The Australian Rangeland Society

RANGE MANAGEMENT NEWSLETTER
An official publication of The Australian Rangeland Society
ISSN 0812-4930

Citation
The material in Rangeland Management Newsletter has not been subject to peer review and may not be acceptable to some editors.

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).

ISSN 0812-4930

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Range Management Newsletter

No. 03/2 July 2003

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

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Range Management Newsletter 03/2

FROM THE EDITOR

Noelene Duckett, 7 Belcarra Place, The Woodlands, Texas, USA, 77382. Email: nduckett@ozemail.com.au

Welcome to another *Range Management Newsletter*.

Following on from the monitoring studies included in *RMN* 03/1 (March 2003), this issue begins with two additional articles related to this subject. Firstly, there is an article from Dick Condon describing the condition of the rangelands in the Western Division of New South Wales from the late 1800's until the present. Dionne Walsh has also written an article outlining Centre Land Watch, a producer-driven monitoring initiative carried out by many pastoralists in the Central Australian rangelands.

A number of other interesting articles have also been included. Paul Carberry has taken a first-pass look at the opportunities for seasonal forecasts to regularly influence management decisions using the results of a survey based on management in 2002. There is also an update on the Centre for the Management of Arid Environments (CMAE) from the new director Ben Norton, and a brief note describing the Australia Day Achievement Medallion awarded to one of the Society's long-term members, Dr Greg McKeon.

This newsletter contains several reports from the ARS Council including the usual communications report from Lachlan Pegler and an article indicating that Council has reinstated the ARS Travel Grants. While applications for the current round of grants closed on the 30 June, there is lots of time to prepare an application for the next round - see the article on page 12 for further details. The reports from the AGM held in May 2003 are also included at the back of this issue. Of particular note is the report from the 12th Biennial Conference held in Kalgoorlie in 2002 which showed that the conference had an overall profit of $22,570.41 – well done to everyone involved! Please note that Council would also like to invite all members to a general meeting and dinner in Adelaide at the end of August – see the notice on this page for further information.

I am sure some of our members are looking forward to attending the VIIth International Rangeland Congress in Durban, South Africa from 28 July – 1 August 2003. It promises to be an exciting event with over 580 full registered delegates (65 of which are Australians), 720 abstracts and 390 full papers received as at 3 June 2003. I hope some of our members will share their Congress experiences in future newsletters for those of us unable to attend.

Please note that the next issue of the newsletter is due out in November. To allow time for editing and printing I would appreciate receiving your articles by late September. As usual, I would be particularly keen to receive longer articles as well as reports from the IRC.

GENERAL MEETING OF THE SOCIETY AND DINNER

Saturday 30 August 2003
Adelaide SA

ALL MEMBERS OF THE SOCIETY ARE INVITED TO ATTEND

Since Council has become a national body, it aims to have at least one face-to-face meeting each year. This year Council will meet in Adelaide at the end of August. Council will meet through the day, after which there will be a General Meeting of the Society followed by dinner. All members are very welcome and encouraged to attend the General Meeting

Date: Saturday, 30 August 2003

Venue: TIFFINS ON THE PARK
176 Greenhill Road,
Parkside SA 5063

10am – 3pm Council Meeting

5 – 6pm General Meeting of the Society, including verbal report on the IRC in Durban.

6.30pm Dinner, at member's own expense. (Cost for a 3-course meal will be $35.00 per person, not including drinks.)

RSVP essential to:
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BY 8 AUGUST 2003

RECOVERING RANGELANDS IN WESTERN NEW SOUTH WALES

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Email: rwcondon@ozemail.com.au

Articles in a previous issue of the *Range Management Newsletter* (03/1 March 2003) were recording improvement in the condition of rangelands in the Northern Territory and Western Australia. This article describes the widespread recovery of seriously eroded lands which has taken place in the Western Division of New South Wales over the 55-year period since the end of the 1940s drought in that region, this drought also extending over much of south-eastern Australia. I began duties as a soil conservationist in the region in 1947, and was able to observe the results of the previous 50 years of adverse climate, in association with adverse management of the time, and rabbits frequently in plague numbers. I was later able to serve as Western Lands Commissioner, administering the lands of the region.

The Western Division of NSW

The Western Division is one of three territorial divisions of NSW, occupying the driest 40% of the state, with average annual rainfall ranging from 400-500 mm along the eastern boundary to 150-200 mm along the border with South Australia. Soils, topography and vegetation are, for the greater part, loamy red earths with box-pine and *Acacia* shrub woodlands and mulga sandplains across the northern half. Arid brown calcareous loams across the southern half support a dense mallee or broken low arid woodland of belah-rosewood.

Broad expanses of heavy grey and brown clays on mostly treeless plains support saltbush/bluebush sbrublands in southern and far western areas and on the stony downs and outwash plains of the undulating and sometimes mountainous country of the Barrier and Grey Ranges running roughly parallel with the South Australia border on the west. The river floodplain woodlands of the Darling River system bisect the region from north-east to south-west. Undulating stony and gravelly red loams occur across the eastern end of the region, also with a box-pine and *Acacia* shrub woodland.

Land Management and Grazing History in the Western Division

Prior to 1900

The earliest settlement occurred along the river systems until wells and tanks, dug initially with shovels and drays, and a few near-permanent waterholes in occasional large, mostly dry creeks, opened up the country between the river systems to grazing. Later, horse, camel or donkey drawn scoops were used to construct earthen tanks and bores, and sub-artesian bores were also sunk into the Great Artesian Basin and other groundwater systems to provide stock water over the whole region. By 1878 almost all the Western Division was used for pastoralism.

The pastoralist found, however, that providing this water was very expensive. Watering points often served two, three and sometimes four paddocks, each with 5000 sheep. It was not unusual to find 15,000 sheep on a 6 km watering radius (equivalent to 1.34 sheep/ha) in country with a carrying capacity today of one sheep to 6-8 ha. The consequent extremely heavy grazing and trampling pressures on the first kilometre or so around such watering points caused much severe wind and water erosion.

A period of unbelievable devastation began in the early 1890s when the Western Division reached a peak of 15 million sheep equivalents, compared with 6-9 million generally through the 20th century. The peak in stock numbers coincided with the arrival of the rabbits, which crossed the River Murray into western NSW in 1881 and were reaching plague proportions throughout the Western Division by the end of that decade.

The rabbits were responsible for wiping out the edible shrubs, mostly chenopods, over large areas, although there is also evidence that sheep had already overgrazed in many areas. This huge grazing pressure by sheep and rabbits coincided with the 1895-1902 drought, causing widespread severe erosion. The netting fences which had become compulsory on boundaries served to pile up sand, becoming useless for both stock and rabbits. Buildings, yards and sometimes homesteads were sanded up, often abandoned to the sand. The lands surrounding the heavily used watering points became huge scalds or drifting sandy wastes. By the end of the drought in 1903, livestock numbers were down to 4.13 million sheep equivalents.

1900s until 1945

Over the following forty years or so, 50% of which were drought years, drought conditions were exacerbated by the rabbits removing the feed much sooner than it would otherwise have been removed. During this period, between 1895 and 1945, winds were very much stronger than they had been before, or have been since (Ward and Russell 1981). Black-out and brown-out dust storms were a common feature of this period in drought times, often occurring at weekly intervals through the spring/summer periods.

Although stock numbers had been reduced to more reasonable levels, the adverse management practices continued after 1900. Large numbers of stock were kept on few watering points and huge numbers of stock were also brought to shearing sheds twice a year which placed enormous pressures on the paddocks around the woolsheds. Additionally there were huge mobs of 10,000 to 15,000 sheep and similar large numbers of cattle using the stock routes to escape from drought and to re-stock the country afterwards. Consequently, erodible soils along the mile-wide stock routes and the public watering places were invariably surrounded by huge scalds or drifty wastes.

The surrounds of the mining towns at Broken Hill and Cobar were also eroding wastelands. Timber was removed for mining purposes and home firewood and the Common areas carried huge numbers of stock. This included teamsters' horses, donkeys, camels, dairy cows and

travelling stock moving through to saleyards and trucking yards. Any mild breeze would have Broken Hill shrouded in dust.

1946-1990s

From the late 1940s there was a marked improvement in climatic conditions with most years from 1949 to 1956 registering 1.5 to 2 times average annual rainfall over the region, and elsewhere in south-east Australia. The large volumes of run-off from near-impermeable scalded surfaces flooded the lower parts of the scalds, causing the surface several centimetres to become cracky and crumbly as the sodium was leached down through the profile. These conditions encouraged regeneration by primary colonisers such as annual saltbushes and copperburrs as well as poverty bushes. These were followed by perennial native grasses or perennial saltbushes and bluebushes, or whatever was plentiful in surrounding non-eroded areas and suited to the exposed clay surface.

Another run of wet years in the mid-1970s brought widespread bushfires as the huge volume of spear grass or mitchell grass subsequently dried out. The good seasons, however, consolidated the recovery. Sand drifts and drifty areas grassed up, although they often became drifty again in drought conditions. Most of the former huge scalds, dating from the 1890s and later, recovered to 80-95% of their former areas. The highest parts of the former scalds, only 20-30 centimetres above the lowest parts perhaps 1-2 kilometres away, remain bare, still shedding water to lower parts. These will probably never recover without some form of mechanical treatment. Many such former scalds were used as catchments for earthen tanks for stock water supplies, the drains now bereft of the run-off they used to carry down to the tanks.

