Woodland Wanderings

Newsletter of the Grassy Box Woodlands Conservation Management Network

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Forbes White Bend Remnant Vegetation Site to Expand

by Len Reade

Forbes Urban Landcare Group (FULG) has recently received funding approval from the Lachlan Catchment Management Authority to extend their current White Bend Remnant Vegetation Preservation Site from 10 ha to 16 ha. The new site will link the current site with the Lachlan River. There is a small amount of shrubby box woodland, but mostly open grassy woodland down to and along the river. There are also saline discharges on the site. The two sites are close to Forbes, and will be separated by a roadway called South Lead Road, making it hazardous for wildlife moving between the two sites.

Both sites are part of a Travelling Stock Reserve and Forbes Rural Lands Protection Board has supported approaches made by FULC to fence, maintain and manage both these sites. Fencing of the new site will involve approximately 600 metres of fencing which will be along the road and across one end. The river and a neighbour's fence will form the other two sides. The fence will assist in the rehabilitation and preservation by excluding livestock and restricting vehicle access. A people entry and a lockable gate will be incorporated in the fence. It is planned to plant and establish indigenous native trees, shrubs and grasses. It is also anticipated that

Photo By Len Reade

Photo By Len Reade

Forbes White Bend

with revegetation it will be possible to reduce the amount of saline discharge on the site. A water supply from a neighbouring property will be extended to the site to help establish the new plantings.The original 10 hectares were fenced in 2000 and have greatly benefited by the exclusion of travelling stock over this time, especially during the 3 years of drought. Stopping vehicles entering the site has stopped rubbish being left or dumped on the site. Weed control and eradication continues to be carried out. This has included St John's Wort, Boxthorn, Horehound, Paspalum, burrs and thistles.

FULG has recently installed a concrete water hole on the terraced area of a past gravel quarry, for the wildlife. Water is piped from a neighbouring property which is equipped with a timer. The waterhole has a drainage pipe, for emptying and cleaning, and an overflow pipe. A bench seat has also been installed near the waterhole to allow people to sit and rest or eat while they enjoy and appreciate the surrounding remnant vegetation and wildlife.

The photos to the right show the waterhole, bench and current fencing at White Bend.

Photos By Len Reade

Photo By Len Reade

Editorial Grassy Box Woodland CMN

by Toni McLeish

Monitoring isn't a dirty word. It is an essential part of all our everyday lives. I've monitored the health and wellbeing of my family for many years, resulting in different items on the shopping list, a holiday away or simply spending more time with one individual or another. I do this without too much thought these days, but when I think back to our early days of marriage and parenting, I remember reading many self-help books, attending courses and having long discussions with friends and my parents. At the time there were painful moments but we always knew that in the long-term we would benefit. Remember this when you approach the monitoring of your Grassy Box Woodland site.

If you have not yet responded to the offer of a free and confidential flora and bird survey for your property, this spring may be your last chance, depending on continued funding. Those of you who have had your sites surveyed and would now like to monitor the condition of your site, but need assistance to start this process, register your interest on the Grassy Box Woodland CMN survey form, or phone me. A copy of the Grassy Ecosystem Management Kit will be yours free. I addition, you will receive some on-ground support to set up some sites.

Our current funding ceases in April 2007, but with your guidance, by filling in the survey sheet enclosed, we will be able to plan the next phase of your network and pursue appropriate funding. If you would like to add any suggestions as to the future direction of your network, now is the time to have your say.

For those of you who had your free bird and plant surveys Spring 2006 and are wondering when you will be receiving your report, please accept our apologies for the delay. They are on their way to being produced. We expect to start sending them out by late June and to have them all out by the end of July this year. . The combination of the great response we had last year (about 280 sites surveyed – nearly double that of Spring 2004!) and a number of unforeseen circumstances from the time the surveys were commenced to getting it ready for processing have led to this unavoidable but necessary delay.

Evaluating the effectiveness of Conservation Management Networks and Biosphere Reserves

by James Fitzsimons

The conservation of terrestrial biodiversity faces a number of key challenges ranging from habitat clearance and degradation to the overexploitation of species and ecosystems and to the impacts of introduced species. One of the main responses has been for governments to protect samples of natural habitats by setting aside areas in national parks or conservation reserves. Increasingly private individuals and organisations are either purchasing land or actively managing all or part of their properties for nature conservation. Thus a new challenge arises: How do we coordinate the myriad of approaches to biodiversity conservation, and in particular the management and protection of natural areas across various tenures?

