

# News of Friends of Grasslands

Supporting native grassy ecosystems

September-October 2002



## SEPTEMBER-OCTOBER PROGRAM

**Saturday 21-22 September - South Coast trip** Let's see what those coastal headland grasslands look like at the end of September. Our coast trip this year will be on the weekend of 21-22 September, and Rainer Rehwinkel will be our leader again. Flowering will be a month more advanced than last year's trip. Our base will again be at Moruya South Head and we have already made tentative bookings for Friday 20 and Saturday 21 September in the same units as last time and in a cabin nearby. Accommodation will be no more than \$20 per person per night (depending on numbers), and some sleeping on the floor with (your own) sleeping bags and mats will be available for \$10 per night. Most people will come down on the Friday evening, but others can join us on the Saturday or Sunday mornings at Moruya South Head. Please contact Margaret on 02 6241 4065 if you are interested, and to book accommodation.



**Friday 11 to Monday 14 October - Cootamundra/Tumut "western" weekend** We'll take the grassy ecosystem word to the Cootamundra area (Friday and Saturday), and the Tumut area (Sunday and Monday). In October last year we saw some interesting flora in these areas and were even entertained by a pair of Brolgas near Cootamundra. Our leaders for these days will be Rainer Rehwinkel, Kevin Thiele and Suzanne Prober. We hope to catch up with members in those areas and any other interested parties. Each day will be self contained - contact Margaret for meeting details or re accommodation (in cabins in caravan parks and the cost will be no more than \$20 per person per night (depending on numbers)).

**26 October, 2pm - a top grassy woodland at Gundaroo.** Yumandi, Mal and Celia Lawrie's property near Gundaroo, has some very good samples of dry forest with a grassy understorey, Box-gum Woodland and secondary grassland dominated by Kangaroo Grass. Some highlights are the uncommon *Brachycome diversifolia* and a *Caesia* species. We'll meet at the General Store/Post Office in the main street of Gundaroo at 1.45pm. (Look for the public phone box in the main street.)

**9-10 November - Jackie Miles' inland coastal sites** - Jackie's program will start at a leisurely pace in the Bemboka-Candelo area on the Saturday, and we'll stay at a Burragate B&B on the Saturday night. On Sunday morning we shall drive down the coast to Eden, heading inland to cemeteries at Towamba, Rocky Hall and Wyndham, and leave the valley via Cathcart & Bombala. Each day will stand on its own, and accommodation at Geoff's and Margaret's at Nimmitabel on the Friday



night is available. On Saturday night, the B&B will be \$20 per person and that's with linen provided, etc. They also have camping sites for \$10 per night. It's a great location and we shall do a little spotlighting with great expectations!

**Saturday 24 November - Tinderries walk** and a grassland on the way. A visit to those alluring mountains east of Michelago.

**December - Smokers Flat in Namadgi NP.**

## CONGRATULATIONS AND THANKS:

*The East O'Malley Story* by Groundcover

FOG congratulates the ACT Government and thanks the many people who persuaded it to postpone its decision to auction the 27ha area of high conservation value woodland in East O'Malley.

As the last newsletter was going to press, the office of Kerrie Tucker (Legislative Assembly Member, ACT Greens) discovered that the East O'Malley site had been advertised for auction. The non-announcement of this decision - slipping it through - was itself appalling, as Minister Simon Corbell was aware that many people were awaiting his decision.

East O'Malley was always a potentially explosive issue, because in *Action Plan 10, Yellow Box Red Gum Grassy Woodland: an endangered ecological community*, the area along with several other areas of high and very high conservation value were left earmarked for development. Many conservation groups (eg the Conservation Council, Canberra Ornithologists Group and FOG) objected to this through the various drafts of Action Plan 10. This flaw is the main reason why FOG has lobbied for a review of Action Plan 10, which has finally come to pass.

When the Control Plan for East O'Malley was released, it showed a large area earmarked for development. Both the Conservation Council and FOG in their comments opposed the development partly because they were given inadequate time to respond. Subsequently FOG, after investigating the area, confirmed its view that most of the area should not be developed (FOG Newsletter January-February 2001).

Before the Preliminary Assessment for East O'Malley was published, the then Liberal Government attempted to broker a compromise with the Conservation Council and announced that a further area would not be developed. While this was welcomed, the Conservation Council and FOG decided that this did not go far enough. In its submission opposing the Preliminary Assessment, which FOG slammed as shoddy, FOG focussed on new and compelling evidence provided by Richard and Gill Langdale-Smith on bird species using the 27ha area proposed for development. The bird species included two NSW threatened species and several others known to be in serious trouble (FOG Newsletter November-December 2001). *Story continues on next page.*



Michael Mulvaney, an authority on Yellow Box Red Gum Woodland and a local resident, put an excellent submission together on behalf of the Red Hill Regenerators pointing out the importance of East O'Malley in the Yellow Box Red Gum Community as a whole. The Chifley Pearce Urban Landcare Group, led by Will Raymond, also put a substantial submission together.

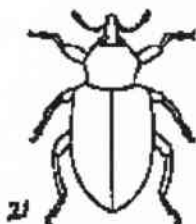
Each of these organisations and people has provided the mainstay of effort but have since been joined by many others. It is also important to mention the Conservation Council's Working Group on Woodlands and Grasslands (WGWG) which often provided a forum to review the progress on East O'Malley.

Prior to the last ACT election, the Conservation Council arranged a letter to all candidates, signed by 30 groups, to win support for East O'Malley and to seek a review of Action Plans 10 and 1 - *Action Plan 1: Natural Temperate Grassland: an endangered ecological community* (FOG Newsletter November-December 2001). Simon Corbell, on behalf of the ALP, acknowledged the importance of East O'Malley and agreed to the review of Action Plans 1 and 10 (FOG Newsletter January February 2002).

When in office, a decision on East O'Malley was delayed while Simon looked for alternatives. In our last newsletter we mentioned "the Government sent a signal (letter to Will Raymond) that residential development would proceed (at East O'Malley), but following a lobbying flurry it now appears that the situation is on hold temporarily." In fact various groups were given various optimistic signals and so the decision, when it came, was surprising.

The decision was justified by saying that the review of Action Plan 10 had occurred, weasel words later withdrawn, and that the advice of both Environment ACT and PALM was that keeping East O'Malley wasn't necessary to save the ecological community. Two other key factors were mentioned: the lack of land available for development and the need to produce a Government Budget surplus. The amount the Government hopes to get is "commercial-in-confidence," but figures of between \$10m and \$40m have been quoted. The first response was a motion by the Greens and Democrats in the Legislative Assembly to stop the auction; it was lost 15 to 2. Unfortunately that motion had to be bought on very quickly, and there was little time for lobbying, due to the Legislative Assembly going into recess.

Many articles and letters started to appear in the press reporting on the ever-increasing opposition. FOG wrote to each member of the



Legislative Assembly. Many individuals and members of FOG and other organisations wrote to, or contacted, Legislative Assembly Members to seek a reversal of the decision. There was intense lobbying behind the scenes. Government sources later admitted they were surprised by the strength of the opposition. Some influential members of both the Liberal Party and ALP expressed

sympathy for the lobbying activity. The various groups came together and the Conservation Council organised a petition which collected over 800 signatures in two weeks.