The less erodible soils over most of the region recovered, quickly in grassland areas, less so in landscapes dominated by the edible chenopod shrubs. These latter areas are now also improving, with the perennial saltbush (*Atriplex vesicaria*) and black bluebush (*Maireana pyramidata*) being restored to normal stand densities in many areas from which it had been wiped out in the 1890s.

Although the improving climate was the catalyst which initiated and consolidated the recovery, there have been many other factors which have made it easier for the native vegetation to respond. Foremost among these has been the decimation of the rabbit populations, by myxomatosis from the 1950s and later by the *Calici* virus. Landholders through much of the region have taken advantage of this opportunity with government-funded ripping programs to prevent their lands again being over-run by rabbits.

Other factors have also contributed to the recovery. These include:

- The post-World War II land settlement program which broke up the huge pastoral runs into owner manager units of 3000 to 5,000 sheep areas, with watering points now serving from 300 to 500 sheep.
- The movement of livestock on wheels which has taken the pressure off the stock routes and enabled areas to be de-stocked quickly in drought and returned after drought.
- Improvements in farm water supply technology, especially in reducing the cost. Polythene piping now enables water to be taken to where the feed is, removing the trampling pressures which previously destroyed much country around the sparsely-spaced earlier watering points.

These recovery factors, and the recovery processes, have been discussed in detail in Condon (2002).

The early surveys of landform, soils, vegetation, erosion and management aspects showed that about 20% of the region was composed of highly erodible texture-contrast soils. Another 10% of the area was classed as undulating loamy red earths which also suffered severe water sheeting in earlier adverse times. The erosion of these soils has been exacerbated by repeated invasions of woody weeds, initially following a very wet period in the 1870s, with further generations of woody weeds in-filling the previous generation of scrub and timber regrowth, in subsequent wet periods in the 1950s, 1970s, 1980s and 1990s.

Whereas this country was originally "see a cow at half a mile" grassy woodland, it is now often difficult to see a cow at half a chain (10 metres) through the dense scrub and young trees, which are often at spacings of less than a metre. The result, in terms of productivity and continuing erosion, is catastrophic. The 1970s generation of woody weeds extended westward over much of the mulga sandplain country to the South Australia border and beyond. The only means of returning such country to its former state is clearing to remove the scrub and timber to allow native grasses and forbs and perennial shrubs to re-occupy. This idea was supported by the Wentworth Group of Concerned Scientists (2002) in their *Blueprint for a Living Continent* which seeks an end to broadscale clearing (This document is available for download from the WWF website – www.wwf.org.au).

Current Conditions

The current drought across south-east Australia has been shown by the Bureau of Meteorology to be more intense than the 1895-1902 drought which contributed so much to the earlier devastation. This time, however, it appears that the recovery factors discussed, and the low livestock numbers (now similar to the previous record low in 1903) have been responsible for keeping the landscapes well covered.

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Note:
As indicated above, more information about land management and grazing history in the Western Division of NSW can be obtained from Dick Condon's recently published book *Out of the West - Historical Perspectives on the Western Division.*

The book is available from the Rangelands Management Action Program (RMAP) office at Wentworth. The cost is $35 (incl. GST) plus $8 for postage and handling- if you would like a copy autographed by the author for an extra $5 please indicate when ordering. Please make cheques payable to "Dick Condon A/c c/- RMAP" and send to:

Sheree Bradford
RMAP
PO Box 305
Wentworth NSW 2648

The author can also be contacted for orders and other queries. His contact details are:

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CENTRE LAND WATCH - MONITORING BY PASTORALISTS FOR PASTORALISTS

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Introduction

The majority of cattle producers in the Alice Springs district are members of a pastoral landcare group called the Centralian Land Management Association (CLMA). The CLMA district stretches from Tennant Creek in the north to Oodnadatta in the south and encompasses 300,000km² of land under pastoral lease. Many pastoralists in the region now do more of their own rangeland monitoring due to a producer-driven initiative called Centre Land Watch (Walsh, 2002). This article describes the evolution of Centre Land Watch and provides some advice for people designing monitoring systems for producer use.

Monitoring in Central Australia

The most common approach to monitoring by government has been to use fixed photopoints in combination with plot-based measures to monitor vegetation and soil, although satellite-based monitoring tools are in development (Bastin *et al.* 1983, Walsh *et al.* 2002). Over the years, NT pastoralists have been encouraged to visit and photograph monitoring sites, however, less than 15% have routinely undertaken this voluntary activity in the Alice Springs district. In the late 1990's, some CLMA members articulated a desire to do more of their own monitoring but also expressed a wariness of the government agency encouraging them to do so. In order to overcome this, CLMA secured NHT funds and employed an extension officer to provide an independent monitoring support service. Rather than installing yet another set of sites, members decided to make use of existing sites and then designed a simple data sheet to record plant, soil and animal information. They named this initiative Centre Land Watch (CLW).

Existing Sites

There are about 2,000 photopoint sites in Central Australia. About 800 of these are in current use by the NT Government (for Pastoral Land Board reporting requirements). The government aims to visit each of these sites on a 3 - 5 year cycle. Centre Land Watch integrates with the existing government program by encouraging pastoralists to visit the sites in the years between government visits. Centre Land Watch also allows pastoralists to pick up the large number of sites that are no longer serviced by government. These latter sites tend to be the oldest in Central Australia and are of great interest to pastoralists due to the changes that have occurred. With the cooperation of the Northern Territory Department of Business, Industry & Resource Development, CLMA has been able to provide pastoralists with historical photo sets for these old sites. These photo series have motivated

several land managers into taking up monitoring for the first time (Figure 1).

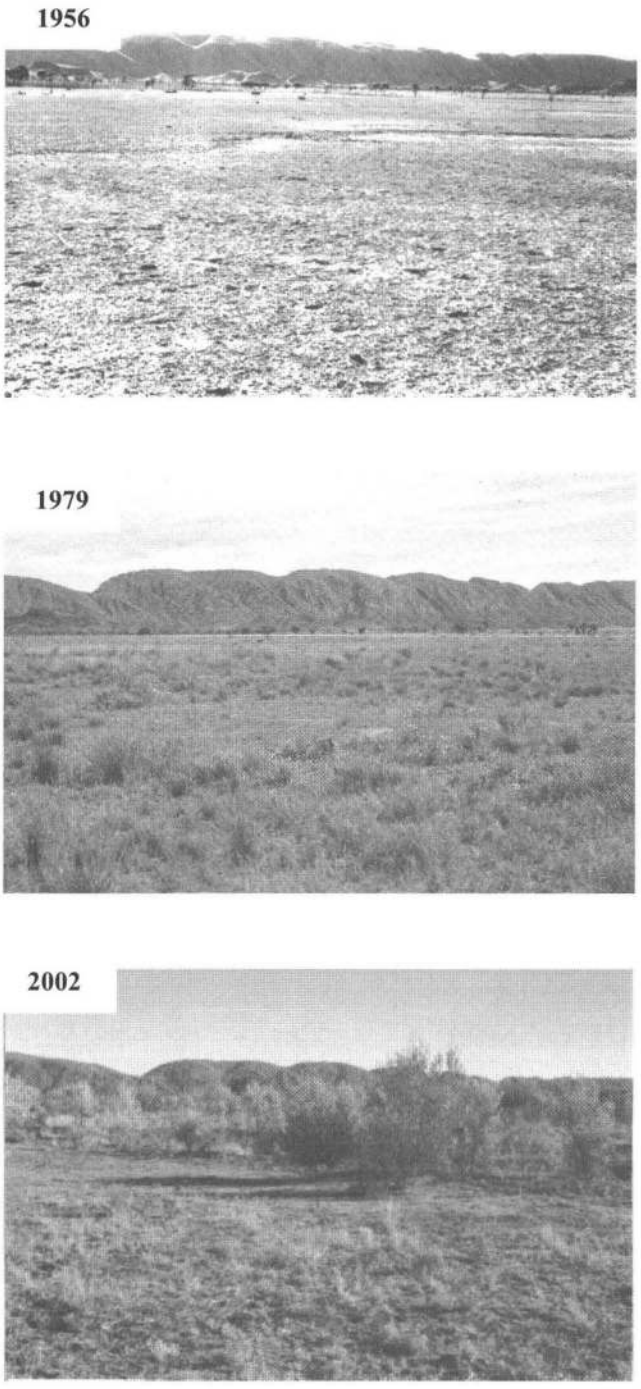

Figure 1. Historical photos are of great interest to pastoralists because they record changes that occur slowly over time, such as shrub encroachment.

What Support is Provided?

Producers are visited on their properties and time is invested in determining what aspects of monitoring the family is interested in and how the monitoring can be tailored to suit their interests, level of experience and confidence. All members of the family, including children, are encouraged to participate. Together, we locate sites, take the photos, record information on the Centre Land Watch sheet and discuss the changes occurring (Figure 2). The ultimate aim is to provide "hands-on" training so that pastoralists can feel confident about doing their monitoring on their own. The project also offers a range of complementary services including customised photographic herbaria, updated maps, assistance to install new sites, GPS tuition and electronic data storage on request.

Figure 2. Monitoring encourages lively debate between family members.

Part of Centre Land Watch's appeal has been its flexibility. We learnt early on that a producer monitoring system does not have to be "one size fits all". Pastoralists choose what elements of the environment they wish to monitor. Interestingly, most choose similar elements, these being a combination of plant species composition, percentage ground cover, seasonal pasture condition, evidence of on-site impacts by cattle and other animals and changes in the density and size of woody vegetation. Some pastoralists use their monitoring sites to record the recovery of vegetation after fires and the effectiveness of particular actions (such as weed control and erosion control). Others are starting to record non-pastoral values such as the presence of birds, reptiles and ants at sites.