'Multi-tenure reserve networks', which incorporate public and private lands managed for conservation, are considered a means of achieving landscape scale conservation. Biosphere Reserves and Conservation Management Networks are characteristic models in Australia, and have been established with enthusiasm in parts of south-eastern Australia in the past decade.

Research undertaken as part of my PhD aimed to evaluate the role of such networks in protecting biodiversity, specifically by: (1) analysing the spatial configuration (size, shape, connectivity) of networks and their individual components; (2) evaluating the contribution of networks (in real terms and in reporting procedures) to biodiversity conservation objectives; (3) analysing the influence of the attitudes and perceptions of land managers on the functionality of networks; and (4) evaluating the influence of coordinating bodies on network functionality.

Multi-Tenure Reserve Networks

Three Australian case studies were chosen as the basis for the research - the Bookmark (now Riverland) Biosphere Reserve (BR) in South Australia, the Gippsland Plains Conservation Management Network (CMN) in Victoria and the Grassy Box Woodlands CMN in New South Wales. A combination of geospatial data and questionnaire analyses was used to measure aspects such as reserve design, protection of under-represented ecosystems, management actions of landowners, and operational aspects of the networks.

It was found that the sizes of individual components varied markedly between the three networks, however within each network public reserves were on average larger than private conservation lands. Although levels of physical connectivity varied between networks, Bookmark BR and Gippsland Plains CMN showed greater similarity to each other than to the Grassy Box Woodlands CMN.

All networks, and particularly those components outside the public protected area estate, contributed to enhancing the protection of ecosystems unrepresented or under-represented in the reserve system, although the extent of this contribution varied between networks. Trade-offs between reserve design efficiency and a contribution to a comprehensive, adequate and representative reserve system were evident between networks. For example, Bookmark BR was characterised by high connectivity, strong reserve design integrity but a lower contribution to protecting under-reserved ecosystems, whereas the opposite was evident in the Grassy Box Woodlands CMN.

Over 88% of managers considered their involvement in multi-tenure reserve networks to be a positive or very positive experience. A lack of resources and time for management were considered major limitations of these networks. The majority (80%) of private land managers within networks were willing to be included in a national reserve system of conservation lands. This has important implications for the Australian National Reserve System, which currently incorporates mostly public land. The changing nature of the network coordination arrangements suggests an organic fluid evolution of network structures is likely, contrasting with the desire for legalistic and administrative rigidity often promoted by government agencies.

The research concluded that all the networks studied contribute in varying degrees to biodiversity conservation. The key factors influencing the current and potential contribution that such networks make are: (1) the aims, directions and restrictions set by or imposed upon the coordinating body; and (2) the biophysical nature of the surrounding bioregion and resultant historical land use and tenure pattern. Although the successful operation of such 'multi-tenure' networks ultimately relies on the willing participation of private landholders, ongoing institutional support is likely to be required for maintaining networks in the longer term. Considering networks are increasingly formed outside of the influence of government institutions, this presents a significant challenge for effective coordinated conservation.

Further reading and information:

Fitzsimons, J.A. & Wescott, G. (in press) Perceptions and attitudes of land managers in multi-tenure reserve networks and the implications for conservation. Journal of Environmental Management

Fitzsimons, J.A. & Wescott, G. (2005) History and attributes of selected Australian multi-tenure reserve networks. Australian Geographer 36, 75-93.

Fitzsimons, J.A. & Wescott, G. (2004) The classification of lands managed for conservation: existing and proposed frameworks, with particular reference to Australia. Environmental Science & Policy 7, 477-486.

Fitzsimons, J.A. (2004) The Contribution of Multi-tenure Reserve Networks to Biodiversity Conservation. PhD thesis, School of Ecology & Environment, Deakin University, Melbourne. Available: http://tux.lib.deakin.edu.au/adt-VDU/public/adt-VDU20050817.103606/

Bobbara Creek Travelling Stock Reserve

by D. Boyer

The Bobbara Creek TSR is a 24 ha block 6 km west of Binalong on the Burley Griffin Way. This is on the border of Ngunuwal and Wiradjuri Country. In the Wiradjuri language "Bobbara" means *to sing* and "Binalong" is mentioned as towards a high place (1) explaining its proximity to Mount Bobbara, which overlooks the reserve.

