she slept indoors as we feared for the possums which visited the neighborhood gardens in search of food.

When we moved to the Dandenongs three years ago, it was decided that because of the multitude of native birds attracted to our bird table and flowering shrubs, the cat should only be allowed outside the house for short intervals throughout the day. During the first winter, a dead male Dusky Antechinus (marsupial mouse) was found not far away from the house. I put it down to 'natural causes' as the males in the population die soon after mating. Several months later, however, a dead female appeared in the exact spot, only this time there were tell tale teeth marks on the head.

It was obvious that Puss would have to be kept inside unless alternative living arrangements could be made for her (I received death threats from the kids when I mentioned having her put down!). A relative in suburbia offered to take Puss if we supplied the cat Chow, so I guess she is back to hunting the doves and blackbirds.

What are the rewards of having a *Felis*-free household? Now the only Antechinus we see are alive and running around. White Browed Scrub wrens have recently taken up residence in our fernery where we have observed them collecting nesting material. Now I'm severely scolded when I visit the clothesline! The wrens have become so 'tame' that they now feed out in the open; perhaps they feel safe now that Puss no longer lives here. Brown Thornbills and occasionally Spinebills hover about the windows snapping up spiders from their webs (maybe it's time we cleaned the windows). Many species of honeyeaters feed on the grevilleas and other flowering plants surrounding the house.

We are convinced that the increase in the number of birds, particularly the smaller ones, and their lack of timidity, is due directly to Puss's absence.

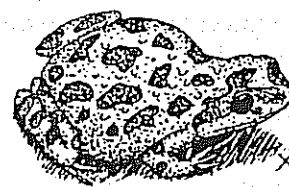
* Ferny Creek. Reprinted from *Inside Out* No. 1, the newsletter of Wildlife Watch Dandenongs.

The Autumn Greenhood

(continued from page 4.)

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SPOTTED GRASS FROG
Lymnodynastes tasmaniensis

Restoration and management in the USA.

By Tony Faithfull*.

I was excited to hear of the formation of a new group in the US, and summarize parts of their advertising leaflets for readers.

During the past decade in the U.S. the field of ecological restoration has evolved from inconspicuous beginnings into a discipline widely recognised as having a crucial role to play in natural area conservation.

Environmentalists have always been concerned about the preservation of natural and wilderness areas. Now as restorationists, they are taking on a new task - not just the preservation of what still exists, but a campaign to regain ground that has been lost.

The challenge is one that, by its very nature, demands a wide variety of skills and appeals to an almost endless array of interests. Scientists and administrators are involved. So are engineers and landscape architects, farmers and land-owners, natural area managers and representatives of numerous governmental agencies, naturalists and "plain citizens" - and a healthy mixture of professionals and amateurs.

The twice-yearly journal *Restoration and Management Notes*, edited at the University of Wisconsin, has been on the scene for some time. Almost unknown in Australia, R&MN is well respected by those who do know it as the only Journal devoted exclusively to the restoration and management of native ecological communities.

Restoration and Management Notes has become the official journal of the newly formed Society for Ecological Restoration and Management (SERM). SERM was organized in response to the growing interest in and in recognition of the interdisciplinary nature of restoration and management work and the clear need for better communication for those involved in it.

The Society aims to promote research into all areas of ecological restoration and management, to facilitate communication among restorationists in order to hasten the development of the science and art of ecological restoration and management, to

promote wider awareness of the value as well as the limitations of restoration and management techniques, to recognise individuals and organizations who have made outstanding contributions to the field of restoration and management, to contribute to the discussion of public policy in relation to restoration and management, and to develop grass-roots, public support for the restoration and sound management of natural areas in urban and rural as well as wilderness areas.

SERM members intend to pool their collective knowledge of restoration and management to develop easy access information systems including a national communication network, a directory of restorationists, managers and projects, annotated bibliographies, proceedings of Society meetings, special publications dealing in an authoritative way with various aspects of restoration and management, a database and network with sister organizations and prototype designs for restoration projects and monitoring programs.

The benefits of membership include the quarterly SERM newsletter, the twice-yearly journal *Restoration and Management Notes*, and a discount rate for the Society's annual conference. Anyone involved in - or interested in - any aspect of restoration and management, from the scientific and technical to the political, economic and philosophical, is invited to join. Annual membership rates for individuals in Australia (airmail) are US\$47 or US\$37 for students, and should be made payable to the Society for Ecological Restoration and Management, and mailed to SERM, University of Wisconsin Arboretum, 1207 Seminole Highway, Madison, Wisconsin 53711 U.S.A.

The Society's first annual conference in January 1989 (which IFFA member Tym Barlow has attended) was five days of poster and panel sessions, paper presentations, lectures, round tables, workshops and symposia. IFFA eagerly awaits a report from Tym on his return.