Lessons Learnt

In a former life, I was a government scientist frustrated that more pastoralists didn't do their own monitoring. Since becoming an extension officer employed by industry, I've spoken to many pastoralists, pastoral company staff and extension people around Australia and found out that I'm not the only one that was frustrated! Through these discussions, I've compiled a (non-exhaustive) list of issues that are barriers to uptake:

- Many monitoring systems have not been designed with genuine and widespread input from land managers and therefore don't meet their requirements.
- Pastoralists keep track of indicators at the paddock or property scale and find the pedantic details of data

collection at the 'site' scale perplexing or meaningless.
- It is often seen as something the 'government' does.
- The results of government monitoring are often used for regulatory purposes and are potentially threatening.
- There is usually inadequate instruction or ongoing support.
- Data collection is often complex or time consuming.
- Humans don't act until there is an imminent threat to their activities.
- When times are tough, monitoring is one of the first things to be dropped.
- There is rarely a clear connection between monitoring and increased profit.
- It takes a long time to detect a trend and it's almost impossible to assign a cause.
- "Experts" have been quick to criticise but slow to offer solutions for monitoring issues such as biodiversity.
- It takes up to five years to get into the habit and see it as a legitimate management activity.

Why Does Centre Land Watch Work?

Pastoralists in Central Australia have told us that they value their photopoints for recording changes that occur gradually over long periods (such as shrub encroachment) and for demonstrating the range of vegetation cover that occurs as a result of the variable climate (Figure 3).

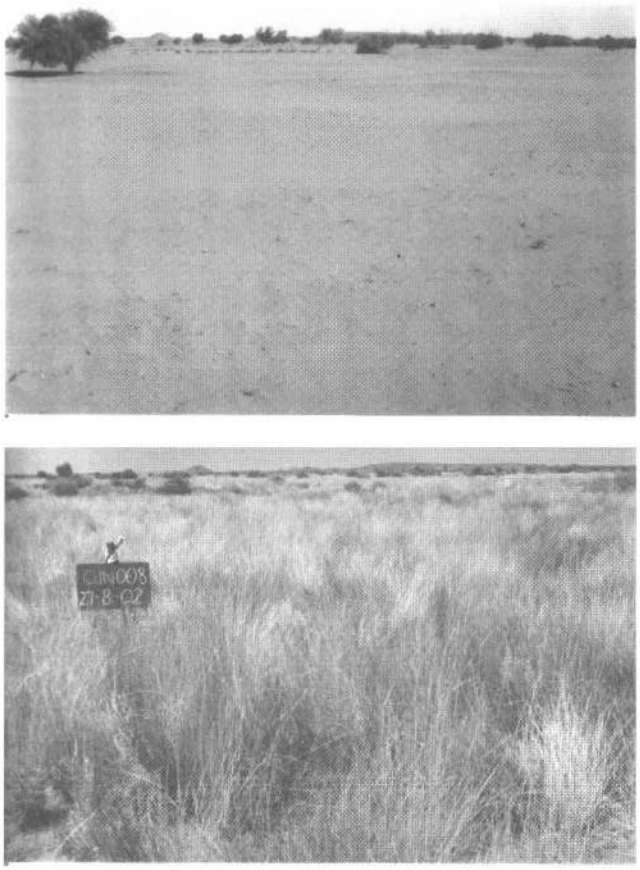

Figure 3. Regular visits to monitoring sites are important to capture the wide variability in seasonal conditions.

Some pastoralists feel that it is important to have photos and data in the years between government visits so that pastoral officers can interpret changes in light of all the available information. Centre Land Watch empowers land managers because they gain control over the photos and data which gives them confidence to articulate their management credentials.

Centre Land Watch has been successful because it:
- Is driven by pastoralists.
- Has a project officer employed by the industry.
- Provides "one-on-one" extension support.
- Avoids technical jargon.
- Is not done for regulatory purposes.
- Tailors the monitoring to suit the needs and experience of the individual.
- Values the knowledge and experience of the land manager.
- Encourages women and children to participate.
- Records how pastures respond to different seasonal conditions.
- Starts simple and is added to as pastoralists request more.
- Is kept to one day a year.

The Future

CLMA will continue to support the monitoring aspirations of its members beyond the NHT funding period. We have also recently secured funding through the National Pilot Program for Environmental Management Systems. Through our pilot, we will be supporting 15 producers to develop and implement EMSs for their properties. Centre Land Watch will be a key component of the monitoring effort for these EMSs. We will be further customising and refining monitoring on each station to link it with the monitoring needs of each EMS. This will strengthen the bond between monitoring and the bottom-line aspects of the businesses involved. We will also be determining how (if) Centre Land Watch can be expanded to include biodiversity elements.

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IMPROVED SEASONAL FORECASTS FOR WOOL PRODUCERS IN WESTERN NEW SOUTH WALES

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Early stages of a project for the Climate Sub-program of Land, Water & Wool asked what opportunities there are for sheep producers in a low and variable rainfall environment to change management should useful seasonal forecasts be available.

A preliminary analysis of the first 100 replies received in a recent survey reveals some limitations but also some obvious opportunities for seasonal forecasts to regularly influence management decisions.

Demonstrated capacity for change

Figure 1 illustrates the management changes that were made in 2002 compared to normal management. This figure indicates that producers are willing to make serious and long reaching changes to management if they consider them necessary. The big range of changes and high proportion of producers making them show an enormous capacity and willingness to change.

Information used in major decisions

Producers were also asked to rate a range of information on it's contribution to making the most difficult management change made in 2002 (Figure 2).

It appears the current conditions – paddock feed, fodder growth and animal condition – are dominant considerations. This is a logical approach as these are high impact, readily observed and are known data compared to the uncertainty of forecasts.

The next most important grouping is seasonal outlook – as assessed with the seasonal forecast, SOI and El Nino situation. Producers clearly recognise the potential for this information to modify decisions suggested by the assessment of current conditions.

Interestingly, market conditions and the short term forecast had little influence.

Activities with flexibility

Producers were asked to provide the calendar month in which they undertook joining, weaning, buying, selling, shearing, crutching, drenching and jetting. Of these, only two activities had clear seasonality - joining and shearing (Figure 3).

For most producers it appears joining time is controlled by shearing time. The plan is to have lambs of a suitable age to wean and shear by August, prior to the likely set of grass seed and spring fly activity. Many also go the reverse and shearing is controlled by joining time. The aim is to shear close before lambing. This may be adjusted slightly to also be before autumn fly activity. Lambing appears to be targeted to having a high chance of having green fed available either at or very soon after and the consensus is that this is during winter. A few join in autumn to maximise lambs born.

In summary, joining and shearing are set mostly by annual cycles of fly and grass seed activity and to a lesser extent green feed. This means there is little flexibility in the timing of these activities. The number of ewes joined could vary if the season six months out could be forecast however with current technology this is not available.

It is interesting that the survey indicated that joining and shearing are the only activities with a clear time attached. Selling was particularly flexible with many responses of "as the season allows" or "when they are ready".

Given this flexibility there is a strong potential for seasonal outlooks to contribute to selling decisions at any time of year, allowing producers to hold stock if conditions have a strong chance of being good or sell earlier or more than usual if chances are low.

The next step is to identify forecasts that are accurate enough to be useful, even if only at certain times and discuss them with producers to develop a presentation style that allows easy and appropriate integration into management decisions.

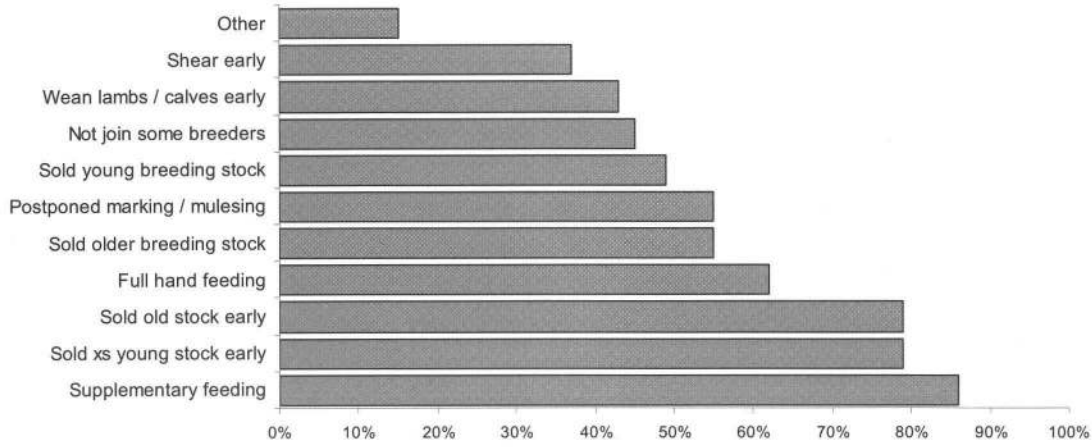

Figure 1. Management changes carried out in 2002 (expressed as a percentage of the total responses)