The Young Rural Lands Protection Board leases this travelling stock reserve (TSR) annually, as it does others in the area. Of the 600000 ha put aside in NSW for the traditional use as TSRs, many have been subsumed, some are not clearly identified and very few are used for their original purpose. Traffic on the Burley Griffin Way has made droving stock on it too dangerous. TSRs were also known as "water reserves" (2) although there is evidence that in practice this was not always true in dry years.

Since 1981 adjoining paddocks have been gradually revegetated, so that wildlife move freely using troughs and dams from those paddocks in times of need. The TSR forms an important nucleus, since it has the only abundant stand of remnant vegetation providing habitat for Brown Treecreepers, already rare in this area. In amongst the young trees, there are several old and weathered dead ones. For most hollow nesting species there is no feasible substitute (3).

Photo by D. Boyer

Photo by D. Boyer

Bobbara Creek TSR

As I write, autumn has not yet arrived. The days are shorter and cooler, but cicadas can still be heard. White-plumed Honeyeaters are busy feeding their latest brood in the White Box above me and a Grey Shrike-thrush is making its short, sharp call - not their melodious sound. The Crested Shrike-tit is within range. Near or far - one often can't tell until they 'craack' a piece of bark … or was it me standing on a twig? The Songlarks are no longer around but they flew in and out all Spring and summer, especially the Rufous one, while the Brown cried raucously from the less wooded areas.

The Acacia (*A. decora*) pods split open during the heatwave after Christmas, and the seeds flew in the wind on New Year's Day. It will not be long now before the Flame Robin arrives, bright red amongst the silver green as first, but later surrounded by yellow. It was May when they came last year, staying until early August. Soon after, the Wood Ducks started landing in the eucalypts, on branches quite high up - such skill in webbed feet!

Spring 2005 will be remembered not only for its burst of post-drought activity, but also for its length. Just when we thought it was ending, more rain fell and the cycle started again. Early on the White-winged Choughs started building their large mud nest two trees down from the one they were in the year before. A Dusky Woodswallow used the peeled back bark as an opportunistic nest, while a Willy Wagtail in the same tree briskly set to work for several days. I have seen how, with great care, two adults emptied their nest of five growing fledglings, placed them on the branch, and then worked non-stop for a whole day enlarging the nest. By nightfall they were all put back in again. Do they often miscalculate?

Banks of Golden Weather-grass (*Hypoxis hygrometrica*) and Early Nancy (*Wurmbea dioica*) herald the warmer weather, followed quickly by Bulbine Lilies (*Bulbine bulbosa*), and Australian Bindweed (*Convolvulus erubescens*). For the first time last spring, I noticed a few Yass Daisies (*Ammobium craspedioides*) and a Glycine (*Glycine tabacina*).

Drifts of Bluebells (*Wahlenbergia* spp.) and Chocolate Lilies (*Dichopogon fimbriatus*) welcomed the Binalong School children, as did a nesting Tawney Frogmouth. This is Superb Parrot country, but there are also Red-rumped Parrot, and Eastern and Crimson Rosellas, and to compete with their colours, a Dollarbird arrived late in the year, perching not

Original Artwork by D. Boyer

far from a Sacred Kingfisher. Forty-five species have been recorded so far, but I am not aware of any sustained wildlife study of this block.

The same cannot be said of the control of St John's Wort (*Hypericum perforatum*). It is particularly difficult to eradicate due to its similarity with native plants and their ecology, and can build up very long-lived seed banks. It should be dealt with promptly with the aid of herbicides or hand removal (5). Years of misguided management, where grazing produced a cosmetic effect, have resulted in a serious infestation. The present lessee is now confronted with not only trying to eradicate the weeds from the TSR, as a part of the contractual obligation, but also controlling its spread to surrounding paddocks. State Council applied to the Department of Infrastructure Planning and Natural Resources (DIPNR) for funding available through the Native Vegetation Management Fund to manage and enhance areas of native vegetation with high conservation value. DIPNR advised that the funding would be distributed to Catchment Management Authorities. Some Boards have received the funding allocated for the works (6), but so far there does not appear to be any concerted effort to address this widespread problem.

I would especially like to thank Suzanne Prober for raising awareness to the real value of this TSR, Nicki Taws and Malcolm Fyfe from Greening Australia for so generously sharing their knowledge, and also Peter Browne for information on YRLPB and the history of this TSR.

