



## *The Australian Rangeland Society*

### RANGE MANAGEMENT NEWSLETTER

An official publication of The Australian Rangeland Society

ISSN 0812-4930

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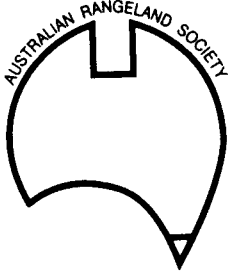
#### If cited it should be in the form:

Bastin, G. and Allan, G. (2012). After the smoke has cleared: 2011 fire in Central Australia. In: Range Management Newsletter (Ed. N Duckett). 12/2:3-6. (Australian Rangeland Society: Australia).

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ISSN 0812-4930



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# **Range Management Newsletter**

**No. 07/1 March 2007**



**Registered by: Australia Post - Print Post No. 545270/00001**

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**CONTENTS**

Range Management Newsletter 07/1

|  |    |
|--|----|
| From the Editor - Noelene Duckett.....   | 1  |
| Australia Day Honours - Dr RDB (Wal) Whalley AM.....   | 1  |
| Australian Rangeland Society Annual General Meeting Notice.....  | 2  |
| Fire and Sustainable Communities in North West Queensland: A Project Overview - Trevor Howard.....                   | 3  |
| Rangeland Monitoring Helps Answer the Question: Are the Pastoral Rangelands Improving or Declining - Ian Watson..... | 5  |
| Education and Training in Rangeland Management - John Taylor.....  | 7  |
| Assessing Grazing Pressures on the Run - Ray Tauss.....  | 9  |
| VIII International Rangeland Congress Update.....  | 13 |
| New Members.....   | 13 |
| Information Snippets.....  | 13 |
| Australian Rangeland Society Awards.....   | 14 |
| Membership Application Form.....   | 15 |

## FROM THE EDITOR

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Welcome to the March edition of the *Range Management Newsletter*.

This newsletter opens with some great news. For those of you who have not heard, a valued member of the ARS, Dr Wal Whalley was recently awarded a Member of the Order of Australia (AM). Congratulations Wal! Please read John Taylor's short article for further details about the award and Wal's contributions to environmental management, education and the ARS.

This issue also includes a couple of other important articles for ARS members. Firstly there is a note regarding the Australian Rangeland Society AGM. This will be held on Wednesday, 23 May 2007 in Brisbane. Please note there are positions available on Council if you are interested. Additionally, if you have any motions to be put forwarded to the meeting, they must be lodged with the Secretary, Sandra Van Vresswyk by **4 May 2007**. Later in the newsletter (p 13) there is an update on the International Rangeland Congress to be held in China in June/July 2008. The Congress Organisers have called for the initial submission of paper titles which need to be received by the **1 June 2007** (only a couple of months time!)

This newsletter contains a number of longer articles – this time on a wide variety of rangeland topics. In the first article, Trevor Howard outlines the details of a recently funded project which is looking at fire and land management issues in north-west Queensland, relating particularly to training and capacity building in indigenous communities. Ian Watson's article is a brief summary of how the WARMS monitoring results in the Western Australian rangelands compare with other studies – I am sure Ian would enjoy receiving any comments you may have! If you have ever thought about improving your knowledge of the rangelands, then John Taylor's updated overview of the short courses and postgraduate programs in rangeland management currently being offered by Rangelands Australia will be of interest to you. RA now offers many postgraduate course options and you don't necessarily need an undergraduate degree to enrol! See John's article on pages 7-8 for details. Additionally, there is an article from Ray Tauss detailing his Rapid Appraisal Method for determining grazing pressures on the run. I know that Ray is looking forward to receiving any feedback that members may have regarding his method.

As usual, this issue of the newsletter also includes information about the ARS Awards (thinking about travelling to the IRC in China?) and the updated Membership Application form.

The next issue of the newsletter is due out in July 2007, so it is time to start thinking about writing that article now! I would appreciate receiving your articles by late May if possible.

## AUSTRALIA DAY HONOURS: DR RDB (WAL) WHALLEY AM



Long standing and active member of the Australian Rangeland Society, Wal Whalley, was recently awarded a Member of the Order of Australia (AM) for his '*service to conservation and the environment, particularly through research into Australian native grasses and the promotion of their use for pasture, lawn and revegetation of degraded natural landscapes.*'

The award recognizes 40 years of work in which Wal has researched the value and properties of native grasses such as weeping grass (*Microlena spp*) and Wallaby grass (*Danthonia spp*) and the commercialization of types for turf, forage and roadside re-vegetation. The award could equally recognize his contribution to education, which has included supervision of over 50 postgraduates, including over 25 PhDs, and the conduct of native grass identification schools/workshops throughout NSW since 1975. Wal stimulated the production of the book, *Grasses of NSW*, and is an author of the third edition.

Wal has been a foundation member of the Society, and has contributed to the Society as Chair of the Editorial Committee 1976-78 and Associate Editor 1990-99. He has been the Editor of the Rangeland Journal since 1999.

Wal is an Honorary Fellow of Botany in the School of Environmental Sciences and Natural Resources Management at the University of New England, Armidale NSW.

I am sure all members of the Society will join me in congratulating Wal, and look forward to his enthusiastic contributions to the Society for many years to come.