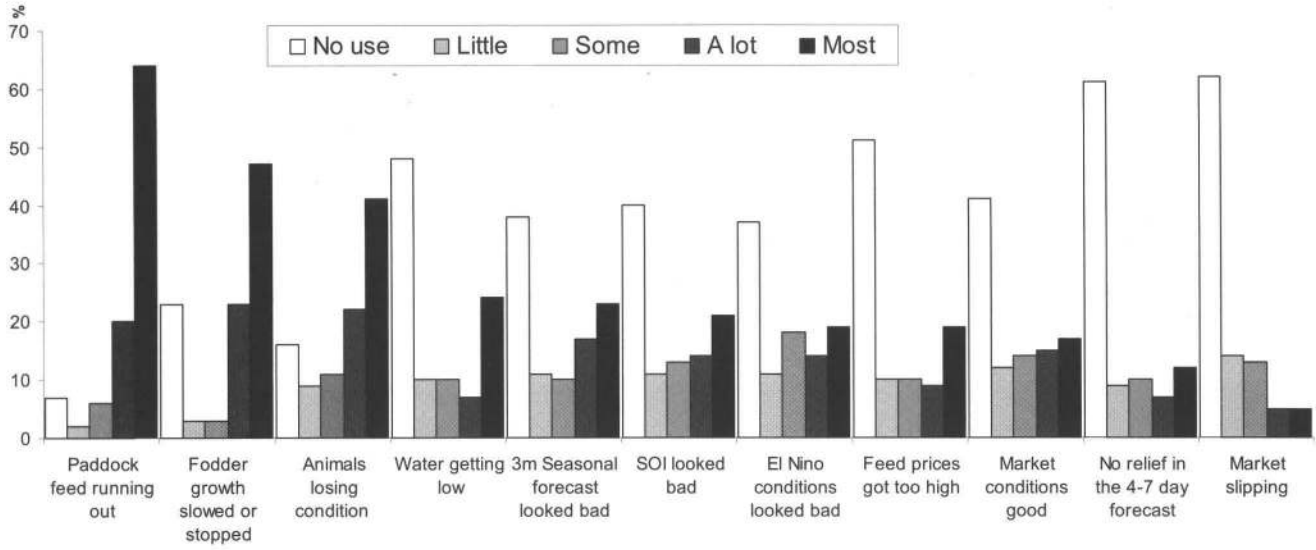

Figure 2. Factors contributing to the major management change undertaken in 2002.

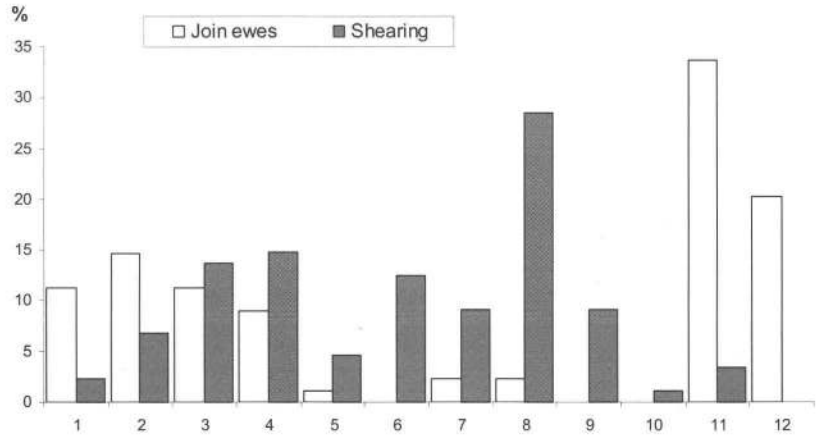

Figure 3. Timing of joining and shearing over the calendar year (months expressed as a number).

RANGELAND RESEARCH CENTRE GATHERING MOMENTUM

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Email: B.Norton@cmae.curtin.edu.au

The Centre for the Management of Arid Environments (CMAE) was launched with great enthusiasm and great expectations a little over three years ago. An article by Adrian Williams and Ed Barrett-Lennard, published in the November 2000 issue of the *Range Management Newsletter,* set out a challenging program of research and development for the pastoral zone with regional, national and international dimensions.

The program for the Centre has become more pragmatic since then, with the realities of budget and personnel resources moulding the agenda. The vision of CMAE's role in the future of rangelands, however, remains exciting. What are we doing? you might ask. And who exactly is "we" these days? The first question can be answered by providing a snapshot of the CMAE activities during the months of May and June 2003.

Preparation for the implementation of the Desert Knowledge CRC, approved last December, continues in top gear. CMAE is a joint venture of two of the eight core partners of the Desert Knowledge CRC, namely, Curtin University of Technology and the Department of Agriculture Western Australia, and the CMAE Director serves on the DK CRC steering committee. Two CMAE research proposals have been submitted to the DK CRC, one concerned with restoration of the Roderick River catchment in the Murchison region of Western Australia, and the other concerned with an on-station study of sustainable grazing management.

CMAE Director Ben Norton, who taught for many years in the Department of Rangeland Resources at Utah State University, delivered three lectures to students enrolled in a course on Range Ecology and Management at the University of Western Australia. This course will culminate in an intensive week of field exercises beginning at the end of June on Cashmere Downs station northwest of Kalgoorlie. The team of field supervisors includes staff from the WA Departments of Agriculture and Conservation and Land Management, as well as CMAE.

The Natural Heritage Trust requires a strategic plan for natural resources management in the rangelands before funds are released for the second phase. Over the next 12-18 months a group of strategists and NRM facilitators will work with stakeholders to articulate their vision for the sustainable use of rangeland resources in Western Australia. Interim funding has permitted CMAE to hire two of the anticipated four NRM facilitators whose role is to prepare stakeholders for the strategic planning process.

Some projects supported under the first phase of the NHT environmental program were deemed too important to be abandoned during the hiatus created by the strategic planning initiative, and assigned high priority for continuation. One of these priority projects is the Ecosystem Management Unit (EMU) project directed by Hugh Pringle of CMAE/Department of Agriculture and Ken Tinley of Conservation and Land Management (*Range Management Newsletter* 01/3 December 2001, pages 11-14). The EMU team works with pastoralists to capture their knowledge of their land, its condition and key ecological features in a series of overlays on a base land system maps. From this systematic accumulation of knowledge pastoralists acquire a deeper understanding of the landscape and the requirements of sustainable use. CMAE has received a significant grant from NHT to support the EMU program over the next 12-18 months.

For the past year CMAE has been encouraging a Master's student, Gary Price, in his attempt to demonstrate the viability of olive growing in the pastoral zone. A geologist by training, Gary observed the devastating impact on desert towns when a mining operation closed down. He believed that the long-term survival of desert communities depended on diversification of enterprises. Olives grow well in gardens in the Goldfields regions and as isolated trees in the rangelands. Olive trials on Mount Weld station, managed by the Placer Dome mine Granny Smith, have shown particular promise over the past three years. CMAE sponsored Gary Price in a presentation to Laverton Shire Council inviting them to endorse the project and provide some assistance to olive grove maintenance, which they have agreed to do.

Following contacts initiated by Ed Barrett-Lennard in February 2002, a delegation from Omar Al-Mukhtar University in Libya will be visiting Western Australia in mid-June, hosted by CMAE. We anticipate that the outcome of this visit will be a Memorandum of Understanding between Curtin University and Omar Al-Mukhtar University for collaboration in research and education.

This overview of current CMAE activities is by no means exhaustive, but it provides a thumbnail sketch of the Centre's program.

Finally, who are we? Last August saw a turnover in the management of CMAE. Mr Adrian Williams resigned from his position as Business Development Manager and joined an AusAID project in China. Mr Williams was largely responsible for the establishment of CMAE and with his departure the Centre lost a large part of its institutional memory. He is currently the Rangeland Advisor for the Alxa League Environmental Rehabilitation and Management Project, Inner Mongolia, managed on behalf of AusAID by ACIL Australia.

The first Director, Dr Ed Barrett-Lennard returned to his senior research position with the Department of Agriculture in Western Australia, studying saline-affected lands. He was seconded from DAWA to serve as Interim Director of CMAE from November 1999, and was subsequently appointed the first CMAE Director in June 2000. Dr. Barrett-Lennard and Mr Adrian Williams deserve credit for turning Mr William's vision of CMAE into a functional reality. They conceived and designed a

program, hired staff, attracted funding, and worked with the Western Australian Department of Agriculture to refurbish and furnish the CMAE building at 55 MacDonald Street. On 2 August 2002, Dr Barrett-Lennard resigned from CMAE and returned to the Western Australian Department of Agriculture in South Perth where he has resumed his research work on salinity and its amelioration. Dr Barrett-Lennard also holds an adjunct appointment with Curtin University and will maintain a professional relationship with CMAE through the supervision of postgraduate students.

On 16 July 2002, Dr. Barrett-Lennard handed over the Director's role to Dr Brien E. (Ben) Norton, and thereby inaugurated the second generation of CMAE personnel. When Dr Norton was initially invited to join CMAE he had been working (since June 2001) for the International Centre for Agricultural Research in the Dry Areas (ICARDA) as the Range Management Scientist, located near Aleppo in northern Syria. Prior to taking the ICARDA position, Dr Norton was based in the United States where he held academic appointments in the Department of Range Science (later, Department of Rangeland Resources) at Utah State University and was involved in international projects in seven countries. He received his tertiary education at the University of New England, and has returned to work in his native Australia after an absence of 30 years. His particular interests lie in the theory and application of rotational grazing systems, and he plans to participate with pastoralists to study grazing management in Western Australia at the whole-station scale.