Five groups, including FOG, made "complaints" to the Commissioner for the Environment who carefully went over the facts with all stakeholders and finally recommended that the auction be postponed until after a real Review of Action Plan 10 had been undertaken. As usual, the Commissioner's Office prepared a very thorough and dispassionate report. Simon Corbell accepted the Commissioner's advice, although he has stated that he hopes the land auction will take place before June 2003, on the understanding that the Review of Action Plan 10 will be completed by April 2003.

#### Articles in this issue:

- Congratulations and thanks: the East O'Malley Story
- Australian Grasslands: their status and future for grazing, part 3, future directions
- The First Monaro People
- Don't panic - it's Hairy Panic Grass

An interesting post script is a letter quoted in the press from Environment Australia pointing out that the ACT Government had the right to auction the land but that the developer may be required to prove that the development was not inconsistent with environmental values.

The new ALP Government has been committed to a more open approach and we see much evidence of this. While the initial handling of the auction does not illustrate this, there are strong signals that consultation will be more open in future. Environment ACT is putting together a substantial recovery strategy for woodlands, although FOG and other groups still hold some serious reservations about what is on offer. The battle for East O'Malley is not over, but there is now a much greater understanding of its importance and a strong and vocal sentiment in the Canberra community about saving threatened ecosystems.



#### CENTRE FOR CONTINUING EDUCATION

PHONE: 6125 2892

FAX: 6125 5938

EMAIL: [enrolments.cce@anu.edu.au](mailto:enrolments.cce@anu.edu.au)

#### Understanding birds

Ian Fraser

6.30-8.45pm on 6 Wednesdays from 23 October + 2 x 3hour field-trips, 8-11am Saturdays,

23 November & 7 December - \$265

Learn to think like a bird! Evolution, biology, behaviour, taxonomy of birds, with an Australian emphasis; birdwatching books, tools and techniques. Lots of slides.

#### Understanding orchids

Ian Fraser

6.30-8.30pm on 2 Wednesdays 9 & 16 October + 1 x 6hour field-trip, 9am-3pm Saturday

19 November - \$138

Learn something exciting about this most recent, most successful and most extraordinary group of plants, which in a good season are abundant on our very doorstep. Evolution, ecology and conservation from a self-taught orchidologist. Many slides. NB this is not a gardening course.

**Booking essential. Fees must accompany enrolment.**

## NEWS ROUNDUP

### FOG visits Site 36

*Aristida*

On a sunny 27 July FOG visited two areas on properties that make up Site 36 in the ACT Grassland Action Plan. This site is on properties that are along Jerrabomberra Ave and the Monaro Highway which consist of Spear Grass (*Austrostipa spp.*) and Wallaby Grass (*Austrodanthonia spp.*) and contain the Grassland Earless Dragon. Jenny Ipkendanz from Callum Brae started the afternoon by telling us of her experiences with Serrated Tussock (*Nassella trichotoma*) and attempts to control it. On our wanders on both properties we managed to find quite a few plants of interest and these could be identified even at the height of winter. Perhaps the most stunning was the stand of Barbed Wire Grass (*Cymbopogon refractus*) on Woden, which was accompanied by Kangaroo Grass (*Themeda australis*). It was a learning experience in so far as it was a practical example of the difficulties of managing remnant grassland in a peri-urban setting. The weed problem is a real difficulty. Our thanks to Jenny Ipkendanz and Charles Campbell for allowing FOG onto their grasslands

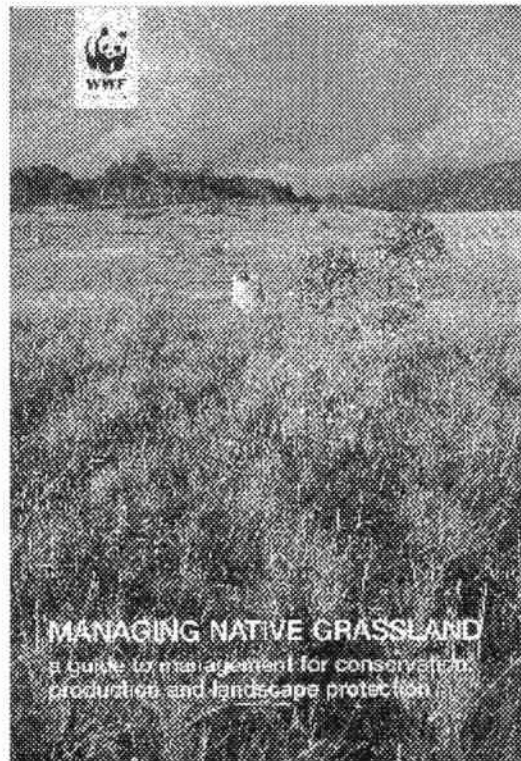
### Fire regimes in grasslands

*Aristida*

Twenty years ago CSIRO published *Fire and the Australian Biota*. Now we have *Flammable Australia*. One of the papers is by Ian Lunt and John Morgan on the role of fire regimes in Temperate Lowland Grasslands of south-eastern Australia.

They state that over 99 percent of grasslands in most regions have been destroyed or highly modified for agriculture. Fire is excluded from most agricultural operations and is regularly used in only a small proportion of grassland remnants. Most of the grassland fire literature focuses on frequently burnt grasslands dominated by Kangaroo Grass in western Victoria, and little information is available on grasslands dominated by other species. They say that Kangaroo Grass tolerates frequent burning, and many remnants with a diverse flora are burnt at one to three year intervals. They discuss the fire ecology of Kangaroo Grass grasslands and develop a conceptual model which highlights the importance of disturbances such as fire for preventing competitive exclusion by the dominant grasses.

They say that relatively little fire research has been conducted in Australian temperate grasslands compared to sclerophyllous ecosystems. Issues requiring further research include: experimental studies of ecosystem responses to particular fire regimes; identifying processes that promote seedling recruitment; and the effects of different fire regimes on grassland fauna and soil nutrient fluxes.



### A little beauty

WWF has produced a booklet, *Managing Native Grassland: a guide to management for conservation, production and landscape protection* by David Eddy. In easy to read language it explains what native grasslands are, why conserve them, what threatens them, why they need management, and how to manage them. The many photos of landscapes and plants, also by David, are superb. The cover page included here shows grassland in the foreground with woodland and possibly dry forest at the back. The publication is free, but you need to contact WWF quickly for a copy. FOG has some spare copies and it will give away one to a reader who gives us the proper or scientific name of each small fauna appearing in this newsletter. To be strict, if we get more than one right answer we will randomly selected one. Have a go. Drawings by Roger Farrow - FOG Insect Workshop.

They conclude by stating that it is clear that far more ecological research is required to enable burning regimes to be confidently tailored to individual grassland remnants. They argue that in the meantime, however, many productive grassland remnants need to be continually burnt to prevent further declines in plant diversity.