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# *The Australian Rangeland Society*

## **ANNUAL GENERAL MEETING**

The 2007 Annual General Meeting of the Australian Rangeland Society will be held  
**on Wednesday 23 May 2007 at 5 pm EST**  
**in the A Block Conference Room, Animal Research Institute**  
**665 Fairfield Rd, Yeerongpilly**  
**Department of Primary Industries and Fisheries, Brisbane, Queensland**

Members are advised that the following is proposed for the meeting:

- Accept the minutes of the 2006 Annual General Meeting
- Receive the President's Report
- Receive the Financial Reports
- Election of office bearers
- Motions on notice
- General business

### **Election of Office Bearers**

Section 16 of the Articles of Association of the Society provide for elections in each alternate year beginning in 1983 commencing at the end of the next Annual General Meeting. Positions are held for four years. The officers of the Society are President, Finance and Audit Officer, Secretary, and up to five General Council Members. Accordingly nominations are called for these positions.

The name of the present holder is shown along with an expression of their intention to nominate.

|                           |  |
|---------------------------|--|
| President                 | Peter Johnston - will nominate as President              |
| Secretary                 | Sandra Van Vreeswyk                                      |
| Finance and Audit Officer | Tim Ferraro - will nominate as General Member            |
| General Council Members   | Vanessa Bailey - will nominate as Secretary              |
|                           | Doug Campbell  |
|                           | Peter Marin - will nominate as Finance and Audit Officer |
|                           | Graeme Tupper - will nominate as General Member          |
|                           | Annabel Walsh -will nominate as General Member           |

Any financial member wishing to **nominate for a position on Council** must ensure their nomination form is lodged with the Secretary by post, fax or email. Nomination forms are available from the website and from the Secretary.

### **Motions on Notice**

#### *Motion 1*

'That the Directors have reason to believe that the Australian Rangeland Society Ltd will be able to pay its debts as and when they become due and payable.'

As part of an approach for better value audit services and to allow local contact, The Australian Rangeland Society proposes to remove its current auditors, Michael Boyce and Co and replace them with Lee Green and Co.

#### *Motion 2*

'That Michael Boyce and Co be removed as the auditors of the Australian Rangeland Society Ltd.'

#### *Motion 3*

'That Lee Green and Co Pty Ltd be appointed as auditors of the Australian Rangeland Society Ltd.'

Any financial member wishing to place further **motions on notice** before the Annual General Meeting must ensure that the signed motion is lodged with the Secretary by post, fax or email **by 4 May 2005**.

The Annual General Meeting will be followed by light refreshments. Please RSVP to the President, Peter Johnston. Please see the inside cover for his contact details.



# **FIRE AND SUSTAINABLE COMMUNITIES IN NORTH WEST QUEENSLAND: A PROJECT OVERVIEW**

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Southern Gulf Catchments and the Queensland Rural Fire Service (RFS) have secured funding for three years from the Natural Heritage Trust (NHT2) for the above project. The Department of Emergency Services, the parent organisation for the RFS, is also a financial contributor. The project primarily focuses on community engagement regarding fire and land management issues to facilitate training and capacity building in indigenous communities and to foster regional cooperation.

## **Background and Context**

Substantial areas of north west Queensland and the southern Gulf of Carpentaria are under Aboriginal ownership and management. These areas include Mornington Island, the Deed of Grant in Trust (DOGIT) lands, former pastoral leases acquired through the Gulf Communities Agreement negotiated under the *Native Title Act 1993*, and various land parcels purchased by the Indigenous Land Corporation.

There is a large Aboriginal population across the area including the township of Doomadgee which has a population of about 1200. This town has many social problems, very high unemployment and very few opportunities for young people. Mornington Island has a similar population and social situation while the small town of Burketown also has a significant indigenous community. The Aboriginal people across the entire region come from a number of language and family groups, with each having special attachments to particular parts of the landscape. As a result a number of outstations have been developed away from the main townships.

Emergency services at Doomadgee include a volunteer rural fire brigade that covers the township as well as all land within the Doomadgee DOGIT area. Mornington Island and Burketown rural fire services are also voluntary. While there are significant community safety issues there is very limited Aboriginal involvement in emergency services and efforts to recruit and retain members have so far been largely unproductive.

This situation can be contrasted with the interest that community members have in the role of fire in the landscape, and there is a strong desire to reintroduce traditional burning across large tracts of Aboriginal land surrounding Doomadgee and Burketown, as well as outside Gununa, the main township on Mornington Island. Traditional links with neighbouring groups in the Northern Territory underpin and reinforce this approach to managing the cultural landscape with fire.

Given the extent of Aboriginal landholdings on the mainland, and the frequency of ignition, there is also a high potential for fires lit for such cultural purposes to cross land tenure boundaries. Each year there have been tensions with adjoining pastoralists due to uncontrolled fires, with losses of feed, fencing and stock as well as high suppression costs. Wildfires regularly cross the Queensland/Northern Territory border. Some negative attitudes about this situation have become entrenched over many years.

Aerial prescribed burning (APB) early in the year would significantly reduce these problems by creating strategic firebreaks and mosaics of burnt and unburnt country. However, the adoption of APB has been limited and *ad hoc* in this part of the country due to a number of factors including the limited availability of suitable aircraft, the timing of operations to suit different curing rates across the landscape, and a lack of appreciation by landowners of the potential benefits despite the relatively low costs. There is a need to involve all landowners in planning and coordination, and training landowners to conduct their own APB operations may improve results.

In addition to the issues arising from fires and multiple land use there is also a need for the targeted use of fire to control Rubbervine *Cryptostegia grandiflora*, a Weed of National Significance (WONS) that does not yet occur in the Northern Territory. This pest plant occurs on a range of land types and tenures in north west Queensland and there are numerous infestations on land under Aboriginal ownership. Fire can be a valuable control method when used as part of an integrated approach.