References

1. Triffett, Geraldine. Australian Institute of Aboriginal Studies. Latter 8.10.1987.
2. YRLPB 2005
3. Gibbons, P & Lindemayer, D. 2003. Respecting our Forest Veterans Nat. Aust. 27, 27-33.
4. Prober, S & Thiele. 1995. Conservation of the Grassy White Box Woodlands. Aust. J. Bot. 43, 349-366.
5. Grassy Box Woodland Conservation Management Network, Restoration Toolkit 2005.
6. YRLPB 2005

Original artwork by the author. Photos show Bobbara Creek TSR.

Original Artwork by D. Boyer

Photo by D. Boyer

Monitorin

The key to knowing if you are winning

WHEN TO MONITOR

At Regular Intervals, At least annually, Until a trend becomes evident

CHOOSING A MONITORING METHOD

Transects / Quadrats / Photo points. Always use the same method/s in the same place

Transects

Permanent straight line along which features are recorded.

Length depends on features to be recorded. (Eg Canopy trees 100x10m – shrubs 25x1m).

Can incorporate quadrats for greater detail and photo points.

Qua

Usually (triangles for

Use representativ areas vary in siz small seedling vegetation struct

Use 5 to 20 qua on the size

What are the objectives of your manageme

Is your management having the desired results?

Salinity control	Sustainable grazing	Habitat fo
Increased Biodiversity	Firewood production	Natural pe
Plant diversity	Increased soil fertility	Nutrient c
Stock shade & shelter	A functioning ecosystem	A great pla

YOUR WOODLAND CAN PROVIDE ALL THE ABOVE!

References: Grassy Box Woodland Conservation Management Network Forum, April 2005, Monitoring- Th
Kemp, David Butcher, Dr Phil Gibbons J. Lambert & J Elix, 2002 Grassy White Box Woo

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THE KEY TO SUCCESSFUL MONITORING

Keep it simple
Keep it consistent
Maintain excellent record keeping
Analyse results
Adapt your management in light of results achieved

drats

squares
photo points)

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e from .25m2 for
gs to 400m2 for
ture and diversity.

drats depending
of your area.

Photo points

Choose points so they are associated with transects and/or quadrats.

Permanently set up and identified. Use standard photographic procedure.

Monitor regularly in set seasonal intervals and set times of day.

ent?

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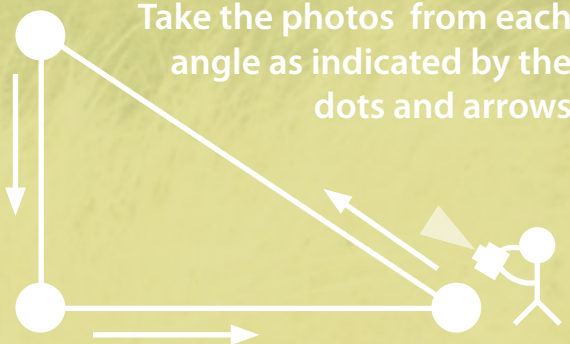
ycling
ace for a picnic

Triangular Quadrat

Take the photos from each angle as indicated by the dots and arrows



e Necessary Tool, Orange NSW, presenters **Dr Sue Mc Intyre, Rainer Rehwinkel, Dr Ian Lunt, Professor David**
dlands Information Kit Sydney NSW

Utilising Native Legumes for Grazing in the Granite Borders Landcare Region

by JL Coldham [1], RD Fitzgerald [2], CA Harris [3]

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[2] Sustainable Grazing Systems – Northern Tablelands, PO Box 805 Glen Innes NSW 2370
[3] NSW Department of Primary Industries, Centre for Perennial Grazing Systems, Glen Innes NSW 2370

Native legumes play an important role in pasture systems in the Granite Borders Region located across the Northern Tablelands of NSW and the trap-rock country of Southern Queensland. The native legumes, specifically *Glycine* and *Desmodium* species, are summer growing perennial plants with a deep tap root. The *Glycine* and *Desmodium* species been noted by local graziers for their persistence, especially during times of extreme drought and fire. Rees et. al. (1993) identified the potential of *Glycine latifolia* for sub-tropical areas including Northern NSW and South-east Queensland.

Photo by C. Harris

There is very limited information available about the productivity, nutrient value and response to fertiliser (phosphorous and sulfur) of these native legumes. This paper reports on a joint project between Granite Borders Landcare Committee Incorporated, Sustainable Grazing Systems and NSW Department of Primary Industries that investigated the potential role of native legumes as an alternative / compliment to introduced pasture legumes.