### Selling off TSRs

*The Land*, 1 August, reported the defeat of a motion at the NSW Farmers Association annual conference to close Travelling Stock Reserves (TSRs). Those supporting the motion regard TSRs as a source of weed infestation, animal disease and a financial burden on Rural Land Protection Boards. The article quoted that last year Young RLPB had spent \$194,000 maintaining its TSRs, while income from stock fees was \$41,000, a shortfall of \$153,000. It was further argued that a fee of 70cents per cow per week was charged to use TSRs, whereas corresponding private

### Community perceptions

In our last issue we ran a small story by Rob Gregory, a university student, on Heywood Park. Rob has since completed his small project and sent FOG an electronic copy of his report, *Not In My Park. Community Opposition to the Enhancement of Urban Biodiversity: A Case Study of Heywood Park*. This is an interesting and very well written and researched piece (eight pages) covering the importance of biodiversity. He covers community perceptions of this simple but complex concept, as well as the history of Heywood Park and recent plans to restore it. The report is instructive on many levels, one of which is how to write up a nice piece on a particular site. If you want a copy of the report please contact Rob: [rcgregory@bigpond.com](mailto:rcgregory@bigpond.com).



## NSW Pollies discuss environmental tax

*The Land*, 1 August, mentions that both Premier Bob Carr and Opposition Leader John Brogden support the concept of a community tax or levy to restore farmland and the environment. If our readers know more of the detail, please let us know.

## Grassy Box Woodlands

Lorraine Oliver has taken over as co-ordinator for the Grassy Box Woodlands Conservation Management Network from Erica Higginson. To find out more about this excellent project there is a new CMN web site that looks at this and some other networks and what they are trying to achieve. The address is [www.conservation-management-networks.net](http://www.conservation-management-networks.net).

## GrassEcol Update

Donna Smithyman

*FOG's March-April Newsletter introduced Donna Boyle, as the new Grassy Networker taking over from Helen Ryan. Donna has recently married (congratulations) and changed her name to Smithyman, and has been very busy. She makes regular updates to GrassEcol and the following are some extracts. In June she reported:*

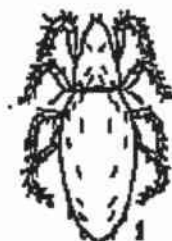
Hello everyone. Before I get into the roundup I have a request for any information or contacts on treating/managing Chilean Needle Grass (*Nasella neesiana*) in native grasslands. I've had a couple of people ask about it so I'd like to get an idea of what data is out there.

Queensland - Anyone interested in adopting or promoting procedures for preventing the spread of weeds, particularly machinery hygiene, the Department of Natural Resources and Mining has a great set of guidelines on the web. Down around the Melbourne area the maintenance of linear reserves through slashing has lead to the rapid spread of Chilean Needle Grass. The sooner machinery hygiene procedures are required through contractual arrangements the better for our roadside reserves. If interested check out this website: [www.nrm.qld.gov.au/pests/weedseed/guidelines.html](http://www.nrm.qld.gov.au/pests/weedseed/guidelines.html).

ACT - I recently visited Canberra and enjoyed the hospitality of Geoff Robertson from FOG. Despite being constrained by time, Geoff managed to show me a couple of grassland sites around Canberra itself, also giving me a feel for the landscape. The ACT still has good quality remnants but it is obvious that it's going to be a tough tussle between protecting grasslands/grassy woodlands from development as Canberra expands. How do you make grasslands a

priority in planning? East O'Malley, a 27ha 'high quality' Yellow Box Red Gum grassy woodland, is up for auction in August. The area of East O'Malley was to be considered for incorporation into Canberra Nature Park during the review of the Canberra Open Space System as there is a strong view that the O'Malley land has higher conservation value than some of the other protected woodlands in the ACT. The decision to auction the land for residential purposes came as an unwelcome surprise. The priorities for the Government are becoming clearer.

Victoria - I have just received a video from the Department of Natural Resources and Environment (Bendigo office), entitled 'Treasures of our Grassy Woodlands'. It is a 15-minute presentation that has been supported by a variety of organisations (NRE, Land for Wildlife, North Central Catchment Management Authority, NHT, Bushcare and Trust for Nature). It highlights the grassy woodlands of Northern Victoria and includes footage of the Grey-crowned Babbler. The aim of the video is to help increase awareness of the delights of these woodlands in north central Victoria.



The Albion Resource Centre for Grasslands located on the campus of Victoria University of Technology (St Albans), has changed its name to Iramoo Grasslands and Sustainable Living Precinct. In Woiworong (the local Aboriginal dialect) Iramoo is the name for the grassy plains around Melbourne. At the education centre they run a program called 'Wild Research' where 12 students at a time, to minimise impact, investigate different aspects of grassland ecology. These students are environmental leaders who take what they have learnt back to their school. Iramoo is also the home of the Friends of the Striped Legless Lizard. The 35ha site adjacent to the Victoria University campus hosts the largest population of Striped Legless Lizards anywhere. There is a proposal out for consideration for the group to change their name to the Friends of Iramoo and the Striped Legless Lizard.

*July Report:* In talking to people working on grasslands there are still plenty of questions to be answered and puzzles to be

solved in order to obtain some long term security for the remaining pockets of grassland. Two issues I believe to be very important in achieving this are: one, having systems in place that promote conservation on private land, and two, open and active communication channels in which information can be shared and problems (and successes) discussed. So far only varying degrees of these things are in place. Other issues could include management, money/resources, weeds, awareness, appreciation, legislation, apathy, priorities, etc. I'm interested in hearing from those at the coalface what particular barriers you are facing in regards to grassland conservation. Speaking of conservation on private property, there are two forums coming up in August which aim to discuss the issues involved.

I have probably mentioned this before, but I believe that there is a lack of useful up-to-date extension materials out there specifically for grasslands. David Eddy has just produced an excellent land management guide but other resources (static displays, posters, pamphlets, stickers, etc.) are either few and far between, or too old. These types of extension items are either to educate or simply stimulate interest, which is the first step towards awareness. They can also cost a lot to produce.

I know some of the government departments, such as NRE, have fact sheets and action statements on their web sites but often people don't know where to look for them.

I'm really interested in hearing what people are using for extension purposes and producing a list of extension resources. Some will be specific to a region, community or species, while others will be more general. It would be a good resource to link a list of what is available, and where, to the Grassy Ecosystem Network website: [www.ea.gov.au/land/bushcare/contacts/grassnet.html](http://www.ea.gov.au/land/bushcare/contacts/grassnet.html).

## Darling Riverine Plains Project

Alan Ford

The Darling Riverine Plains is a bioregion extending from Moree to Menindee and south to Dubbo. It is the subject of a two year study that will improve knowledge of biological diversity in the region.

Through plant and animal surveys, areas of high biological diversity will be identified. The emphasis of the National Parks and Wildlife Service surveys was on native fauna and flora, primarily birds, bats, other mammals, reptiles and frogs. The Australian Museum studied insects in the area. They recorded 325 species of fauna, 486

plant species and, while the invertebrate data has not been completely analysed, they have 145 ant species and estimate around 200 spider species.

The bioregion was chosen as the subject of this form of survey as it is one of the most extensive riverine environments in inland Australia. The survey will assist in identifying the gaps in our knowledge of the plants and animals, and managing land, river and wetland quality. The extensive riverine environments within the region are valuable habitats for the support of many native species - less than one percent of the region is within conservation reserves.