Within the context of northern Australia, in recent years there have been numerous projects focusing on fire and environmental management in the Kimberly region of Western Australia, the Victoria River district and Arnhem Land in the Northern Territory, and Cape York Peninsula in Queensland (Russell-Smith *et al.*, 2003). These initiatives have engaged scientists, government agencies and indigenous landowners and have attracted considerable external funding and support.

Some small but significant advances in community development have also been made as a result of these projects. Of particular note are the successes in Western Australia and the Northern Territory involving training and resourcing young Aboriginal people to participate in contract employment associated with fire and natural resource management. Not only have these ventures brought direct benefits to the people and indigenous communities involved, but there have also been some major improvements in neighbour relations as well as some positive attitude shifts in the broader population.

From either the environmental or community development viewpoints, the north west of Queensland stands out as an area with both problems and potential. There has been only very limited fire research conducted in this area (Leasie Felderhof's current doctoral research is a notable exception) and there is a need for capacity building initiatives aimed at involving Aboriginal elders and youth in rural fire management. Given the

dispersed population due to the outstation movement, the development of safe and sustainable communities is also a priority. In addition, there are potential commercial opportunities for young Aboriginal people in contracting for hazard reduction and prescribed burning, weed control, fencing of riparian vegetation and other natural resource management activities.

One of the keys to success in the interstate initiatives has been that projects have generally been driven at a community level, not by governments. With external funding mainly through the Natural Heritage Trust and the support and technical assistance of research institutions and government agencies, community ownership and direct benefits have maintained momentum. Having a funded and dedicated project facilitator, based in an appropriate community organisation, has also proven to be successful elsewhere and this philosophy underpinned the development of the current project.

### **Project Objectives**

- To develop safe and sustainable indigenous communities in north west Queensland and the southern Gulf of Carpentaria through the provision of tailored, culturally appropriate training and support in fire mitigation and management;
- To involve the scientific research community in the compilation of fire histories, the analysis of fire regimes, and the development of prescriptions and monitoring programs, and to assist land owners through the provision of appropriate technology and extension services;
- To increase the adoption and effectiveness of aerial prescribed burning through promotion, demonstration and training and by providing assistance to land owners with planning, coordination, operations and monitoring; and
- To develop Aboriginal teams for contract employment, and improved fire and natural resource management on indigenous lands, through training in rural fire management, weed control, fencing, equipment maintenance, first aid, the use of digital data, business development and project management, as well as the provision of appropriate resources.

While the four objectives underpin a work program to deliver outcomes over the three year life of the project, it is recognised that community capacity building and change in an environment such as this require a long-term focus and commitment.

### **What has been achieved so far?**

- A Project Officer commenced in Burketown in May 2006 working under the day-to-day direction of the Carpentaria Land Council.
- Traditional land-owning groups and key stakeholders, primarily on the mainland, have been identified and consulted.
- An ranger crew to undertake land management activities on the indigenous estate has been formed. Training

has been provided in fire management, equipment use and first aid. Burning for land management, wildfire mitigation as well as Rubbervine control has also been carried out across a large area.

- Some employment for the ranger crew has been enabled by the Community Development Employment Program.
- Extension work is supporting indigenous and non-indigenous land owners with computer access to regularly use basic remote sensing and mapping tools such as the North Australian Fire Information website ([www.firenorth.org.au](http://www.firenorth.org.au)) to monitor and manage fires.
- Indigenous membership of the Doomadgee and Burketown Rural Fire Brigades has increased (rural fire brigades exist to provide fire services across the community whereas ranger crews are made up of indigenous land owners managing their own land).
- Brigade members and ranger crews have worked closely with pastoralists in burning boundaries and suppressing wildfires, and very positive relationships have resulted.
- Interest has been expressed by other entities – government agencies, utilities and mining companies etc. – for the future engagement of ranger crews to carry out burning and other land management works on a commercial basis.

### **What remains to be done?**

- A review and re-configuration of fire warden (community members appointed and authorised to issue permits to burn) and rural fire brigade boundaries by the RFS to better reflect traditional and non-traditional land ownership and use.
- An expansion of the current project activities that focus largely on the mainland to include Mornington Island, plus the development of better linkages with NT counterparts to have a whole-of-Gulf focus.
- Trialling and adoption of new technologies for APB – e.g. Skyfire and Raindance systems – to enable more flexibility in conducting operations, as well as consideration of the forthcoming national accreditation standards and training packages for bushfire air operations and the potential provision of suitable training for landowners.
- Further mapping of fire scars at scales suitable for environmental management, the compilation of fire histories, the analysis of fire regimes, and the development of prescriptions based on scientific and traditional knowledge.
- Monitoring for NRM and biodiversity outcomes, not only to meet current project requirements, but also as part of a long-term north Australian program.
- Training in herbicide safety and weed control methods for ranger crews, and accelerated efforts on indigenous lands under the WONS-funded Rubbervine program.

- Development of linkages with the sustainable grazing land project (Akers, 2006) for information sharing, workshops etc.
- Establishment of a suitable business entity and structure for contracting by indigenous teams to clarify and maintain functional boundaries with other entities – rural fire brigades, ranger crews etc.
- Consideration of changing institutional arrangements – e.g. the end of the Tropical Savannas CRC – and the associated challenges and opportunities.
- Consideration of new initiatives concerned with greenhouse emissions abatement and environmental offsets – greenhouse and biodiversity – and their potential application to the Gulf.

A steering committee comprised of Southern Gulf Catchments, RFS, the North Australian Indigenous Land and Sea Management Alliance, the Tropical Savannas CRC, the Carpentaria Land Council and a local pastoral industry representative oversee the project. The Burke Shire Council provides some support, and Northern Territory agencies including Bushfires NT and the Northern Land Council have also taken a keen interest so far. Project stakeholders will be constantly scanning for new directions, funding options and commercial opportunities to sustain the initiative and these remote rural communities into the future.