On 14 October 2002, Mr. Bill Mason was hired as the new Business Development Manager, succeeding Adrian Williams. Mr Mason was previously Senior Development Officer in the Kalgoorlie office of the Goldfields Esperance Development Commission, a State Government agency engaged in a wide variety of regional development projects. One of his first tasks at GEDC was to work with Adrian Williams on the organisation of the Fourth Biennial Desert Technology Conference, held in Kalgoorlie in 1997. Before working in regional development, Mr Mason spent 18 years in the arts and entertainment industry, managing entertainment venues and theatre companies.

Several research and development proposals are in train, mainly directed towards collaborative projects with pastoralists, and those developments will likely be the subject of CMAE's next report to the ARS newsletter.

REPORT FROM COUNCIL

Lachlan Pegler, Communications Officer ARS, PO Box 224, Charleville Q 4470

- Well the website is finally up and running (http://www.austrangesoc.com.au), thanks to the concerted efforts of David Wilcox. A bookmark to promote the website is under production - you should see these around in the near future. If anyone is interested in the position of Webmaster for the site, please contact any member of Council.

- The organising and program development for the 13th Biennial Conference to be held in Alice Springs has begun. The organisation of the conference has been awarded to Intercomm (Sarah Nicolson) following an open tender process.

- A report on the 2002 Kalgoorlie conference was received from Intercomm. This report comprehensively outlined the success of the conference, with an overall profit of $22570 generated (the full conference report is included with the other AGM reports at the back of this newsletter).

- Don Blesing has been contracted by the Council to rearrange the book keeping processes and to construct a framework for future financial management of the Society. This will be prepared in time for a changeover of Finance and Audit Officer, Secretary and President that will occur in August this year. This changeover will occur at a face-to-face meeting and dinner in Adelaide on 30th August (see separate notice on page 1 for details).

- Neil McLeod (Qld), Sandra Van Vreeswyk (WA) and Tim Ferraro (NSW) have all been elected as new Officers on Council. The current Council will carry forward the business of Council until the meeting in August in Adelaide, when new positions will be filled from the remaining and new members of council. Thank you to Merri Tothill (President), John Maconochie (Finance and Audit Officer) and Sarah Nicolson (Secretary) for sterling service for the past four years on Council.

- Council has reinstated travel grants (bursaries) for this year. The information for these is found on the web site - applications close on 30th June. One application has already been received and will be considered by the Council after the closing date.

- Robyn Cowley and Lachlan Pegler attended workshops on managing, planning and communication within societies for membership benefit; a range of recommendations from these workshops have been put to the Council. Some recommendations such as the need for position descriptions for all positions on Council have already been enacted.

- Merri Tothill has been appointed to the Advisory Committee of Rangeland Australia, so will be able to provide an important link to that group in the future.

AUSTRALIAN RANGELAND SOCIETY AWARDS

The Society has two awards to assist members with either:

- Studies related to the rangelands, or
- With travel expenses associated with attending a conference (or some other activity).

Applications for each award close in June of each year. Any member of the Society interested in either award is invited to apply. Students are particularly encouraged to apply to assist their attendance at the 2004 ARS Conference in Alice Springs.

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 has the purpose of 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 grant 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 Council before 30th June. Application forms and guidelines can be downloaded from the ARS website at http://www.austrangesoc.com.au. For further information contact the ARS Member Services Officer robyn.cowley@nt.gov.au.

Conditions

Applications for the Travel Grant should include details of the costs and describe how the grant is to be spent. Details of any other sources of funding should be given. Those applying for the Scholarship should include details of the program of study or course being undertaken and the institution under whose auspices it will be conducted. Information on how the scholarship money will be spent is required, as are details on any other sources of funding.

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

Finally, on completing the travel or study, recipients are required to fully acquit their grant or scholarship. They are also expected to write an article on their activities or experiences for the *Range Management Newsletter.*

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.

Travel or study assistance can be made available to a non-member where Council considers that the application meets the aims of the Society, and is of sufficient merit.

Overseas Travel and Study

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 grants can be for Australian members travelling overseas or overseas members to for study within Australia.

2003 AUSTRALIA DAY AWARD FOR GREG McKEON

Beverley Henry and Ken Brook, Climate Impacts and Natural Resource Systems, Natural Resource Sciences, Department of Natural Resources and Mines, 80 Meiers Rd, Indooroopilly, Queensland 4068.
Email: beverley.henry@nrm.qld.gov.au

Dr Greg McKeon, one of Australia's premier rangeland ecologists and a member of the Australian Rangeland Society since 1981, was awarded a 2003 Australia Day Achievement Medallion. The medallions are presented annually by the National Australia Day Council in conjunction with the States and Territories to individuals who have made a noteworthy contribution during the past year and/or given outstanding service over a number of years.

Greg has been a key member of the Climate Impacts and Natural Resource Systems group of Natural Resource Sciences in Queensland Department of Natural Resources and Mines for the past decade. His work has resulted in a comprehensive systems view of grazing systems in northern Australia. Greg's incisive analysis, modelling, networking and enthusiastic mentoring of others have provided knowledge of how plants grow; their interactions with animals in a variable climate; prospects for a warmer, drier greenhouse world; strategies for minimising off-site impacts of erosion and nutrients; the role of fire and carbon storage in savanna systems; the interactions of grasses and trees; salinity water-balance issues; and the start of an all-encompassing, whole-property management system incorporating all these factors.

In part the citation read:

"Dr McKeon was instrumental in the development of the premier model of pasture growth for northern Australia, and the formation of the Drought Research Group at Indooroopilly.

Awarded the Australian Institute of Agricultural Scientists medal for his contribution to the nation, Dr McKeon is recognised for his compassion, optimism and enthusiasm for a better world.

His latest work is a rallying call for Australian graziers, ecologists and land managers not to repeat the previous eight major land degradation events that have wreaked havoc and permanent degradation in all corners of the nation".

Greg McKeon was a worthy and very popular recipient of the Australia Day Medallion.

INFORMATION SNIPPETS

Next ARS Biennial Conference

The 13th Biennial Conference of the Australian Rangeland Society will be held in Alice Springs from 5-8 July 2004. The venue will be Minnamurra Hall, St Philips College.

More information will be available on the Society's website (www.austrangesoc.com.au) by the start of August.

Land & Water Australia Community Fellowships Available

Land & Water Australia are offering fellowships to provide people with the opportunity to tell their stories. This is a non-academic award which will enable 'ordinary' people who work within the natural resource management field to share their extraordinary actions. The fellowship is intended to provide the time and resources for people to write their experiences down; to speak at seminars and workshops; or even the opportunity to invite others to come and see their work first hand.

The Fellowship can cover travel costs, if for example they are looking to speak on their experiences at a number of workshops. However, if they choose to stay at home to write about their experiences this will be recognised as a valid contribution. Land & Water Australia will handle all arrangements including the administrative costs, which will ensure that Community Fellowship Fund is totally focussed on providing financial support to the successful applicants. It is envisaged that each Fellowship will be in the range of $5,000 to $15,000.

More information, including how to prepare an application, is available from the Land & Water Australia website (www.lwa.gov.au) or from Chris Louis (Tel 02 6263 6003; Email public@lwa.gov.au). Applications close on Friday 1st August, 2003.

Fulbright scholarships

The Fulbright Commission offers postgraduate, postdoctoral, senior scholar and professional awards for individuals wishing to study or research and lecture in the United States. For the 2004 awards, the application period will open on 1 July and close on 31 August 2003. More information is available from the Fulbright website at www.fulbright.com.au/home.htm.

www.austrangesoc.com.au

Don't forget the Australian Rangeland Society now has an website full of information about the Society. Check it out now and get the latest information on:

- **The Rangeland Journal**
- **The Range Management Newsletter**
- **Office Bearers of the Society**
- **Membership**
- **Conferences**
- **Bursaries**
- **Links to other relevant websites**

ABSTRACTS FROM THE RANGELAND JOURNAL ISSUE 25(1)

VEGETATION CHANGES IN A SEMIARID TROPICAL SAVANNA, NORTHERN AUSTRALIA: 1973-2002

Gary N. Bastin, John A. Ludwig, Robert W. Eager, Adam C. Liedloff, Reginald T. Andison and Michael D. Cobiac

We measured vegetation changes inside and outside two exclosures built in 1973 on red calcareous loam soils located in Conkerberry Paddock on Victoria River Research Station in northern Australia. These two exclosures were unburnt since their establishment in 1973 until exclosure 1 was unintentionally burnt late in the dry season (October) of 2001. Data from permanent transects and examples from photopoints illustrate that from mostly bare soils in 1973, total pasture biomass recovered relatively rapidly both inside and outside exclosures (in about five years). This initial recovery was primarily due to the establishment of annual grasses and forbs. After this five year period, there was a consistent increase in the biomass of perennial grasses, such as *Heteropogon contortus* and *Dichanthium* spp. Also in the first five years after exclosure, the exotic shrub, *Calotropis procera*, invaded the study area, but then largely disappeared in a period of lower wet-season rainfall in the late 1980s. The density of native tree species, particularly *Hakea arborescens, Eucalyptus pruinosa* and *Lysiphyllum cunninghamii* increased in general, but more so inside one or other of the exclosures. Although the late dry-season fire of 2001 reduced the density of larger *H. arborescens* and *L. cunninghamii* inside the exclosure at Site 1, this effect was not apparent for smaller trees and for trees outside this exclosure. Our findings show that savanna vegetation can change massively in the medium term (29 years) and that exclosure from cattle grazing can contribute to our understanding of the role of livestock in such change. However, exclosures by themselves do not provide adequate information about the processes leading to vegetation change – replicated experimental studies are needed. That substantial increase in the biomass and proportion of perennial grasses occurred with light to moderate cattle grazing implies that these rangelands can be managed for production, although control of woody vegetation is an issue.