Methods

The objective of the project was to investigate / demonstrate low cost techniques for encouraging native legumes in pastures using fertiliser and grazing management. Four paddock scale demonstrations were established, in granite and traprock soil types and varying climates across the Granite Borders area.

Each of the paddock scale demonstrations was divided into 3 grazing treatment blocks (approximately 4.0 hectares); set stocking, strategic grazing (rest to facilitate seed development and seedling establishment) and simulated cell grazing (short duration grazing with long recovery periods). Each of the grazing treatment blocks was further divided into 8 plots (approximately 0.5 hectares), being 2 replications of 4 fertiliser treatments. The fertilizer treatments of nil fertiliser, phosphorus (11 kg P/ha), sulfur (12.6 kg S/ha) and phosphorus + sulfur (11 kg P/ha and 12.6 kg S/ha) were applied annually.

Fixed point transects were set up in each 0.5 hectare "plot" to monitor any changes in botanical composition of the pastures and frequency counts of native legume plants. Rainfall and livestock grazing days were measured by each co-operating landholder.

Results

Dry conditions delayed the establishment of some sites and impacted on the effectiveness of others. Drought conditions for 2002 - 2005 had a severe impact on the project, reducing the number of measurements that could be taken, altering the

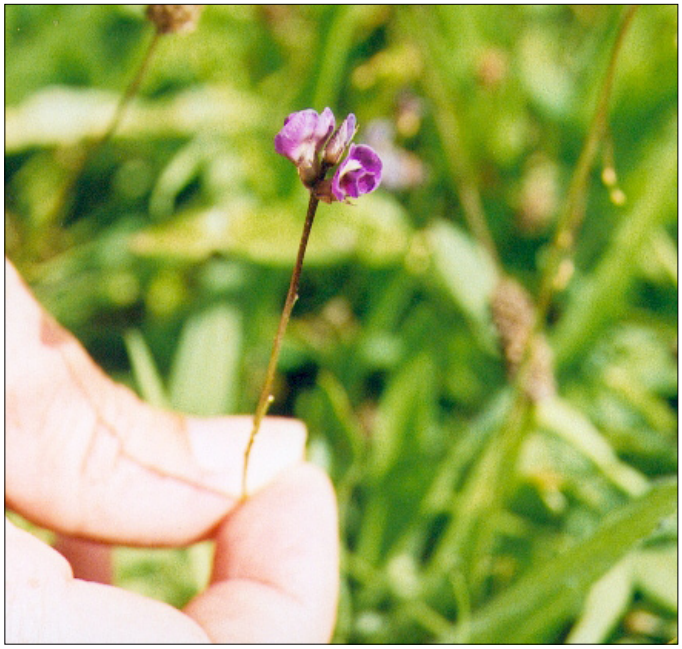


Photo by C. Harris

management of the project sites and challenging the interest and enthusiasm of co-operators. Results reported in this paper are from only two of the sites.

Despite the dry conditions the project has produced some interesting trends. Across all sites the native legumes are contributing between 5 to 10% of the pasture composition. This is in agreement with Heard (1996) who found that across the Granite Borders Region, *Glycine* could contribute up to 9% of pasture yield. A survey of native legume diversity conducted as part of the project found 9 *Glycine* species and 2 *Desmodium* species, as well as *Zornia*, *Chamaecrista*, *Galactica*, *Crotalaria* and *Swainsonia* species.

The phosphorus fertilizer treatment had a significant (P>0.05) beneficial effect on native legume frequency compared to the nil fertilizer treatment (refer Table 1). At one of these sites the sulfur treatment also had a significant (P>0.05) beneficial effect on native legume frequency (refer Table 1). An associated replicated fertilizer trial in the Granite Borders region has also demonstrated the positive effect of phosphorus, sulfur and lime to native legume frequency.

Table 1. Mean native legume frequency (%) for fertiliser treatments.

	Nil	P @ 11 kg/ha	S @ 12.6 kg/ha	P+S (11+ 12.6 kg/ha)
Site 1	24a	46b	44b	21a
Site 2	22a	31b	20a	19a

Note: means in rows followed by the same letter are not significantly different

At one of the sites the strategic grazing treatment had a beneficial effect on native legume frequency compared to the set stocking (26% compared to 16%).