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## RANGELAND MONITORING HELPS ANSWER THE QUESTION: ARE THE PASTORAL RANGELANDS IMPROVING OR DECLINING?

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Much of the rangelands are degraded from their original state and many people assume they are continuing to degrade – but does the degradation continue?

We have a good idea of the extent of degradation; rangeland surveys suggested that, at the time of survey, only 46 per cent was in good condition, with the remainder in fair (30%) or poor (24%) condition. The more difficult question is whether the rangelands are continuing to degrade.

Anecdotally, most pastoralists will say that things have improved on their lease over the last few decades. However, this subjective view needs to be supplemented with good quality information collected in a systematic way.

We will never know conclusively whether the rangelands are improving or not. The area is just too big and the resources too small to assess them all. Moreover, there is no such thing as a "range condition meter"; we have to make judgements about change based on observation and experience.

However, there are activities in place which provide evidence of change.

### Evidence of change

At least every six years each station is subject to a Range Condition Assessment. These inspections assess the land in a similar way to the Range Survey Team, by judging range condition at one kilometre points along a ground traverse.

Another approach is the Western Australian Rangeland Monitoring System (WARMS) which consists of a set of about 1,600 permanent sites. These are reassessed on a three-year schedule in the Kimberley and Pilbara and every five years in the shrublands.

Most of the current WARMS sites were installed between 1994 and 1999 and almost all have been reassessed at least once. On each site the change in perennial vegetation is measured, along with aspects of soil surface condition. These measurements are rigorous and are designed to minimise operator error.

The data are stored in a Department of Agriculture and Food WA database and are available for analysis and scrutiny by outside organisations.



## Good news

The news from the WARMS results is generally good. In the Kimberley, perennial grass frequency on the sites has tended to increase from their installation through two successive reassessments up until the last three-year period, when frequencies have stabilised or decreased slightly (Photo set 1). In the shrublands, there has been one complete round of reassessment revealing that shrub density and cover have increased on most of the sites.

The results from the Pilbara have been mixed. The shrubland sites have tended to improve. Conversely, during the last complete reassessment (2003-05) perennial grass frequency had declined on many sites – but this has also been a very dry period in much of the Pilbara. Separating the effect of seasonal quality from the effect of pastoral management will always be difficult, but over time we will see whether this is a long-term trend or a short-term fluctuation.

This generally good news provides no reason to be complacent. Almost all areas of the pastoral rangelands have enjoyed a good run of seasons since the early to mid 1990s. The last few years have been very dry in many places, but if the entire last 15 or so years is compared with the historical rainfall record, the overall sequence has been very good.

## Ongoing debate

There is also some debate about whether the WARMS sites provide a true reflection of change. The sites are located mostly on the large, relatively intact, flatter parts of the landscape and they may be in “the wrong spot” if all the adverse change is occurring in the drainage lines. Nevertheless, they provide good information, representative of large parts of the rangelands.

A paper presented at the recent Australian Rangeland Society Conference suggested that the rangelands are suffering from increased run-off and declining condition and that the “good news” may be overstated.

Another paper suggested that the Gascoyne catchment was in worse condition than it was at the time of the rangeland survey in 1970, that the degradation was continuing and was irreversible without specific management interventions.

The debate will continue. Some evidence will suggest improvements, other evidence will suggest decline.

In the meantime, WARMS sites will continue to be reassessed and over time will provide an increasingly important and rigorous measure of the extent to which parts of the rangelands are improving or not.

*[Please note that this article has been reproduced from the Department for Planning and Infrastructure, Pastoral Lines - The Official Magazine of the Pastoral Lands Board, Issue 5, February 2007, Perth, Western Australia]*



1996



1999



2002



2005

Photo Set 1: This WARMS site in the East Kimberley shows a pattern commonly seen on Kimberley sites. It was installed in 1996 and reassessed in 1999, 2002 and 2005. Perennial grass frequency on the site increased from 1996 to 2002 but then declined by the 2005 reassessment, despite the photo showing more grass biomass.

# EDUCATION AND TRAINING IN RANGELAND MANAGEMENT

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## Overview

Just on two years ago, the first of a series of new rangeland-specific short courses (1-3 days) and postgraduate (PG) coursework programs were introduced by Rangelands Australia. The first PG students have now graduated. These courses were designed to build the knowledge and skills necessary for future success in the rangelands. Student evaluations have shown that the courses are high quality, practical, up to date and relevant, and are providing personal growth and professional development for owner-managers, advisors, facilitators, etc. Importantly, they are leading to high levels of satisfaction in terms of the knowledge gained, and in the relevance of the courses to people's workplace/business and their future in the rangelands.

## Short Courses and Qualifications

The need and potential topics for short courses was identified by over 450 rangeland stakeholders, from pastoralists to policy makers. These courses were designed to meet the current needs of people in the rangelands, and are delivered face-to-face to groups in the rangelands according to need and demand.

### *FarmBis (Qld, SA and NT) Approved Training Activities:*

- Being heard as a stakeholder (2 days)
- Introduction to monitoring for management (1 day)
- Being in the rangelands for the long run – Balancing for economic, environmental and social outcomes (2 days)
- No surprises in the bush – Understanding global and national trends influencing you and your business (1-1.5 days)
- Success in diversification – Thinking through opportunities, options and implications (2 days)

At the end of each short course, participants are issued with either a Certificate of Participation which acknowledges attendance, OR a Certificate of Attainment which lists the competencies demonstrated in successfully completing the learning and assessment activities in a particular course

## Postgraduate Programs, Courses and Qualifications

The suite of postgraduate courses developed by Rangelands Australia is the framework for the new coursework programs in rangeland management offered by The University of Queensland. These are the **only postgraduate programs specifically in rangeland management in Australia**, and are unique in their 'triple bottom line' and applied focus.