ENVIRONMENTAL (RE)EDUCATION AND LOCAL ENVIRONMENTAL KNOWLEDGE: STATUTORY GROUND-BASED MONITORING AND PASTORAL CULTURE IN CENTRAL AUSTRALIA

Nicholas Gill

Ground-based monitoring of rangeland condition is common in Australian pastoral administration systems. In the Northern Territory (NT), such monitoring is officially seen as a key plank of sustainable pastoral land use. In the NT and elsewhere, these monitoring schemes have sought to increase participation by pastoralists. Involvement of pastoralists in monitoring is theoretically an educative process that will cause pastoralists to more critically examine their management practices. Critical perspectives on the relationship between rangelands science/extension and pastoralist knowledge systems and concerns, however, suggest that pastoralists' reception of such monitoring schemes will be influenced by a range of social contexts, including the character of pastoralist environmental knowledge. Fieldwork with pastoralists in Central Australia shows that the process by which pastoral environmental knowledge develops has rich experiential, historical and social dimensions. These contexts play a role in framing pastoral environmental knowledge and in shaping pastoralists' interpretations of environmental events and information from other parties. Pastoralists will assess information from monitoring in light of these contexts. The nature of the ground-based monitoring scheme is such that the very environmental knowledge that it seeks to reform may in fact be confirmed or otherwise interact with pastoral knowledge in unanticipated ways. Lack of systematic evaluation of the scheme and of pastoral environmental knowledge, however, precludes definitive judgements at this stage. The apparently central role of monitoring in NT pastoral land administration, however, suggests that the assumptions underlying the scheme and its implementation be reassessed.

KANGAROOS AND FERAL GOATS AS ECONOMIC RESOURCES FOR GRAZIERS: SOME VIEWS FROM SOUTH-WEST QUEENSLAND

Margaret Chapman

Fifteen years ago it was proposed that the conversion of kangaroos from a pest to an economically valuable resource would allow graziers to reduce the numbers of domestic stock and thereby lower total grazing pressure. Since then, little progress towards this goal has been achieved. This is believed to be due mainly to the low prices obtained for kangaroo products. A survey of graziers in south-west Queensland was carried out to discover their opinions on kangaroos as a potential economic resource. Questions on the harvesting of feral goats were also included in the survey because of the contrast this industry provides to kangaroo harvesting in terms of grazier involvement. The results of the survey are discussed in relation to resource ownership rights; kangaroo product prices and marketing; and competition within the kangaroo harvesting industry. They show that while low kangaroo product prices do act as a disincentive to graziers, other administrative, legal and institutional factors are also important impediments to their entry to the industry. It is concluded that until the focus of attention widens to include consideration of these as well as just market factors, little progress will be made towards integrating graziers into the kangaroo harvesting industry.

NATIVE GRASSLAND MANAGEMENT: A BOTANICAL STUDY OF TWO NATIVE GRASSLAND MANAGEMENT OPTIONS ON A COMMERCIAL CATTLE PROPERTY

B. R. McGufficke

Variations in the botanical composition of two native grasslands, each managed differently, were investigated on a commercial cattle property in northern NSW. One grassland had not been fertilised, whilst fertiliser and subterranean clover had been applied by aerial application to the other grassland. Soils in both treatments had the same Bray 1 phosphorus level when the study was conducted. The fertilised grassland was stocked at triple the rate of the other grassland. Although more native species were recorded in the fertilised grassland many species had a lower frequency than in the unfertilised grassland; and introduced species tended to have a higher frequency in the fertilised grassland. Ground cover was significantly higher in the fertilised grassland in spite of the greatly increased stocking rate.

AN ECONOMIC ANALYSIS OF SOWN PASTURE TRENDS ON THE TABLELANDS OF SOUTH-EASTERN NEW SOUTH WALES

D.T. Vere and P.M. Dowling

The latter part of the 20th century has seen a persistent decline in the productivity of some types of sown pastures on the central and southern tablelands of New South Wales. Currently, much research effort is directed to stabilising the perennial grass component of these pastures. This paper evaluates the economic justification of that emphasis. It is argued that trends in livestock production can usefully represent increases or decreases in the stocks of three broad categories of sown pastures that are defined as being those pastures sown to introduced perennial grasses and legumes (perennial grasses), introduced legumes only (legumes), and the total of both these categories. Regression methods were used to determine the changes that have occurred in the livestock production from these pastures that could be explained by changes in a range of economic and other variables. The estimated models were then used to forecast wool, beef and lamb production from each pasture type. The results indicate that changes in prices and costs have influenced the trends in animal production from these pastures and that the structures of these influences have changed over time. Production from perennial grass-legume pastures has remained high relative to production from legume pastures despite adverse cost-price trends. The forecasts indicated a continuation of present levels of perennial grass-legume pasture areas but a decline in production from the legume pastures. The results support the concerns about the continued deterioration in the legume only pastures and the thrust of R&D programs that promote the benefits of perennial grass-legume pastures. The use and analysis of public data to improve understanding of the economic factors that influence the long-term stability of intensively grazed rangelands is highlighted.

GENOTYPIC VARIATION AMONG SITES WITHIN ELEVEN AUSTRALIAN NATIVE GRASSES

C.M. Waters, G.J. Melville, G.J. and A.C. Grice

Eleven species of native grass were collected from 51 sites throughout western New South Wales and south-west Queensland. Approximately 10 whole plants of each species were collected from a site but not all species were collected from each site. Plants were grown in a common environment at Trangie in central western New South Wales and plant morphological and floristic characteristics measured. Data reported here are for observations made in the third year, by which time differences between populations were likely to be more genetic than environmental. Principal component and discriminant analyses revealed a strong relationship between site of origin and plant morphological characteristics, which explained between 61% and 93% of the variation within species. For all but one species, site was significantly correlated with these morphological characteristics. Site could be predicted from morphological characters with a success rate usually greater than 80%. These morphological characteristics must reflect genotypic differences among the collection from the different sites.

We were unable to relate this variation to any of a range of site characteristics. Distance between sites could not be used as an indicator of morphological differences between populations. The implications of these findings are discussed in terms of providing strong evidence for the existence of ecotypes and for obtaining appropriate seed sources for revegetation/restoration programs.

KANGAROO HARVESTERS: FERTILISING THE RANGELANDS

D. Wilson and J.L. Read

Offcuts from harvested red kangaroo (*Macropus rufus*), comprising the head, stomach, entrails, legs and joey (females only) and sometimes the tail remain near the point of harvest. Offcut weights of males averaged 11.46 kg and comprised 26% of the total body mass, whilst average female offcuts weighed 6.69 kg and comprised 31% of total body mass. There was a strong correlation between carcass and offcut mass for both sexes. Offcuts from 27 kangaroos were randomly exposed to three different assemblages of vertebrate scavengers. Soil nitrogen and organic carbon concentrations increased significantly following the addition of offcuts but there was no significant change in soil potassium concentrations or pH. Decomposition and dispersal of offcuts was enhanced by accessibility to different scavenging guilds. The contribution of the kangaroo industry to soil nutrient retention and cycling contrasts with the depletion of nutrients through the export of domestic livestock from the Australian rangelands.

NEW MEMBERS

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CDN Agricultural Library – Swift Current
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The Australian Rangeland Society

REPORTS FROM THE 2003 ANNUAL GENERAL MEETING

ABN 43 008 784 414

PRESIDENT'S REPORT

Merri Tothill, PO Box 357, Port Augusta SA 5700.

1. Directors as per Business Plan

- Merri Tothill
- John Maconochie
- Sarah Nicolson

No director has received or become entitled to receive a benefit during the financial year.

2. Activities

Council has met 8 times since the last AGM, with a quorum present at all times. Most frequently the meetings have been as a teleconference but includes some face to face meetings with some Council members present and others on the phone.

Council membership has altered with Ian Watson taking on the role of Subscriptions Manager and resigning from his Council position and being replaced by David Wilcox, as the new Membership Officer, as at September 2002.

Ian still works very closely with the Council and provides a report to each meeting. The Subscription Manager role involves the day to day running of ARS subscriptions including keeping the data base of members up to date, co-ordinating membership renewals and new members etc.

David Wilcox role is as a Council member and is more strategic, dealing with issues of attracting new members and retaining current members. It closely relates to Robyn Cowley's role as Member Services Officer, which specifically deals with the services we currently offer *e.g.* Journal, newsletter, website and bursaries and also developing new services.

ARS major activities in the course of the last financial year were:-

12th Biennial Conference in Kalgoorlie, September 2002
(the following has been taken from the final conference report, provided to the Council by the Conference Committee).

The theme for this conference was "Shifting Camp", and on the first day of the Conference, there were six presentations of various scenarios addressing the theme.

For the first time in the history of ARS Conferences, concurrent sessions were offered on both the Tuesday and Thursday, to allow for a more diverse program. This experiment seemed to be generally well accepted, although there is always the difficulty of delegates having to choose between competing sessions. In summary, there were a total of 56 spoken paper presentations and 53 posters. There were three structured poster sessions during the Conference, and one unstructured session. Field Tours were held on Wednesday in the middle of the conference, with delegates having a choice of 3 full day tours.

Thanks to the organising committee:-

Dr Ed Barrett-Lennard (Chair);
Mr David Wilcox (Program);
Dr Robert Rouda (Media/promotion);
Mr Ken Leighton (Financial);
Mr Ian Kealley (Field Tours);
Mr Adrian Williams (Sponsorship);
Ms Sandra Van Vreeswyk (President, WA Branch, ARS); and
Sarah Nicolson of Intercomm Event Coordination who was contracted to manage the conference.