The results of this project have benefited many graziers across the Granite Borders region through an increased awareness, and benefits of the native legumes in their pastures as well as being actively involved in designing grazing and fertilizer systems to encourage the native legumes in their pastures. This has been demonstrated in their keenness to continue with the project.

Photo by C. Harris

Acknowledgments

The Natural Heritage Trust and Australian Government Envirofund provided the funds for this project. We thank the site co-operators – Peter & Martin Bonner, Rod Dowe, Richard Magner, Alan Marsh and Clive Smith for their significant contribution to the project. We would also like to acknowledge the efforts of Alan Marsh as Project Overseer.

References

Heard B E. (1996). Evaluation of the potential of native herbaceous Glycine species as pasture legumes for the Northern Tablelands. Honours Thesis, Department of Botany. University of New England Armidale. Rees M C, Jones R M, Brown A H D, and Coote J N. (1993). Glycine latifolia - a potentially useful native legume for clay soils in tropical and sub-tropical Australia. In "Proceedings of the XVII International Grassland Congress". Pp 2134-2135.

Understanding the interactions between biodiversity and the management of native pastures in the Murray Darling Basin:- a new research project

by J. Stol

The south-western slopes of the Murray Darling Basin support around three million hectares of native pastures managed for livestock production. Although there has been recent research into the value of these as perennial pastures little is known of their biodiversity values. A research project has recently begun looking at the role of grazing management systems for plant, bird and reptile diversity, in relation to past intensification and management in the wider landscape. A specific focus will be to explore whether rotational and continuous grazing management systems differ in their biodiversity outcomes.

Rotational grazing typically has high intensity grazing periods, with up to 1000 head of sheep or cattle grazing for short periods of time (a couple of days or weeks) followed by a long rest period (weeks to months) in which the grazed plants can 'recover', developing further leaf or basal area and producing seed, which could have benefits for native plant and animal diversity.

The project, jointly funded by Meat and Livestock Australia and the Cooperative Research Centre for Plant-based Management to Dryland Salinity, is being undertaken by the Arthur Rylah Institute, part of the Victorian Department of Sustainability and Environment, and CSIRO Sustainable Ecosystems.

A recent mail-out to members of the GBWCMN located in the south-western slopes of NSW and north-east Victoria was used to help find willing property owners managing native pastures. The mail-out brought a large number of enthusiastic replies and potentially some of these properties are to be involved in the project.

This research will aim to improve the scientific understanding of biodiversity in native pastures and develop new knowledge of the trade-offs between management for livestock production, water management and biodiversity conservation. These results will be integrated into management guidelines developed for the benefit of livestock production, water use and biodiversity conservation.

Field research will begin this spring. As the results of the flora and fauna surveys emerge we will be providing updates to the GBWCMN.

Photo by J. Stol

The Austral Bugle

Newsletter of the Southern Tablelands Grassy Ecosystems Conservation Management Network, in association with the Grassy Box Woodlands Conservation Management Network

Austral Bugle Editorial

by Rainer Rehwinkel

I extend a welcome to all managers and owners of grasslands in the region between Gunning and Goulburn that were surveyed last spring and summer by Greg Baines (Grassland Project Officer with the Natural Temperate Grassland Recovery Team) and David Eddy (consultant). I had an opportunity to visit just a few of the sites that Greg surveyed, and I must say that I was surprised and impressed to see grasslands of such quality. Greg will be doing similar surveys in the coming season, most likely in the area around Yass.

In this issue, I have included a member survey to get a feel for what you are thinking. Please be aware that the Southern Tablelands Grassy Ecosystem CMN still awaits additional funding support. So in the meantime, *The Austral Bugle* continues to be published within the *Woodland Wanderer* newsletter and some of the services one should expect from a fully-fledged CMN (i.e. field days and workshops) are currently on hold.

Let me update you briefly on a number of recent developments in our Southern Tablelands grassy ecosystems. I have had the pleasure to be working on a number of scientific projects recently. Firstly, with extra funding supplied by the Southern Rivers Catchment Management Authority, I have reviewed the remotely-sensed (satellite) mapping of grassy ecosystems of the Monaro. I take this opportunity to personally thank Prue Woodford and Brett Miners for providing the impetus and funding, and also to Stuart Burge, Jackie Miles and Alison Rowell for their help in the field with this project.