The three coursework-based programs are:

- Graduate Certificate in Rangeland Management (8 units, e.g. four 2-unit courses)
- Graduate Diploma in Rangeland Management (16 units, e.g. eight 2-unit courses)
- Masters of Rangeland Management (16-24 units, e.g. up to ten 2-unit courses including a 6 or 12 month project). (NOTE: Up to 8 units of credit can be granted for a relevant 4-year degree).

Students can progress step-wise, from one level to the next, based on satisfactory completion of courses and by undertaking additional core and elective courses as appropriate to their needs and the level of qualification sought.

### a) Rangeland-specific courses available now:

- Sustainable production systems and regions
- Grazing land management
- Advanced rangeland ecology
- Building effective stakeholder engagements
- Global and national trends
- Property, catchment and regional planning
- Animal nutrition and behavior
- Managing self; developing (and retaining) others
- Diversification and new industries.

NOTE: Detailed descriptions of these courses are available on our website.

### b) Rangeland-specific courses under development (with funding from the National Landcare Programme):

- Animal wellbeing and health
- Reading country and natural resources
- Pests, weeds and bio-security
- Monitoring and adaptive management
- Legal, policy and political frameworks.

## What sets the PG programs apart?

There are a number of factors that make the Rangelands Australia - developed programs and courses special, from the careful homework that was done at the outset to aspects of the courses themselves. These include:

- Program structure is aligned to the needs expressed by over 450 stakeholders nationally
- Courses have been developed and reviewed by experienced managers, scientists, advisors, etc, over 200 to date
- Courses are current and practical, and build knowledge, skills and personal qualities for individual and enterprise success
- Courses are built around solving current and emerging issues in the rangelands, using learning activities and assessment items applied to your particular enterprise or region
- Courses are directly relevant to people's work and business, and their future in the rangelands, according to our mature-aged 'students'.

## Who's doing the PG programs?

Around 60% of the Rangeland Management postgraduate students are owners or managers of pastoral enterprises

(half of these entered through Recognition of Prior Learning - RPL), with the remainder being Landcare or NRM facilitators, regional body and agency staff, training providers, valuers, etc. Their age ranges from 25 to 65 years, with most in their 30s and 40s. They come from NSW, NT, Qld, SA, Vic and WA, and just over half are women.

### **Why are people doing further study, and PG study at that?**

People have acknowledged that *"on the job training is not enough any more"* and have given many reasons for deciding to do further study. These include the need to:

- *"Increase knowledge to successfully cope with the changes around us"*
- *"Be on the front foot (re) greater community and government interest and scrutiny of rangeland businesses"*
- *"Gain a broader perspective of important issues that will influence our future"*
- *"Increase our skills and credibility as land managers/advisors/facilitators"*
- *"Build capacity to represent rangeland interests"*

There have been many catalysts for peoples' decisions to undertake further study including poor policy and regulatory decisions that strengthened their resolve to better advocate rangeland issues, realization that they could easily be 'left behind' due to an isolated and insulated lifestyle, and awareness that they were 'out of their depth' at some community and industry meetings.

### **What benefits have they gained from doing these courses?**

Our mature-aged students are reporting a wide range of benefits, including:

- New perspectives on current and emerging rangeland issues
- Better decisions and risk management
- Greater self-confidence and credibility, and
- Better understanding of other stakeholders and engagement with them.

Looking further ahead, and as the learning from their courses is applied more and more, they also anticipate more profitable rangeland use and reduced variability of profits, improved land condition, and better communication and advocacy of rangeland interests and requirements.

### **Not sure you could do it?**

Yes, the thought of further study can be daunting, and particularly if you have no recent experience of tertiary education. But there are a few things that might allay your fears and even increase your confidence and readiness for study by distance. First, is a very useful 3-day short course on *'Getting into Further Study'*, which can be run in your region for a group of 5-6 people. Second, you won't be alone, and there will be others among your intake who will be at a similar educational level, whatever that is. And finally, there is now a small, national network of Rangeland Champions keen to provide out-of-hours

advice, support and encouragement for mature-aged, remote learners. Check our website for information on your local Champion.

### **Entry to the PG programs**

Interested? Well, there are many pathways by which people can enter the postgraduate programs. They include formal and informal learning, skill development training, and work and life experiences. For example,

- **if you have a degree**, from the University of Queensland or elsewhere, its straight-forward. Just fill in the Application for Postgraduate Coursework form available from the UQ or RA websites.
- **if you have a post-secondary qualification** (eg. Diploma or Advanced Diploma) awarded after completing a taught program OR awarded through recognition of current competencies PLUS relevant work experience at a managerial level, again it is straight forward. Just fill in the Application for Postgraduate Coursework form.
- **if you have no qualifications** but relevant work experience at a managerial level AND have satisfactorily completed postgraduate non-award courses OR relevant short courses such as RA short courses or EDGENetwork courses, you may also be granted admission. However, you will have to demonstrate that you have the 'equivalent knowledge' of a graduate. Guidelines for this process (ie. Recognition of Prior Learning – RPL) and an Application Form are available on the RA website

Fees and ways of funding your studies are included in the latest PG brochure, available from RA, or on our website.