Publications (details can be found in the Publications Committee report)

In summary 2003 has resulted in the publishing and circulation of the professional and highly regarded publications in the form of three newsletters and two journals per year to members, under the guidance of the Committee and their respective Editors and Associate Editors. Thanks to Leigh Hunt and his dedicated team.

Website

Our thanks must go to David Wilcox for his untiring effort in getting the website up and running. Thanks also to those that assisted David. Lachlan Pegler has also been instrumental in developing a bookmark which promotes the website and urges recipients to "connect" to the Society. The bookmark will be distributed to current members and will also used be as a promotional tool for attracting new members.

FASTS Workshop

Lachlan Pegler and Robyn Cowley attended the workshop entitled – Planning and Communication for Membership Benefit in Brisbane in February 2003. The workshop was considered to be extremely worthwhile.

Major points or recommendations for implementation for ARS include:

- Development of position descriptions and clear responsibilities and actions for all Council members
- Development of an action plan to implement priorities from the Business Plan
- Development of a Council policy and procedures manual
- Development of a resource package to support Council members in undertaking their roles.

Membership Services

There has been a concerted effort by the Membership Services Team, led by Robyn Crowley, on attracting new membership with a focus on students, whilst still maintaining high quality service delivery to existing members. This has included the development of a Student Package for the next ARS conference in 2004.

Subscriptions

Ian Watson has taken on the role of Subscriptions Manager as at September 2002 due to the retirement of Rob Richards. Thanks to Rob for all his years of hard work which ensured an easy hand over of records to Ian. The Subscription records are managed very efficiently, with good financial records delivered on a regular basis to the Finance and Audit Officer, John Maconochie.

Finances

With the assistance of Don Blesing, the financial records of the society were reviewed and sorted into a simplified record keeping system, suitable to be handed over to the next Council.

It is strongly recommended that the new Council employ a bookkeeper to maintain the records and system, including the constructing of annual budgets.

The role of the Council should be to oversee the system, ensuring compliance with responsibilities to the ATO and ASIC and to make strategic investment decisions.

Thanks to all the Council members and its associated committees and also to all the ARS members who have supported the Society in the past year. This is my final report as President of the Society, I wish the incoming President all the best for the future.

FINANCE AND AUDIT OFFICERS REPORT

A full financial report was not available at the time of going to press. This will be included in the November 2003 issue of the newsletter

SUBSCRIPTION MANAGER'S REPORT

Ian Watson, Centre for Management of Arid Environments and Department of Agriculture Western Australia. PO Box 483 Northam, WA 6401.
Email: iwatson@agric.wa.gov.au

Based on ARS members database as at 17 May 2003.

Membership and Subscriptions

Ed Barrett-Lennard's closing address to the Society's Conference in Kalgoorlie last year highlighted that the success of the Society was dependent on keeping existing members and attracting new members. Over the last 12 months, with the impetus of the Conference, the Society is at least holding its own in terms of total members and continuing to attract good numbers of new members.

Membership of the Society stands at 334 with just over three-quarters receiving both the Journal and Newsletter (Table 1). Indications are that membership may have stabilised since 2000 (Figure 1). At approximately the same time last year membership stood at 330 and corresponding figures for 2000 and 2001 were 336 and 371.

Table 1: Membership breakdown as at 17 May 2003

Member type	FULL - Journal & Newsletter	Journal only	PART – Newsletter only	Total
Individual/ family*	214	-	44	258
Institution/ company	22	-	4	26
Students	7	-	1	8
Library	23	27	1	51
Total	266	27	50	343

* Includes seven ARS Fellows and nine "ex-officio" non-paying members such as the ARS archive and the National Library of Australia

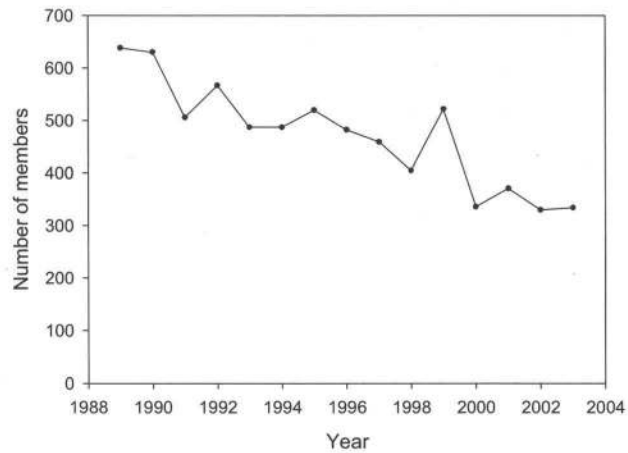

Figure 1: Number of members since 1989, at time of AGM

These figures understate the total number of members in a full year. For example, the database shows 427 members and subscriptions for 2002. Renewals were mailed a little late this year and members from 2002 continue to renew for 2003. I expect the total membership to increase over the next few months as these late paying members renew their subscriptions.

About 15 or so "lapsed members" from 2000 and 2001 have renewed their membership this year after they were sent notices inviting them to "re-join". This had the added benefit of flushing out several members who had simply forgotten to renew their membership and two cases where a mix up at the Society's end meant that their membership in 2002 was not properly processed. I apologise to all members for this.

Few people notify the Subscription Manager that they wish to resign from the Society, most simply decide not to renew their membership. All the resignation notes that I have received this year have stated their reason for resigning as either because they had retired, or had ceased to work (and therefore have a professional interest in) the rangelands. No one has contacted me to say they were dissatisfied with the Society or its services and publications.

More members joined the Society in 2002 (49) than in any year since 1996 and new membership in the early part of 2003 continues to be strong.

The majority (90%) of members and subscribers come from Australia (Table 2). I was interested to see when I produced this table that the numbers of members in Qld and NSW seem low in comparison to the NT, SA and WA in terms of the number of people working and living in the rangelands. Tasmania, perhaps is over-represented and correspondence with Tasmanian members suggests they are proud of this fact. The low number of student members is of some concern. Of the international members and subscribers, 53% have US addresses (Table 3).

Table 2: Australian members and subscribers by state and territory

State	Number
Australian Capital Territory	18
New South Wales	76
Northern Territory	36
Queensland	69
South Australia	42
Tasmania	3
Victoria	13
Western Australia	52
Total	309

Table 3: Overseas members and subscribers

Country	Number
Canada	2
Falklands	1
Germany	1
Iran	1
Japan	1
Mexico	1
Netherlands	2
Saudi Arabia	1
South Africa	1
UK	3
USA	18
Total	34

Subscription rates increased for 2003. The November 2002 Range Management Newsletter contained details of these changes.

The hard work David Wilcox put into the web site will make it much easier for prospective members to join, because it has made it easier to find the point of contact for the Society. I believe the Special Issue of the Rangeland Journal in 2002 also had an impact, encouraging a few new members to join and emphatically re-stating the value of the Society to many existing members.

Note that accurate figures for member locations, new members, un-financial members and members who have resigned are difficult to produce. Subscription agents handle many of our subscriptions and bulk-up orders before mailing to their clients. Some of our "Victorian" members fall into this category. Many institutions change agents from time to time, thereby becoming un-financial or resigning only to start a new subscription with a different agent. Some individuals when they change their place of work allow their current membership to lapse and begin a new membership through their employer. Others "re-join" the Society after a period of being un-financial and can't therefore be considered as new members. Some members back-pay for previous years when they join so that membership numbers for a given year are often not settled until one or two years later.

Thanks

Rob Richards resigned from the role of Subscription Manager in September 2002, replaced by myself. Rob had been Subscription Manager since 1995 and put in an enormous effort. In particular, Rob has provided the Society with an extremely comprehensive and efficient database, which despite some inevitable teething problems, will serve the Society well into the future by holding all the Society's membership details in a single electronic form.

Malcolm Howes, as always, provided fantastic support to the Subscription Manager. Malcolm mails both the Newsletter and Journal and in doing so deals with many of

the "Return to Sender" and back-issue requests efficiently, promptly and without fuss.

The Council and Noelene Duckett also contributed, in many different ways, to making the life of the Subscription Manager much easier.

Finally a note of appreciation to our members. Since becoming Subscription Manager I have very much enjoyed my interactions with them. Despite most of the interaction occurring because of the need to sort out the inevitable membership "glitches" and despite this involving money in almost all instances, members are unfailingly patient, polite and understanding in their correspondence with me. This has simply confirmed that "rangelands"(wherever they may be) are a great place to work, populated by a great bunch of people.

PUBLICATIONS COMMITTEE REPORT

Leigh Hunt, Chair, Publications Committee, c/o CSIRO Sustainable Ecosystems, Tropical Ecosystems Research Centre, PMB 44, Winnellie NT 0822

The Publications Committee met once during the year, taking advantage of the attendance of most Committee members at the conference in Kalgoorlie. A range of issues was discussed including some options for electronic publication of *The Rangeland Journal*. A proposal related to this (involving a commercial publishing house) will be put to Council at its next meeting.

Both *The Rangeland Journal* and the *Range Management Newsletter* are in a very healthy state at present. The flow of papers to the Journal has been excellent in 2002 and so far in 2003 and we do not anticipate having any difficulty in filling the first issue in 2004 (Table 1). The June 2003 issue, Vol. 25(1), is with the printers and will contain seven submitted papers.