### Is fencing enough?

This was the title of a paper recently published by Peter Spooner, Ian Lunt and Wayne Robinson in *Ecological Management & Restoration*, vol 3 no 2, August 2002. The authors summarise research undertaken at 47 sites fenced by Greening Australia (NSW) for 2-4 years. Fenced and unfenced sites were used using split-plot sampling. Woodlands sampled were dominated by Yellow Box/Blakely's Red Gum, Red Box or Cyprus Pine.

Tree recruitment was found in 59% of fenced sites and 13% of unfenced sites. Fenced sites also had significantly greater cover of native perennial grasses, less cover of exotic annual species and less soil compaction. However, outcomes varied among different woodland ecosystems and sites. Tree recruitment did better where there was better perennial grass cover, and there was less regeneration where exotic annual grass cover or overstorey crown cover was dense. Few shrubs were recovered in either area.

Unfortunately, the authors could not say whether there was some bias in the selection of areas to be fenced, but assuming that both fenced and non-fenced areas were similar before fencing, the results show a strong argument in favour of fencing. Interestingly, they also turned their attention to what might be preventing regeneration in some plots and made a case for supplementing the fencing effort. It is a good read for would-be restorers.

### Not breeding like rabbits

Canberra Times 8 August ran an article headed "virus could put end to breeding like rabbits" by John-Paul Moloney. It described CSIRO scientists' efforts to introduce a virus to stop rabbits breeding. Peter Kerr, the research team-leader, predicted that future wild populations could be 80 percent infertile. Because of the genetic

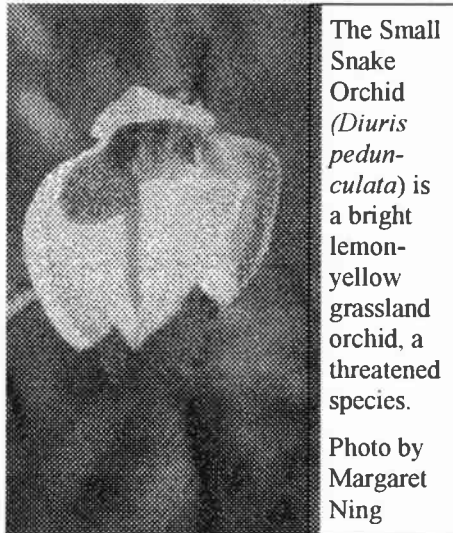
modification concern, Peter Kerr said that CSIRO was being very open about this research.

### FOG submissions

Apart from East O'Malley, this has been a very busy period for FOG. Copies of any of the submissions mentioned below are available to members.

### Vision for Canberra

The last issue published FOG's vision of *Strategic Planning for Canberra*. Copies of this were subsequently sent to each member of the Legislative Assembly. Fortunately or unfortunately this came hot on the heels of our letter on East O'Malley. Nevertheless, a series of meetings has been planned. Already meetings have been held with Kerrie Tucker and her office and with Simon Corbell's, Jon Stanhope's and Bill Wood's offices. Meetings are planned with Bill Wood, Simon Corbell and Helen Cross in the near future. This paper is greatly assisting us with some of the other submissions mentioned below.



The Small Snake Orchid (*Diuris pedunculata*) is a bright lemon-yellow grassland orchid, a threatened species.

Photo by Margaret Ning

### National Recovery Plan

FOG, as a member of the Natural Temperate Grassland Recovery Team, was asked for comments on the draft *Final National Recovery Plan for Natural Temperate Grassland of the Southern Tablelands (NSW and ACT): an endangered ecological community*. While endorsing everything proposed, as a minimum, FOG submitted that it wanted to place on record its view that the approach outlined in the plan had not resolved all operational problems with the definition of Natural Temperate Grasslands, which in its opinion may leave some important remnants unprotected. In addition it considered that the resources requested were far too low and there was insufficient strategy for recovery/restoration

of lower quality Natural Temperate Grasslands.

### Tuggeranong Homestead

In preparing its comment on *Draft Variation to the Territory Plan No. 196 (DV 196) Tuggeranong Homestead Precinct Heritage Places Register*, the Minders of Tuggeranong Homestead (MOTH) requested assistance from FOG to look at the natural values of the precinct. This it did some months ago, helped to prepare a broad conservation management plan for the Yellow Box Red Gum Woodland and adjacent Natural Temperate Grassland, and gave a short presentation to a subsequent MOTH meeting. In addition it was decided to assist Joan Goodrum prepare her submission linking European history, past and shared Ngunnawal history and natural history. FOG subsequently also made a submission on the Homestead.

While both the woodland and grassland are of poor to moderate quality, there is an opportunity to restore them and to link their presence with both European settlement and the Ngunnawal people. This offers exciting reconciliation and public education possibilities. The site also has some wonderful views illustrating the importance of natural landscape in conservation. These landscapes were also important to Ngunnawal people. The site has a number of other natural assets of interest including a perennial soak and evidence of former wetlands.

### Pedal Power

Pedal Power is working on a proposal to establish a walking, mountain bike and service road within the rail easement along the old Queanbeyan to Bombala line. Members of FOG joined Pedal Power recently in a walk from Old Tuggeranong Road to Royalla.

FOG decided that the proposal has great merit especially if it leads to the greater protection, conservation, management and restoration of native vegetation communities, (particularly grassy ecosystems such as Yellow Box Red Gum Woodland and Natural Temperate Grassland) and threatened species in the easement. During the walk we saw a Hooded Robin.

FOG has discussed ways of mutual cooperation such as producing a pamphlet highlighting the natural assets of the easement and has made some suggestions for a broad conservation management plan.



### *ACT industrial land use policies*

FOG made a submission on *Draft Variation to the Territory Plan No. 175 (DV 175) Industrial B3 Land Use Policies*. Under DV175, certain areas with threatened communities and species would continue to be classified as industrial. FOG advocated that sensitive conservation areas should be placed in Canberra Nature Park or a conservation reserve and not earmarked as 'industrial'. Second, FOG expressed concern that the consultation process underlying DV 175 follows an unacceptable "business as usual" approach, lacking any strategic approach to conservation planning.

### **Gungahlin Drive Extension**

FOG was invited to attend one of the recent Gungahlin Drive Extension (Western Alignment) Targeted Stakeholders discussion sessions and asked to give a presentation. Five other community groups, as well as many ACT Government staff, attended the session. It was explained that the road between the Barton Highway and Glenloch Interchange was only 'conceptual' at this stage, ie there was no definite siting proposed. Some very interesting information and arguments emerged about overall costs and benefits and public transport alternatives.

In its presentation FOG said that there were a number of valuable ecosystems along the present alignment including Yellow Box Red Gum Woodland, Natural Temperate Grassland (at either end), and two dry forest communities. One, Black Mountain, was very orchid rich and nothing should be allowed to affect such sensitive species. These were also concerns about several threatened species along the route. From FOG's perspective, it is important to know where the recommended route will go before more definite recommendations could be put.

## **AUSTRALIA'S GRASSLANDS: THEIR STATUS AND FUTURE FOR GRAZING**

### **Part III - New Directions**

*Ken Hodgkinson*

#### **Introduction**

There are no simple prescriptions for addressing the emerging and existing issues outlined in Part 2 driving the intensification and de-intensification of grazing in pastoral Australia. But strategies need to be developed to address the issues at paddock to region scale and taking into account opportunities for land use change and local and national community aspirations.