**Enrolment in the Postgraduate Programs closes - 30th June for Second semester 2007, or 30 January for First semester 2008.**

For further information visit our website at:  
[www.rangelands-australia.com.au](http://www.rangelands-australia.com.au)

or contact: Rangelands Australia,  
The University of Queensland's Gatton Campus,  
Gatton QLD 4343  
Tel 07 5460 1660; Fax 07 5460 166;  
Email [rangelands@uqg.uq.edu.au](mailto:rangelands@uqg.uq.edu.au)

*Rangelands Australia is pleased to acknowledge the support of our sponsors in the development, promotion and delivery of these rangeland-specific programs and courses:*

- National Landcare Programme / Department of Agriculture, Fisheries and Forestry
- CSIRO Sustainable Ecosystems
- Meat and Livestock Australia
- Queensland Government
- The University of Queensland

# ASSESSING GRAZING PRESSURES ON THE RUN

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## Background

As an aid to land managers seeking ecologically sustainable grazing, for over a decade the author sought a technique that would enable a rangeland manager 'at lunch time' to assess the result of what his or her stock had been consuming 'that morning'.

The proportion of current growth necessary to be retained intact in order to maintain a palatable plant and its population has been identified by Hughes (1979).

## The Rapid Appraisal Method

It is expected that ungrazed shoots will be found within the central area of many plants. For thorny or woody plants, centrally located, ungrazed shoots may be found fairly readily. The amount of shoot length utilised by stock in the current season is identified as a key to assessing grazing pressure and an estimate is made of plant utilisation as a proportion of seasonal growth.

The Rapid Appraisal Method (RAM) treats the remaining proportion, together with a brief assessment of the plant in its ecological complex, as a valid and sufficient indicator of the degree to which the level of utilisation is sustainable.

The RAM is complemented by record sheets that are necessarily involved in learning the technique but which are then optionally useful for those who consider a record of their assessment may have an ongoing purpose. During trials of the RAM, almost all pastoralists considered that using and keeping the record sheets would suit their overall management objectives.

A conscientious approach is required to the use of the Field Record Sheet in order to access the sequential approach as a means of leading to a scientifically based management conclusion and action plan.

The author's intention has been to provide clear, easily read paperwork that introduces a technical tool based on ecological parameters. The would-be RAM Assessor needs to be ready to assess a site and will need to work hard (for half an hour or so) to learn the method. The method uses a simple conceptual 'tool' and has been used successfully on cattle and sheep properties.

The RAM Assessor must follow every step of the assessment sheet, completing each cell on the Field Sheet conscientiously based on the immediacy of their own observation on site, and needs to let the tool lead to appropriate decision and action.

I hope you enjoy the journey. For my own journey, I can only succeed if you send me your feedback after using the Rapid Appraisal Method.

The Field Record Sheet (Appendix 1) will help the assessor perform an assessment. The Guide to the Field Record Sheet (Appendix 2) will be required in order to appropriately fill in the Field Record Sheet.

## Reference

Hughes, L. E. (1979). Rest-rotation grazing on the Arizona Strip: An observation. *Rangelands* vol. 1, pp.106-108



## Appendix 1: Field Record Sheet for on-site use of the Rapid Appraisal Method

|                    |   |  |                            |  |
|--------------------|---|--|----------------------------|--|
| Date:              | / |  | Your name as RAM assessor: |  |
| Location:          |   |  | Country type:              |  |
| Sameness/diversity |   |  |                            |  |
| Dominant plants    |   |  |                            |  |

[illegible]

|                                     |  |
|-------------------------------------|--|
| <b>Management awareness:</b>        |  |
|                                     |  |
| <b>Manager's initials and date:</b> |  |

## Appendix 2 - Guide to accompany the field Record Sheet for the Rapid Appraisal Method

These notes are to explain the use of entry headings on the Rapid Appraisal Guide (RAM) Recording Sheet. Items appearing in a Guide 'box' can be found in a cell of the Recording Sheet. It is expected that you will fill in all cells every time you use the sheet. As you become more skilled at using the sheet, the Rapid Appraisal Method will increasingly assist your assessment of vegetation even without making formal written entries. In time, it is expected that the method will help your monitoring practices and decision-making, even when you don't make entries on a Recording Sheet.

### Location

Monitoring does not have to be in a fixed or constant location. It is expected that a maximum area of 10,000 ha would be covered by (say) 4-6 monitoring events or 'readings'. For each set of monitoring events the most important would be in the immediate area of the species most sensitive to grazing, (or on any area already overgrazed).

### Country type

What do you call this sort of country? 'Country type' is a description of the major vegetation and (sometimes) of the soil type.

What range of vegetation or soil is there in this paddock or area? (How much variety in vegetation or soil?) Record your judgement of this as it can help interpret the RAM Recording Sheet later.

### Dominant plants

The most obvious plants in a paddock are usually plants that enable us to describe that country type or land system. These are the first plants we see, and may be the most numerous of any, or their mass is so great it exceeds the mass of the next most obvious plants. Typical 'dominants' are mulga, eucalypt or spinifex. Other dominants may be cottonbush, bluebush, silver saltbush or wandarrie grass. There may be others that you prefer to list.

### Pref graz

These *preferentially grazed* species are the plants that the grazers eat first, as their preference. The plants that are preferentially grazed are looked at to see if current grazing pressure is likely to affect the future productivity or security of those and other species. Typical preferences are scaevola, cottonbush and silver saltbush. The plants first grazed differ for different animals (the preferred diet of kangaroos may be different from the preferred diet of sheep or of goats). Make a record of the three or four species most preferred by stock or ferals.

At least one of the 'preferentially grazed' species selected for monitoring should be a species that will best indicate if change is occurring. This means in a paddock or on a land system, one of the plant species that should be selected for monitoring will be one particularly susceptible to any grazing perturbation or disturbance.