More recently, I've been assembling data for a major analysis of the grassland community. This project is funded by the Natural Temperate Grassland Recovery Team and the aim is to produce an analysis of the various grassland types (also known as associations) to be found within the broader Natural Temperate Grassland community. This work will be done using a program called PATN, and I hope to be able to report on this in the next edition of *The Austral Bugle*. This work will give us an understanding of the regional variation of this community.

Recently I was given the opportunity to talk about my experience of the wildlife and vegetation of the Lake George region. I presented a paper at the Common Ground Forum at Weereewa: A Festival of Lake George. I present an extract of this paper below.

Rebecca Hall and Donna Hazell of the Southern Rivers CMA have launched a native pastures project. Their article in this edition give more details.

Finally, I also take pleasure in presenting a pull-out section within this newsletter to insert into your copy of *Grassland Flora*. I have become aware over the years since the publication of this book that we missed a number of species that really should have been included. In this pull-out section, I have included some of these, as well as a couple of rarities that you may also come across. If you don't already have a copy of the *Grassland Flora*, there is an advert and order form included in this edition.

A unique grassland occupies the dry bed of Lake George

Round-leaved Wilsonia, one of the plants of the unique grassland community at Lake George

A grassland at Weereewa

by R. Rehwinkel

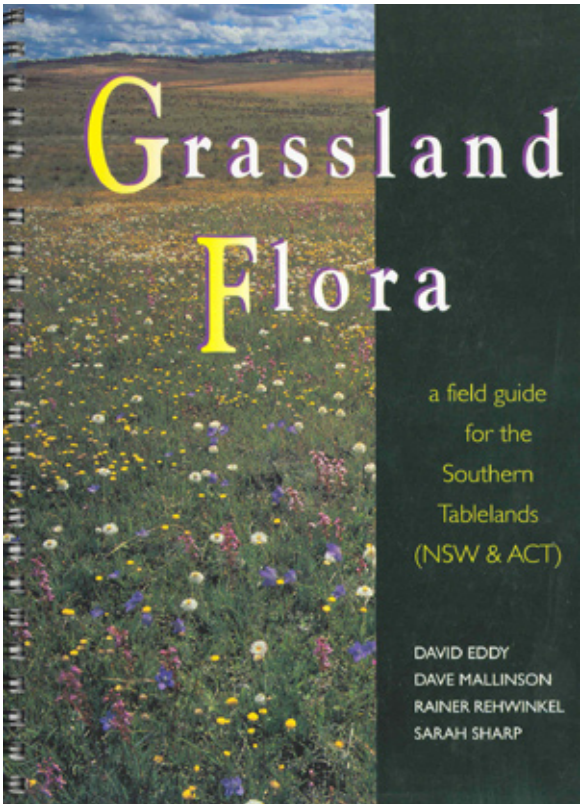
Lake George, (Weereewa) is New South Wales largest inland freshwater lake. But it has been dry over the last 10 years. I recall earlier, wetter times. One birdwatching trip that I took to the northern tip of the lake in the mid-1970's particularly stands out. On this occasion, I recorded massive swirling flocks of waders and waterfowl of many species, including several migrants from the Northern Hemisphere. When there is water at Weereewa, it is possible to record many wetland bird species in a morning, including Australian Shelduck, Pink-eared Duck, Musk Duck, Red-necked Avocet, Black-winged Stilt, Marsh Sandpiper and White-necked Heron. I have collated 25 years' worth of my birdwatching records from the woodlands and wetlands of Weereewa. This has yielded in excess of 135 species, of which 40 are waders or waterfowl.

When it is dry a unique grassland occupies the ephemeral lake bed of Weereewa. This grassland has been a permanent feature over the last ten years. It is possibly the largest remaining single area of unmodified native grassland in the entire Southern Tablelands. More-over, I have yet to find another site with this grassland's composition. Weereewa's bed contains an immense silvery plain dominated by an annual Blown Grass (Agrostis sp.) with certain associated grassland forbs that, in combination, are not repeated anywhere in the tablelands. Here, a stoloniferous buttercup (Ranunculus sp.) and a herbaceous saltbush (Einadia trigonos) jostle with the Fan-flower Mudwort (Selliera radicans), with its succulent leaves and greyish-white flowers. The most extraordinary of the plants found in this community is the Round-leaved Wilsonia (Wilsonia rotundifolia). This curious plant forms neat mats with symmetrical rows of tiny, rounded leaves that grow along its angular branches. Small yellow flowers emerge in spring. This species is listed as endangered, being known in New South Wales from only four other locations. Weereewa's dry lake bed grassland, with its unique combination of plants; see it soon before it disappears – under water!.