#### **Policy**

Federal and State governments have a wide range of policies for land, water and vegetation management. These are applied at local government level close to pastoral communities. Higher levels of government develop strategic policies, but it is local government that make detailed decisions that balance pastoral and other industry development with the need to protect natural resources.

Local government is the most significant sphere of government in regulating land use. Most are actively involved in managing natural resources but local governments are neglected by many decision makers, not only at State and national scales, but also by regional structures, such as catchment management committees. Local governments also find it difficult to access new information.

It is appropriate that policies are reviewed and this is occurring now for natural resource management at Federal and State levels. The impact on intensification/de-intensification of grassland use is uncertain. There is close cooperation between some important Non-Government Organisations in developing proposals to government, such as a recent paper on natural resource development prepared by the Australian Conservation Foundation and the National Farmers Federation. **The pastoral community and other stakeholders need to participate in policy development, along with industry and government.**



#### **Pastoral communities**

Australia has an extensive network of "landcare" groups. These started after urban taxpayers queried governments about dust storms over Melbourne and major farmer and conservation groups began lobbying the Federal Government. The Australian government spent \$360 million in the last decade supporting Landcare groups. The Landcare movement was intended to achieve more sustainable use of Australia's farming lands and enhance biodiversity. It has become a catalytic program for engaging pastoral communities and others, and producing more aware, informed, skilled and adaptive resource managers with a stronger stewardship ethic. Stewardship or land ethic is 'a set of values that engenders an appreciation of, and respect for, the land as the basis of our prosperity and quality of life'.

Landcare is increasingly heralded as an Australian success story, with more and more developed nations examining Landcare as a model for rural development. Indeed, Landcare has mobilised a large section of the rural population; embraced a range of community development activities that have increased awareness of issues and enhanced landholder skills and knowledge; and has accomplished on-ground work likely to have an impact upon land and water degradation at the local scale. There are now over 2,500 Landcare groups with 65,000 volunteer members involving about 30 percent of the pastoral community. Landcare is therefore an important international example of government-sponsored community participation in a developed nation.

However, Landcare has been criticised as an exercise in shifting responsibility for action from the government to local communities. Governments exert considerable control over groups through the allocation of funds to projects that address government priorities. Agency staff play an important role in the decision making of many groups, and group work is significantly related to government funding and information. Others have highlighted important Landcare Group management issues including inadequate leadership and management skills training, inadequate scientific advice and monitoring, low turnover of leadership positions and gender stereotyping with group leadership role. Conservationists are alarmed by continued loss of critical habitats and believe Landcare is not adequately addressing biodiversity conservation.

The two key assumptions underlying the community Landcare program are that attitude change leads to behaviour change and groups will accelerate attitude change. A survey of rural property owners in south-east Australia about Landcare however failed to establish any differences in the stewardship ethic of Landcare and non-Landcare pastoralists. Furthermore, stewardship was not associated with the adoption of best management practices promoted by government agencies. **More emphasis therefore needs to be placed on educating pastoralists about resource issues and systems thinking, thereby raising awareness, rather than by government trying to change attitudes – the capacity of pastoralists to use new knowledge needs to be built.**

### Institutional

To support and motivate pastoralists to manage land and water resources and their livestock production business in a sustainable manner may require new institutional arrangements. It has been argued that the underlying causes of environmental degradation and biodiversity loss, arise from decisions made by institutions. It would be more efficient to use and adapt existing administrative and institutional structures than to create new additional structures.



Ken believes that setting up of partnerships between scientists and pastoralists is important to use the knowledge generated from scientific inquiry and practical experience effectively. Photo taken at Adgingbong.

Incentives aimed at increasing levels of knowledge and understanding are far more likely to result in responsible behaviour because people will have a basic knowledge of the issues at stake. This means that motivational incentives should be a core mechanism for achieving biodiversity conservation and other management skills that would raise profitability. Voluntary incentives have an important role in circumstances where pastoralists have a genuine interest in protecting the environment and little interest in obtaining financial concession. **Regulatory incentives are needed to provide precautionary standards and signals that protect against market failure to value biodiversity and other components of the natural ecosystem.**

### Research opportunities

De-intensification of grassland ecosystems in Australia's pastoral industries demand a strong underpinning of innovation. While some changes are driven by global trends, such as sustained slowing of meat production and persistent low wool prices, the majority of change is coming from the realisation that grassland management in Australia has caused significant environmental problems.

Most changes are not marginal. They involve paradigm shifts that require strategic research with the new parameters and a focus on applied outcomes integrated with improved systems.

The major opportunities for innovation from research would be:

1. **Enhance the ability of pastoralists to produce high quality products when markets require them.** The shift away from a production-driven approach requires better development of market-driven grass-fed livestock production. Customers are increasingly demanding product consistency, reliability of supply, food safety, product choice and most recently, sustainability of production. To meet these requirements pastoralists will need to be more flexible in their management and have better business skills. Knowing when to seize opportunities will be as important as knowing when to avoid hazards for product quality.

There is an ethical issue here too. For Australia, as a developed country, to continue producing grassland products of low to medium quality, neither meets the requirements of increasingly critical home consumers, nor does this meet the ethical considerations of denying reasonable markets for produce from developing countries. .

2. **Develop better ecological theory and tools for the management of the natural grassland environment.** The issues of water quality and quantity, soil salinity, acidification and degradation, air quality, climate change and conservation of biodiversity, all require improved understanding of how semi-natural ecosystems function and how dysfunction can be reversed. Knowledge required to move from a classical agricultural mindset to an ecological approach will involve consideration of spatial and temporal elements, as well as an integration of ecological, economic and social components of what are very complex systems. Research will be required into sustainability of low-input native grassland systems, spatial requirements for remnant and plantation vegetation (amount, location and continuity) to lower water tables, and ecosystems services provided by native plants and

animals. Outcomes of research will need to be transformed into an array of management tools and aids for pastoral people. Some of these will be readily accepted but for others a demand will need to be built by education on ecosystem thinking.

3. **Set up research partnerships between scientists and pastoralists to use knowledge flowing from both scientific inquiry and practical experience.** To address the emerging issues outlined above will require new frameworks for conducting research. Integrated thinking of social, economic and biophysical issues will require the input of pastoralists. Furthermore, the input of pastoral people will ensure the pastoral community owns and uses the new knowledge.
4. **Develop new technologies for high intensity pastoral businesses and the rationale for locating these businesses.** The intensification of appropriately located pastoral businesses will require new knowledge for retaining nutrients on-property and a host of technical innovations to achieve the required efficiencies. New technologies will involve a trend to patented input systems including genetic manipulation of plants and livestock, precision farming and information management using remote sensing and simulation modelling. The development of an industrialised system of agriculture in some parts of landscapes requires an increased vertical integration, a systems approach to agri-industries and the implementation of industry-wide quality assurance. There will also be a requirement to locate these businesses in parts of landscapes where they can be ecologically sustainable and non-polluting.
5. **Develop a predictive understanding of the limits to intensification.** While it is generally understood that intensification of grassland has been too widespread and intense in major regions of the agricultural grassland ecosystems, there is inadequate understanding of how much simplification of natural grassland systems can occur while maintaining ecosystem function. There are grassland landscapes in the northern part of north-east Australia where there is scope for intensification involving tree clearing, but the limits are inadequately understood. The value of native vegetation for providing ecological serv-

ices to livestock production, cropping and other agricultural uses of land is not understood but is a key component of the understanding required to determine the limits for intensification.