### Ht, width

The approximate height and width of the majority of plants (cm.) is recorded as an indication of their size. Their size at monitoring can be compared with the size characteristics of fully grown (ungrazed) plants. This will enable the land manager to better understand whether they could be gaining more productivity (e.g. more foliage) if their plants were actively managed to permit them to grow larger.

### Age (est)

Age of plants may indicate whether specific seeding or regeneration events have occurred, or whether plant ages are mixed. If plants are of mixed ages this may indicate that grazing regimes have generally permitted survival of young plants, and permitted population regeneration to occur.

### Distance between

Distance between plants helps indicate whether the population is healthy (self-replicating). This distance between plants can be compared with district averages for specified country types. If your plants are closer together than the district's average for that species on the same country type, your long-term stock management may have been contributing to plant population survival.

|                             |   |
|-----------------------------|---|
| <b>Current shoot</b>        | <p>The current year's shoot length will indicate the season's growth pattern for that species. You should especially measure the ungrazable shoots inside a plant's canopy or structural shape. This will help inform you whether the plants are bearing more leaf volume than last season, or whether they will have a decrease in volume in the coming season.</p>  |
| <b>Grazed/not</b>           | <p>Record whether plants of the species are generally grazed or generally not grazed. This contributes to being able to form a view about where those species fit on the stock's hierarchy of grazing preferences. It also helps indicate whether grazing stock have 'switched' onto plants that are less preferred by them</p>   |
| <b>Effect on size</b>       | <p>Grazing may affect overall size of individual plants. For instance, if the 'current shoot' is wholly eaten, the plant is unlikely to increase in size during the current season. If new growth is (say) 5cm (e.g. for cotton bush shoots) and only 2 centimetres are generally visibly eaten, if grazing stopped today the plant is likely to be larger in size this year compared with last year. Where current shoot growth is protected from being grazed off, the general health of individual plants is thus being given some protection, and the overall productivity of each plant (leaf mass produced in the growing season) is also being increased. This latter circumstance would be likely to lead to increasing amounts of foliage available for grazing in the forthcoming year, though coming from the same number of plants.</p> |
| <b>Usual local</b>          | <p>Knowledge of the usual size of the mature plant, locally, can be referred to as a baseline against which one's own plants may be measured, and their current and potential productivity ratio estimated. Record the usual size of a mature plant, locally (for the specific country type if possible).</p>   |
| <b>Trend here</b>           | <p>From information about surviving (ungrazed) shoot length, age mix of the population of preferred grazing plants, and the grazing effect on current season's growth, a trend can be estimated for each plant species. Record the species trend in this paddock. Show whether the species appears to be increasing in size or number, static or decreasing.</p>  |
| <b>Overall trend</b>        | <p>From the 'overall trend', awareness of management needs can be generated. Thus if 'overall trend' summarises that there are an equal number of preferentially grazed species decreasing (or their overall shrub size is decreasing) as there are species increasing, the 'management awareness' needs to be that current fencing may be inappropriate (hence adjustments need to be made to the fencing plans) or that the stock is 'switching' to less grazable species because they are being left in the area too long (current grazing pressures are too high).</p>  |
| <b>Management awareness</b> | <p>If (for example) all preferentially grazed species are held static by the current season's grazing pattern, the overall trend may be that foliage production is 'static'. New plants are likely to be most sought after for grazing, as their soft growth is generally attractive to herbivores.</p> <p>This can then be interpreted to mean that populations of preferentially grazed plants will decline, as 'static' production is unlikely to permit new cohorts (juvenile plants) to appear and subsequently develop.</p>   |

## VIII INTERNATIONAL RANGELAND CONGRESS UPDATE

It is getting closer! The VIII International Grassland Congress – International Rangeland Congress will take place from 29 June – 5 July 2008 in Huhhot, China. That is only a little over a year's time!

The main theme of the Congress "Multifunctional Grasslands and Rangelands in a Changing World" will be split into three simultaneous sub-themes:

1. Grasslands/Rangelands Resources and Ecology;
2. Grasslands/ Rangelands Production Systems; and
3. Grasslands/Rangelands People and Policies.

There will be four days for presentations and poster viewing during the Congress, with plenary papers each day. The themes cover the areas of interests of both the International Grassland Congress and the International Rangeland Congress with 24 half-day sessions during the congress. Details of each of these sessions are given at the Congress website - [www.igc-irc2008.org](http://www.igc-irc2008.org).

The Conference Organisers have already called for the submission of papers for the Congress. As indicated on the website, submission should relate to one of 24 sessions as outlined in the Program. Titles of offered papers should be received by the Secretariat of the Organising Committee at [secretariat2008@hotmail.com](mailto:secretariat2008@hotmail.com) no later than **1 June, 2007**. The Instructions for the Authors and deadline for submitting full papers will be communicated directly to accepted authors in July 2007 and detailed in the Third Announcement and the Congress website. As usual, a paper will not be considered for publication in the Congress Proceedings unless one of the authors attends the Congress.

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## NEW MEMBERS

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BELMONT WA 6103

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## INFORMATION SNIPPETS

### New Book Series on Natural Resource Management

The Tropical Savannas CRC have released a set of four books describing the natural resource management practices currently used by some successful graziers and pastoralists. Entitled *Perspectives on managing grazing country: graziers talk about successfully managing their country*, each book focuses on a region of northern Australia: the Cape River Catchment near Charters Towers, Queensland's northern Gulf, and the Northern Territory's Victoria River District and Sturt Plateau.