* 10 Alsace Street, Brunswick East 3057.

Education - The missing link

By John Reid*

During 1988 I have worked as project officer for the Victorian Association for Environmental Education's 'People in Their Environment' project.

Our primary aim was to involve children, school teachers and the general community in investigation of local issues relating to conservation and the problems posed by urban residential development adjacent to natural environments.

The Dandenong Ranges were chosen for the project because this area provides such an obvious focus for local environmental issues such as weed invasion and the effects of feral animals and pets on wildlife. The experience of working in the Dandenongs for the past ten months has strengthened my belief in the importance of Environmental education to the successful resolution of conservation problems. I will mention just a few brief impressions here, but hope that they illustrate the importance of raising community awareness of the environment, especially in primary school children.

The rapid decline of Lyrebirds in Sherbrooke Forest in recent years points to the need for an urban community that encroaches on a bushland area to know and understand its local natural environment. I believe that all schools in the Dandenongs have a major responsibility to teach children about their indigenous animals and plants. Many children have a poor understanding of the needs for survival of wild animals. Their perceptions seem to be based on their experience of domestic animals, especially their own pets.

As a result, they tend to think of interventionist and manipulative 'solutions' to wildlife conservation problems. Special crossings for wildlife, tunnels under roads and fencing are frequent suggestions during problem solving discussions with primary school children. One child suggested that rangers should tie a live Lyrebird to a tree and shoot the feral animals when they try to attack it.

While talking to one group of children recently, I asked them how many eggs a female Lyrebird can lay in one breeding season. The answers ranged from four to twenty before the twelfth child to try came up with the correct answer - one.

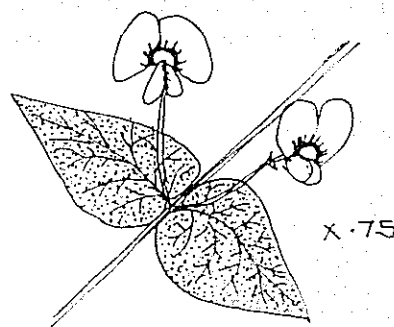
*C/o VAAE, 247 Flinders Lane, Melbourne 3000. Tel: 654 6826; reprinted from *Inside Out* No. 1, newsletter of Wildlife Watch Dandenongs.

An unimportant fact? I don't think so. Such a low rate of recruitment into the population makes that one chick per female per season a very important bird. When children are presented with crucial information like this they can understand why it is so important to protect native animals from introduced predators such as foxes, dogs and cats.

I also feel that the Department of Conservation, Forests and Lands must raise the profile of environmental education in park management as soon as possible. If local awareness is not raised considerably, the forests of the Dandenong Ranges will continue to degrade and each new disaster will take the unprepared community by surprise, just as the lyrebird issue has done.

The broader community can also be reached by the existing community education network. Kallista Community House are providing an effective example of community education in action with its ongoing series of workshops titled 'Living In Sherbrooke'. The November workshop on the wildlife of Sherbrooke presented an opportunity for discussion on wildlife conservation in the area and on the Shire of Sherbrooke's proposed animal by-law. People who had previously felt they had widely separate views on these issues found they had sufficient common ground to begin working usefully together.

It is extremely important that environmental issues don't divide communities. Increased awareness from ongoing environmental education programs in schools and the general community will go a long way towards preserving the natural environment and uniting people in their efforts to protect it for the future.



HANDSOME FLAT-PEA

Platylobium formosum

IFFA Meeting Venue

Due to size constraints and management decisions, IFFA needs to find a new venue for its meetings.

GOT ANY IDEAS?

Bring ideas to the January meeting or ring Michele Arundell on (03) 267 4173 (a.h.)

Mud Island Weeding Weekend.

April 1 - 2 Saturday - Sunday.

20 places available, first in first served.

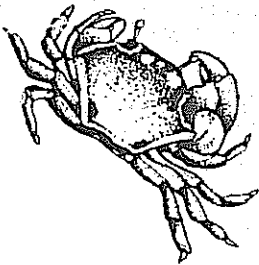
A chance to have a good look at the Island and remove some Boxthorn and Mirror Bush.

Departs Queenscliffe 8 a.m. Saturday, returns Sunday evening.

Bring your own food and camping gear.

Tools, equipment and transport supplied by the amazing Department of Conservation, Forests and Lands Geelong Region.

Ring Mark Trengove to book on (052)



Memberships

IFFA membership costs \$20 for families and groups, or \$10 for individuals.

Memberships should be sent to: the Treasurer, 10 Alsace Street, Brunswick East 3057.

MISSING BACK-COPIES OF INDIGENOTES?

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