#### **Finding the balance**

The balance between production and conservation and other environmental tensions, often expressed as "sustainable development", needs to be found for different grassland ecosystems and regions within each. Recipes are not obvious and research needs to gather momentum quickly. The search needs to be conducted at all scales relevant to land use planning, including property, catchment, regional and national levels. At the regional scale there is a large knowledge gap. New knowledge is urgently required on functioning of regional systems and interactions between components (people, finance and natural resources).

Where there is inadequate knowledge of ecological thresholds and system processes for determining the limits to intensification in grassland ecosystems, the precautionary principle should apply with respect to clearing and intensification. However, it seems reasonable for pastoralists to intensify their livestock production systems if there is no clearing of remnant vegetation and ecosystem function values are maintained.

A matrix of "corridors" of semi-natural vegetation should maintain ecosystem function. Any intensification should provide pastoralists with profits needed to maintain remnant vegetation. In other areas de-intensification is required to address salinity and biodiversity conservation goals.

In finding the balance, the involvement of pastoralists is paramount. The challenge ahead is to find pathways for sharing responsibility between pastoralists, government, industries and the general public. There is no single most appropriate operational scale for addressing the issues; all spatial and institutional scales must be involved.



## **THE FIRST MONARO PEOPLE**

*Geoff Robertson*



### **Introduction**

When Margaret Ning and I acquired our property of Garuwanga, an important objective was to acquire over time an understanding of all its dimensions (ie its total ecology) including its distant and more recent history. This is not only an end in itself but also a necessary element in devising suitable management.

Understanding the link between the Monaro Aboriginal people and Garuwanga is an important part of this quest. There are many specific questions. How often were these people present at Garuwanga and in what season? How did they read the vegetation and animal behaviour to find food and for other purposes (eg recreation, clothing)? What resources did they actually use for food, clothing, shelter, tools, etc? What was the importance of water and shelter? What was their technology? Did they fire the land and when and where? What was the impact of that fire?

As an amateur ecologist, I am curious about their ecological role: they obviously created disturbance in digging for food, removing wildlife, and lighting fires - how did the ecological system adapt? Had in fact the ecosystems evolved over the millennia in response



to Aboriginal people? As a human being, I am interested in life-style, spiritual values, education, recreation, and exploration. Were there special places? Did they enjoy the places and experiences I enjoy now?

My interest is also partly related to being related to an Indigenous family and over the years having acquired some understanding of these people and their highs and lows. For me, reconciliation is personal reconciliation with past, present and future Indigenous people and reconciliation not only with people but also with the landscapes and culture of which they are a part. It also means dealing with issues of self-determination, treaty, land ownership, apology and treasuring the Indigenous legacy.

My interest is also partly related to my interest in grassy ecosystems. For this it is important to understand the place of Aboriginal people in pre-Settlement times, their current land claims (including some of our best grasslands and woodland sites), knowledge and aspirations, and anticipating their future role.

### What's in a name?

The word 'Garuwanga' comes from the Ngarigo<sup>1</sup> language and it means to dream.<sup>2</sup> We selected the property name as we wanted to use a suitable local Aboriginal word to show our respect for the first land owners and to begin the process of understanding the Aboriginal connection, not an easy task. We are glad we chose this name as it is now accepted and it conforms to the widespread practice in the Monaro to use original Ngarigo names - an enduring legacy of the Monaro people.

### Monaro people and Ngarigo language

In 1993 I visited the Australian Institute of Aboriginal Studies in Canberra. I found two references on local Aboriginal languages. One was written by Luise Hercus<sup>3</sup> and the other by Lyall Gillespie.<sup>4</sup> It is not clear what the exact area occupied by the people who spoke Ngarigo was. The map shows the 'Ngarigo tribe' occupying the area just south of Canberra, the Monaro and northern Victoria.<sup>5</sup> According to Hercus "Narigu was once spoken on the Southern Monaro from Bombala to Nimmitabel and along the upper Snowy Valley in the Delegate area. and around Goongerah in Victoria.<sup>6</sup>... Narigu was closely related to Ngunawal."<sup>7</sup> Hercus' work covers the Southern Ngarigo language and records around 230 words, while Gillespie records around 210 words - there does not seem to be much overlap.<sup>8</sup> We would like to

use other Ngarigo words for naming special places at Garuwanga.

In his book, Michael Young<sup>9</sup> states "In the period immediately preceding the arrival of Europeans, the major part of what is now considered the Monaro<sup>10</sup> was occupied by at least 500 people who perceived that their language was different to that of their neighbours... This language was called 'Ngarigo'... Many people today who consider themselves to have ties to the country south of Delegate as far as Orbost, consider themselves to be 'Monaro people'." Hereafter, I will simply refer to these people as Monaro people.

### Aboriginal impact

To understand the impact of the Monaro people, I have tried to read whatever I can come across, although I have not conscientiously documented it. I have also discussed my reading with those with a much greater understanding of the Monaro people than I. A

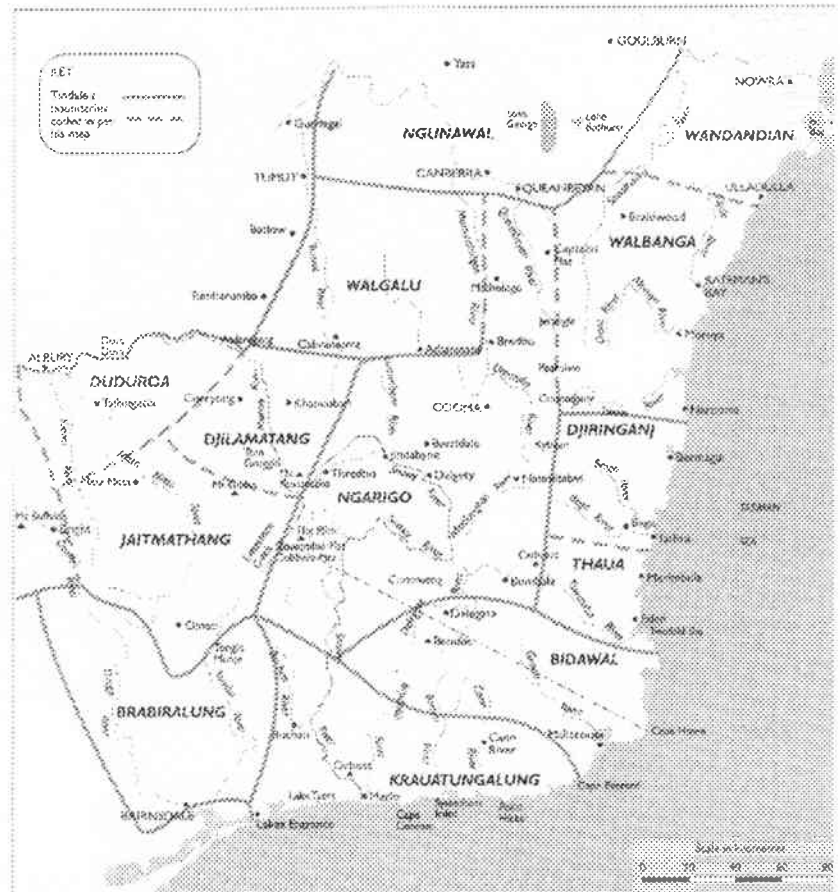


Figure 6: Monaro Tribes' tribal boundaries.