The CRC website indicates - "While there is much information available from scientists, agencies and community interest groups, it is harder to access local knowledge and conventional wisdom held by people who live and work on the land. These books redress this imbalance by documenting how graziers manage their natural resources, and recording the practice and wisdom accumulated by a selection of respected north Australian graziers.

The books arose out a project funded by Meat and Livestock Australia and the TS-CRC and led by Stephen Tapsall. Stephen collected many hours of interviews from dozens of graziers and pastoralists and much of the text is in their own words. This local knowledge is accompanied by summaries of issues faced by land managers written by Maria Kraatz, a writer and editor and Sally Sullivan, an experienced NT pastoralist."

These books are \$15 each and can be ordered through the CRC website at: [http://savanna.ntu.edu.au/publications/books\\_reports.html](http://savanna.ntu.edu.au/publications/books_reports.html)



# AUSTRALIAN RANGELAND SOCIETY AWARDS

The Society has two awards to assist members with either:

- travel expenses associated with attending a conference or some other activity, or
- studies related to the rangelands.

Applications for each award will be considered on a yearly basis and close in November of each year. Any member of the Society interested in either award is invited to apply.

## Australian Rangeland Society Travel Grant

This grant is intended to assist eligible persons to attend a meeting, conference or congress related to the rangelands; or to assist eligible persons with travel or transport costs to investigate a topic connected with range management or to implement a program of rangeland investigation not already being undertaken. The grant is available for overseas travel and/or travel within Australia. It is not intended for subsistence expenses.

## Australian Rangeland Society Scholarship

This scholarship is for assisting eligible members with formal study of a subject or course related to the rangelands and which will further the aims of the Australian Rangeland Society. The scholarship is available for study assistance either overseas or within Australia. It is not intended to defray travel expenses.

## How to Apply

Members interested in either award should submit a written outline of their proposed activity. Applications should clearly address how the intended activity (ie. travel or study) meets the aims of the Society. Applications should be brief (less than 1000 words) and should be submitted to the Secretary, Sandra Van Vreeswyk, before **30 November**. An application form can be downloaded from the ARS website at [www.austrangesoc.com.au](http://www.austrangesoc.com.au). For further information contact Sandra Van Vreeswyk by phone on (08) 9347 5120 or Email at [sandra.vanvreeswyk@dpi.wa.gov.au](mailto:sandra.vanvreeswyk@dpi.wa.gov.au).

## Conditions

Applications for the Travel Grant should include details of the costs and describe how the grant is to be spent. Applications for the Scholarship should include details of the program of study or course being undertaken and the institution under which it will be conducted, and information on how the scholarship money will be spent. For both awards details of any other sources of funding should be given.

Applications for either award should include the names of two referees.

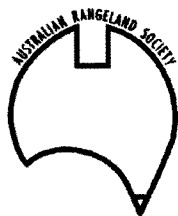
Finally, on completing the travel or study, recipients are required to fully acquit their award. They are also expected to write an article on their activities suitable for publication in the *Range Management Newsletter* or *The Rangeland Journal* as appropriate, and for the Australian Rangeland Society website, within six months of completion of their travel or study.

## Eligibility

No formal qualifications are required for either award. There are no age restrictions and all members of the Society are eligible to apply. Applications are encouraged from persons who do not have organisational support.

There is a restriction on both awards for overseas travel or study assistance in that the applicants must have been members of the Society for at least 12 months. The awards can be for Australian members to travel to or study overseas or for overseas members to travel to or study in Australia.

## MEMBERSHIP APPLICATION FORM



*The Australian Rangeland Society*

**TAX INVOICE / RECEIPT ABN 43 008 784 414**

Please complete and return to the Subscription Manager, Ian Watson, PO Box 483, NORTHAM WA 6401  
Ph (618) or (08) 9690 2179: Fax (618) or (08) 9622 1902: [iwatson@agric.wa.gov.au](mailto:iwatson@agric.wa.gov.au)

I, [name] .....

of [address] .....

Postcode ..... Email address .....

Phone ..... Fax .....

apply for membership of the Australian Rangeland Society and agree to be bound by the regulations of the Society as stated in the Articles of Association and Memorandum.

☐ Enclosed is a cheque for \$AU..... for full/part\* membership for an individual/student/institution\* for the calendar year 2007.

(\* delete as appropriate)

☐ Charge my Mastercard VISA Bankcard AU\$.....for full/part\* membership for an individual/student/institution\* for the calendar year 2007.

Card No.:\_\_\_\_\_ Expiry Date:\_\_\_\_\_

Signature:..... Date: ..... Cardholders Name:.....

If you were introduced to the Society by an existing member please include their name here .....

Please list details of your institution & student number if you are applying for student rates .....

### Membership Rates; GST inclusive

### Australia

### Overseas Airmail

#### Individual or Family -

Full (Journal + Newsletter)/Student

\$85.00/\$65.00

\$105.00/\$85.00

Part (Newsletter only)/Student

\$50.00/\$35.00

\$60.00/\$40.00

#### Company -

Full (Journal + Newsletter)

\$115.00

\$140.00

Part (Newsletter only)

\$65.00

\$75.00

- All rates are quoted in AUSTRALIAN currency and must be paid in AUSTRALIAN currency.
- Membership is for the calendar year 1st January to 31st December. Subscriptions paid after 1st October will be deemed as payment for the following year.

**Australian Rangeland Society Privacy Statement.** Consistent with national privacy legislation, the Australian Rangeland Society (ARS) will only use members' personal contact information for keeping its records up to date, and enabling member access to ARS products and services e.g. meetings, events, newsletters, journals and conferences. ARS will not use members' information as supplied to ARS for any other purpose and it will not disclose the information to any other party without the member's consent. This will be achieved through email communication or any other means as appropriate.