Grassland Flora: Field guide for the Southern Tablelands (NSW & ACT)

by David Eddy, Dave Mallinson, Rainer Rehwinkel and Sarah Sharp

Explore the world of our grassland heritage with this easy to use field guide to the grassland plants of the Southern Tablelands of NSW and the ACT.



This edition of Woodland Wanderer and The Austral Bugle includes an insert with photos and brief text that will enable you to identify additional species not covered by the Grassland Flora. Simply fold the insert in half and keep it with your copy of the Grassland Flora. If you have not yet acquired a copy of this useful guide you can send a cheque or money order to the address below, and your copy/s will be sent to the address that you provide. Grassland Flora retails for $16.50 (including GST). Postage (includes GST) and handling rates are:

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Wildlife Research & Monitoring Environment ACT **PO Box 144 LYNEHAM ACT 2602**

Southern Tablelands Native Pastures Project

Maintenance of biodiversity in native pastures

What are the benefits for primary producers and grassy ecosystems on the Southern Tablelands?

For further information on the project contact:

Rebecca Hall
or
Donna Hazell
Phone: 4842 2594
Southern Rivers CMA

Native pastures are managed, valued and used in a variety of ways across the Southern and Monaro Tablelands. They contribute to the economic, cultural, social and environmental health of rural New South Wales. Native pastures may be modified by continuous or heavy grazing, or lost through sowing of pastures or crops and soil fertility changes.

Management influences the range of native plants that occur within native pastures. We want to learn from these management styles.

The Southern Rivers Catchment Management Authority is undertaking a study to learn about the relationships between current on-farm management and innovation and plant diversity within native pastures.

This study aims to understand different approaches to native pasture management and the type of pasture that results from these approaches.

Specifically it will:

- Identify relationships between pastoral management and plant diversity and composition across a number of grazing properties.
- Develop detailed case studies profiling land managers that manage native pasture with biodiversity values as part of their production system.
- Record land manager perspectives on native pasture management.
- Collect information on native plants that characterise native pasture with biodiversity values. Other structural elements of the pasture such as rocky outcropping and shrubs will also be recorded as these provide important habitat for grassland fauna. This is another important component of native pasture biodiversity.

Some questions the Southern Rivers Catchment Management Authority hope to answer include:

(1) how do land managers graze native pastures?

(2) what are the advantages or disadvantages of having native pasture as part of a grazing enterprise? and

(3) are there different approaches to native pasture management that achieve similar biodiversity outcomes?

The study will facilitate the exchange of ideas between land managers and will assist in developing incentive programs that promote the integration of native pasture management and conservation of grassy ecosystems.

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CMA

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toni.mcleish@environment.nsw.gov.au

Murray CMA Catchment Management Authority

Department of Environment and Conservation (NSW)

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Helping Communities Helping Australia
An Australian Government Initiative

Woodland Wanderings (Grassy Box Woodland CMN) newsletter was edited by Toni McLeish and Rainer Rehwinkel of DEC and was produced with funding from the Federal Government's NHT2.

Useful resources

Andrew Long, 2005, **Aboriginal Scarred Trees in NSW A Field Manual.** Download a free PDF copy at
www.nationalparks.nsw.gov.au/npws.nsf/content/aboriginal_scarred_trees
or purchase from NSW Government Bookshop $10.95

Environmental Defenders Office, January 2006, **Rural Landholders Guide To Environmental Law In New**
www.edo.org.au/edonsw/site/publications.php#landholder

Useful websites

Canberra Ornothologists Group
www.canberrabirds.org.au

Birds Australia
www.birdsaustralia.com.au/remnants/index.html

Department of Environment and Conservation
Threated Species Website
www.threatenedspecies.environment.nsw.gov.au

Members support

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CMN website www.gbwcmn.net.au

Additions: Primary education
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Woodlands email chat group

Join our Grassy Box Woodland email chat group
Email to register or pose any question!
toni.mcleish@environment.nsw.gov.au

Article deadlines for *Woodland Wanderings*

Spring Edition deadline: 1st October 2006
Autumn Edition deadline: 1st April 2007

Making contact

Expressions of interest are invited from all persons or groups wishing to be involved by writing to:
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