<sup>1</sup> Three spellings are recorded for this word. Hercus (see next footnote) uses the spelling 'Narigu', Gillespie (quoted below) uses 'Ngarrugu', while the map next page uses 'Ngarigo'.

<sup>2</sup> Luise A. Hercus *The Languages of Victoria: A Late Survey*. Australian Aboriginal Studies No. 17, Linguistic Series No. 6, Australian Institute of Aboriginal Studies, Canberra 1969. Hercus adds that the word 'Garuwanga' may have been borrowed from *Durga* (*Djiringan*?). On the net I came across the Giriwa Garuwanga Arts and Craft Gallery at Ulladulla. I spoke to David Mills (25 January 2002) who said that Giriwa Garuwanga comes from the local (coastal) language meaning 'Goanna Dreaming'.

<sup>3</sup> Hercus *op. cit.*

<sup>4</sup> Lyall L. Gillespie, *Aborigines of the Canberra Region*, Published by Lyall L. Gillespie (Canberra) as the first book of a Canberra Local History Series, Printed by Canberra Publishing and Printing Co. 1984.

<sup>5</sup> Source: Gillespie *ibid.* However, this map may be taken from another source.

<sup>6</sup> Words like 'Delegate', 'Nimmitabel', 'Cooma', 'Bombala', 'Goongerah' and many more are Ngarigo words.

<sup>7</sup> Spelt 'Ngunawal' in these parts. Ngunawal occupied the area just south of Boorowa, Yass, Canberra, Queanbeyan, Lake George and Goulburn.

<sup>8</sup> The list is attributed to R.H. Matthews.

special thanks to Debbie Argue and Michael Young who were of great assistance in helping me get my thoughts together for this article. While I have quoted Michael Young extensively, he pointed out to me that he has drawn heavily on other authors.

### Time in the area

There has been some controversy over the length of time Aboriginal people have been in the Monaro. Young states "Aboriginal people occupied the Monaro, or at least parts of it, from about

<sup>9</sup> *The Aboriginal People of the Monaro: A documentary history compiled by Michael Young with Ellen and Debbie Murphy*, NSW Parks and Wildlife Service, 2000.

<sup>10</sup> Young states that the Monaro is now considered to coincide with the boundaries of the three shire councils: Cooma-Monaro, Snowy River and Bombala. He also notes, quoting Hancock the many spellings of Monaro: Monaroo, Monera, Manerio, Meneru, Miniera, Monera and for a long period, Maneroo.

20,000 years ago." He bases this statement on an occupation date for the Birrigai cave (on the outskirts of Canberra) of 20,000. Mulvaney and Kamminga state "the earliest evidence for human presence in the Australian Alps dates back only about 4000-5000 years... In the south-east highlands generally a trend is discernible towards a more intensive occupation of rock shelters from about 3000 years ago, accompanied by an increase in the number of habitation sites... The antiquity of the bogong moth migration to the Alps (by Aboriginal people) must be a least a few thousand years."<sup>11</sup> This is qualified by stating that a longer occupation may have occurred. The real problem in answering the question is that very little archaeological work has occurred in this area.

### Population

According to Young, Aboriginal people lived in extended family groups of up to twenty people. Groups amalgamated for various reasons, and in Colonial times groups of up to 500 people were reported getting together. They lived on the tablelands and montane valleys all year round, but gatherings in the high country to eat Bogong Moths are well recorded. Monaro people appeared to have been joined by other Aboriginal people for the annual Bogong Moth festivities.

### Impact

I have often tried to imagine what impact Aboriginal people had on the land. To do this I have made some calculations, which suggest that if family groups remained on their own, each within a particular territory, each would have occupied 512 square kilometres, an area of 25 by 21 kilometres.<sup>12</sup> Such a family might move around its territory during a year and settle in one place (say the size of Garuwanga, 2.75 square kilometres) for a number of days, make optimal use of the food supply and other resources, and move onto an adjoining site. I would imagine that after moving into an area, people would first spend time sussing it out, then whatever was available would be hunted or gathered. After a time, more energy would need to be expended for a decreasing reward and it would be time to move on. There may also be other reasons to move on, eg a known food source may be coming available or there may be appointments with other groups to be kept. By the time of the next visit, the area would have recovered.

In this model, a family could spend two days before going to the next area. This is not to say how long a group actually lingered in a particular locality, but if a group was to spend some time at each site and visit all sites during a year, it could spent on average only two days at each site. Assuming that half the group was children and only the older boys and men engaged in hunting, only four to six men would hunt, and preference may have been to capture smaller animals, particularly possum, rather than hunt kangaroo. In Young's book, there is a long discussion of possum coats and little discussion of using kangaroo products and therefore I have concluded that small animals like possum may have been preferred. Possums may have also been easier targets than kangaroo. Wild ducks and reptiles may also have been a ready food source.

Therefore, given that only a small number of kangaroos may have been taken at any site, Aboriginal people may not have impacted much on kangaroo populations. This may have some implications for our understanding of the role of the kangaroo in the total ecol-

ogy. On the other hand, we don't know about the role of dingos as predators and the possible link between the Monaro people and dingos.

As far as plant food, Yam Daisy is frequently mentioned as an important source, as well as other plants with bulbs - orchids and lilies. We know so little about Aboriginal food, although I understand that Beth Gott is doing some interesting work on Aboriginal use of plants in the Victorian high country. Understanding plant use may answer some interesting questions: how often and for how long would a family stay in an area and what would its impact on different animals and plants be?

A recent *Kosciuszko Today*<sup>13</sup> edition included an article on Rod Mason, an Aboriginal with family connections to the Monaro and South Coast people of NSW. Rod has been working with Mike Young to provide information for a database on Aboriginal knowledge of plants of the Monaro. Rod has an extraordinary depth of knowledge, passed down through his family, about the Monaro and South Coast. The article gives many examples of how Aboriginals considered plants, and gives a charming illustration of using plants to create bird and insect toys.

There is evidence that Aboriginal people resided in somewhat inaccessible spots and, no doubt, were familiar with the whole landscape. On the other hand, I would assume that some areas would not be frequented because they were too difficult to traverse, particularly carrying small children, or offered little food value, while other areas were more intensively visited, especially if they were on major travel routes or corroboree centres. Good pathways were important. There are stories of Aboriginal people (presumably young men, without childcare concerns, who acted as messengers) travelling great distances in a single day. It would appear that early Europeans adopted well-established Aboriginal pathways and therefore each of our major roads may have been used over thousands of years; another Monaro legacy. These pathways reflect a desire to move around the country quickly. It follows that areas most heavily occupied would tend to be around pathways.

Another observation is that the main traffic flows would have been north-south and east-west (between the coast and the High Country). This leads me to believe that Garuwanga would not have been on any major traffic route and given the inhospitable country immediately to the north and west may have been a bit out of the way. Garuwanga seems to have been a backwater since Settlement.

On the other hand, Aboriginals would have moved near to food sources and shelter was important. It is not certain how many animals would have lived in the very open country (the largely treeless areas of the Monaro) compared to areas with more mosaic or treed vegetation. Certainly, areas like Garuwanga with their water, shelter and many mosaic niches supporting a high native animal population, may have been attractive country.

### Garuwanga evidence

At Garuwanga there possibly exists a quartz procurement area and some Aboriginal stone flakes have been found along our entrance track. We have not identified any other possible Aboriginal sites.

### Burning

What was the impact of Aboriginal burning on the area? This is an important question because, knowing the answer might influence our approach to management. We do not know whether Aboriginals burnt the area. When early explorers/adventurers on the

<sup>11</sup> John Mulvaney and Johan Kamminga *Prehistory of Australia* Allen and Unwin 1999, pages 301-2

<sup>12</sup> I estimate that the current size of the three shires is about 160 x 80 kilometres (12800 square kilometres), which I have divided by 25 groups (i.e. 500 people in family groups of 20 people each).

<sup>13</sup> Summer 2001/2 published by NSW National Parks and Wildlife Service.

Southern Tablelands speak of fire haze, they don't seem to refer to Aboriginals actually firing the country. In fact we know that smoke haze (eg Christmas Fires of 2001) coming from forest fires along the coast and coastal ranges in a hot dry summer, can blanket the Monaro. This is not to deny that Aboriginal people burnt the area. But assuming they did, there are many unanswered questions. At what time of year did they light fires? If there were never many people in the area, how frequently would areas have been burnt?

At Garuwanga, I have burnt small patches in autumn and winter around the house. What burn fast and quickly are River Tussock, litter under trees, and Tee-Tree. However, it is difficult to sustain fire in other grassland vegetation because it is mostly green and, due to kangaroo and other herbivore grazing, short. Plants such as Clustered Everlasting Daisy, which build up a large biomass, don't easily burn. We may be able to assemble other evidence about burning. The presence/absence of plants and their response to fire would offer important clues but we have little information at present on this. Most plants do not seem to require fire to germinate. The last serious fires reported in the area apparently occurred in the 1930s.

#### What emerges?

So, some sort of speculative picture emerges about Monaro people's presence at Garuwanga. In all likelihood a family group would have been present several days a year. There may have been a lot to attract them there: the large rocks would have provided

some additional warmth, Garuwanga is sheltered from wind in many places, plenty of water is on hand, and a large variety of plants and animals are present. They may have avoided the more difficult to traverse areas. The quartz procurement area may have been worked over. Would that site have enticed more than one family to visit? Whether or not the area got burnt is difficult to know; that may have depended on what time of year Monaro people were present, and the weather on the days present. Some vegetation patches could be easily burnt while others would provide little suitable fuel.

#### Where to from here?

It was considered that the Monaro people died out, but we now know this is untrue. "Some, as would be expected, are scattered throughout the country and overseas, although many still live in East Gippsland, the far South Coast of New South Wales and at Wreck Bay, near Jarvis Bay." We hope, as Young states, "more will be heard from them in the future." Through the work of Rod Mason they may offer many additional insights about this area. I will continue to follow up any other evidence of Aboriginal links through reading, networking etc. I hope that more searching for signs of the Monaro people will occur at Garuwanga. I believe that understanding ecology and/or animal and plant behaviour will also assist us to see the land as the first Australians once did. Understanding signs of animals, eg scats, tracks, diggings, is an important part of this.

## DON'T PANIC: IT'S HAIRY PANIC GRASS

Michael Bedingfield

Hairy Panic Grass has nothing to do with getting a fright, but gets its common name from the hairs on the leaves and from the allusion to its scientific name which is *Panicum effusum*. *Panicum* comes from the Latin name for Italian millet, and *effusum* means 'loosely spreading', referring to the flower or seed head which is very open with many branches.

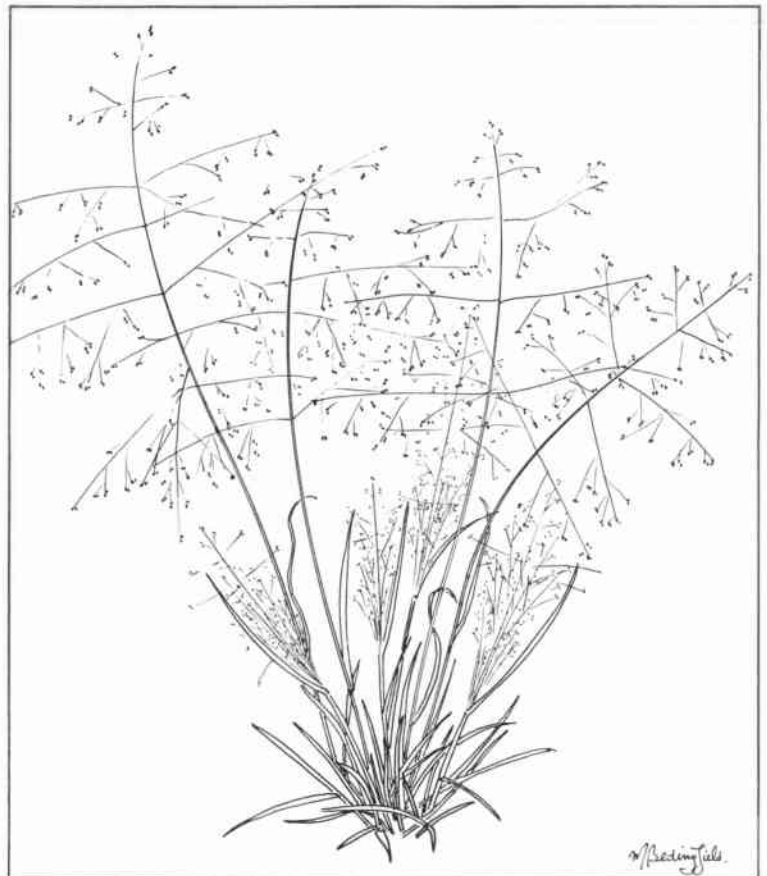
This native grass is common locally and is also widespread throughout southern Australia. It occurs in grasslands and woodlands and persists in native pastures. It is a perennial and flowers in summer, growing very well if there are adequate summer rains.

After the seedhead has dried out in late summer, the stem comes loose from the plant and is blown by the wind. Large numbers of them can be seen stacked up along fence lines and in creeks, sometimes becoming quite deep. Because of this the plant is sometimes called Blow-away Grass.

The plant looks a bit like the Lovegrasses which have similar growth habits. However, Hairy Panic has longer hairs on the leaf margins. As well, its flowers or seeds (spikelets) which occur at the end of the fine branches, are always in pairs. Also, the spikelets of the Lovegrasses are elongated and somewhat flattened.

The drawing shows the whole plant at one third size and a part of the seedhead at two thirds.

Hairy Panic? No worries!



Michael Bedingfield, 1995.

PANICUM EFFUSUM

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*Supporting native grassy ecosystems*

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Of course you may wish to increase your own understanding of grasslands, plant identification, etc. and so take a more active interest in our activities. Most activities are free

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