Table 1. Record of papers and the results for 2001 to 2003 to date

Year	Received	Accepted	Rejected	Pending
2001	34	21	9	4
2002	26	14	6	6
2003	14	1	1	12

For several years, now, we have published one special issue each year and one regular issue and there has been increasing interest in special issues. The Special Issue on clearing of native vegetation edited by Clive McAlpine, (University of Queensland), Sue McIntyre (CSIRO Sustainable Ecosystems) and Rod Fensham (Qld. Herbarium) was published in July 2002 and has been extremely well received. As mentioned in an earlier report, the demand for extra copies was unprecedented and supplies are now exhausted. Publication of the Special Issue on the drivers of change in rangelands (based on the papers presented during the first day of the Kalgoorlie Conference) has been postponed. This issue was originally planned for June 2003 but because of problems in obtaining manuscripts and referees' reports in the time available it has been rescheduled for December 2003.

We have implemented the procedure of applying page charges to papers published in *The Rangeland Journal* where the senior author is not a member of the Australian Rangeland Society. This applies to all papers submitted since the beginning of 2003.

I thank the Journal Editor, Wal Whalley, and the Production Manager, Malcolm Howes, for their continued enthusiasm and effort in producing a quality Journal that reflects well on the Society. I would also like to acknowledge the work of our associate editors and referees for working to maintain the standard of the Journal, and the authors for their support of the Journal.

Noelene Duckett has also displayed much enthusiasm for, and commitment to, her role as Editor of the Newsletter, even to the point of finalising the March edition just days before giving birth to her third child. On behalf of the Publications Committee I would like to thank Noelene for her efforts over the last year. The flow of articles for the newsletter is satisfactory, but there is still room for improvement. Over the last year, half the major articles were volunteered; the remainder were contributed after Noelene made the initial approach to the author. Articles have come from several states (NT, WA, SA and members working overseas) but there has been a lack of articles from the eastern states (NSW, QLD). Perhaps this can be improved in future issues.

There has been improved communication of Council business to the Newsletter through Lachlan Pegler's regular reports, which has been pleasing. However, it is still difficult to obtain some of the AGM reports for inclusion into the July issue each year but hopefully everyone will get their reports to Noelene early this year!

Noelene and I would both like to thank Malcolm Howes for his fabulous job with the printing and posting of the Newsletter, which he does on top of his job as production manager for the Journal. Malcolm did well finding a new printer for the March 2003 issue. This resulted in a definite improvement in quality (particularly of the photos) at lower cost. Noelene would also like to thank Ian Watson for his help with sourcing articles.

Finally, I would like to acknowledge the help I have received during the year from the Publications Committee and Council's support for the Society's publications.

BIENNIAL CONFERENCE REPORT

Sarah Nicolson, Intercomm Event Coordination, 22 Edmund Avenue, Unley SA 5061.
Email: intercomm@ozemail.com.au

The 12th Biennial Conference was held in the WMC Conference Centre, Kalgoorlie WA from 2 – 5 September 2002. Registration and a Mayoral Civic Reception was held on Sunday evening, 1 September. The Governor of Western Australia, Lieut. General John Sanderson AC opened the Conference, which included three days of Conference Sessions (Monday, Tuesday and Thursday), and a range of Field Tours on the Wednesday.

The formal Conference Dinner was held at the newly completed Miners Hall of Fame; during which Prof. John Childs presented 12 delegates with "Young Researcher" prizes. There was also an informal BBQ dinner held at the historic Hannans Club on the evening of the Field Tours.

Two other 'social' occasions were held during the course of the conference. The first, at the completion of the first day's program, was an Informal Poster Viewing where delegates could leisurely wander around the poster presentation area (as opposed to the more structured sessions throughout the Conference). The second was the launching of the book "Rangelands of the World" by Tony Grice and Ken Hodgkinson.

The WA Minister of Agriculture publicly launched the Outback Atlas during the afternoon of the final day of the Conference.

The Program

The theme for this conference was "Shifting Camp", and on the first day of the Conference, there were six presentations of various scenarios addressing the theme.

For the first time in the history of ARS Conferences, concurrent sessions were offered on both the Tuesday and Thursday, to allow for a more diverse program. This experiment seemed to be generally well accepted, although there is always the difficulty of delegates having to choose between competing sessions. In summary, there were a total of 56 spoken paper presentations and 53 posters.

There were three structured poster sessions during the Conference, and one unstructured session (see above). The posters were sorted into principal themes as follows:

Monday: Monitoring, resource mapping and evaluation, with some posters on land regeneration.

Tuesday: Community participation in the development of strategies for the management of resources and for animal husbandry and production.

Thursday: Grazing and an holistic approach to rangeland management.

Field Tours were held on Wednesday, with delegates having a choice of 3 full day tours:

- Pastoral Lease Tour (which also included dinner);
- Goongarrie Conservation Reserves Tour; and
- Kanowna Belle Tour.

Fee Structure

There were 5 different levels of fees available for this conference. For the first time, and in consideration of the membership difficulties experienced recently by the Society, the Organising Committee agreed to an ARS Member Registration fee, as well as keeping the Student/Land Manager Fee established at the previous conference.

ARS Member Registration	$440
Earlybird Registration	$465
Full Registration	$490
Student/Land Manager Registration	$245
Day Registration	$180

Registrations

The Conference attracted a total of 201 delegates. Below is a breakdown based on fee registration. These figures include 16 sponsored speakers including 2 people from the media. There were 6 cancellations.

Fee Category	No.	%
ARS Member Registration	71	35.3
Earlybird Registration	29	14.4
Full Registration	49	24.3
Student Registrations	12	5.9
Land Managers	13	6.4
Day Registrations	27	13.4
Total	201	

Every State and Territory in Australia was represented, with one international delegate (from South Africa).

State/Territory	No.	%	ARS Member
Western Australia	97	48.2	21
New South Wales	24	11.9	10
Queensland	31	15.4	20
South Australia	19	9.4	10
Northern Territory	20	9.9	8
A.C.T.	4	1.9	1
Victoria	5	2.4	1
Tasmania	0	0	0
South Africa	1	0.4	0
Total	201	99.5	71

Financial Report

Funding and Sponsorship
The Australian Rangeland Society provided seeding funds of $5,000.

Sponsorship of $29,152.34 was achieved, the breakdown is as follows:

Organisation	Amount ($)
Seeding Funds (WA Tourism)	2,000.00
Environment Australia	5,500.00
Land & Water Australia (Young Researcher Prize)	**2,000.00**
Dept. Land & Water Conservation	2,500.00
AFFA	5,500.00
Perth Convention Bureau	912.34
GEDC	2,750.00
KBCCI	1,100.00
Pastoral Lands Board	2,000.00
KCGM (Students Prize)	**1,650.00**
CAB (Book Launch)	300.00
CSIRO (Satchel Inserts)	440.00
WMC	2,500.00

Sponsorship was provided for the "Young Researchers Prize" by Land & Water Australia ($2,000) and Kalgoorlie Consolidated Gold Mines ($1650). A summary of recipients is given below.

Young Researcher Prizes		
A) Sponsored by Land & Water Australia		
Paper / Social		
1st	Dionne Walsh	$450
2nd	Steven Bray	$300
3rd	Nick Jerratt	$150
Paper / Biology		
1st	John Read	$450
2nd	Peter Landman	$300
3rd	Chris Chilcott	$150
B) Sponsored by KCGM		
Poster / Social		
1st	Alex Holmes & Faith Deans	$375
2nd	Andrea Bull	$250
3rd	Trudie Atkinson	$125
Poster / Biology		
1st	Robyn Cowley	$375
2nd	Janelle Park	$250
3rd	David Phelps	$125

Financial Reconciliation

Following is the financial reconciliation for the Conference. The Profit and Loss Statement shows that an overall profit of $22,570.41 was achieved.

Conference Reconciliation

INCOME			
Seeding Funds			$ 5,000.00
Sponsorship			$ 29,152.34
Registrations	Full, Early, Day and Discount Registrations		$ 82,822.50
Sale of Conference Proceedings			$ 389.50
		TOTAL:	**$ 117,364.34**
EXPENSES			
Conference Venue (WMC Centre)			$ 16,040.50
Field Tours			$ 2,601.00
Coach Transport (Goldrush Tours)			$ 7,986.00
Printing			
	Registration of Interest Brochure (x 2000)		$ 1,332.54
	Registration Brochure (x 1,500)		$ 3,004.32
	Conference Proceedings (x 200)		$ 3,679.32
	Additional Conference Proceedings (x 50)		$ 1,386.00
Promotion	Web site development		$ 1,770.00
Intercomm Event Coordination			
	Expenses		$ 6,488.36
	Fees		$ 20,824.00
Administration			$ 4,224.35
Refunds / Cancellations			$ 2,129.00
Sponsored Speakers			$ 1,969.00
Conference Dinner - Mining Hall of Fame (176 people)			$ 9,490.80
Hannans Club			$ 1,650.00
Bank Charges			$ 321.80
		TOTAL:	**$ 84,896.99**
	Income less Expenses		$ 32,467.35
	Less repayment of seeding funds		$ 5,000.00
	less GST		$ 4,896.94
	TOTAL		**$ 22,570.41**

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) 9690 2000: Fax (618) 9622 1902: 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 2003

☐ Charge my Mastercard VISA Bankcard AU$.....for full/part* membership for an individual/student/institution* for the calendar year 2003

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

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

*delete as appropriate

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:	**Australia**	**Overseas Airmail**
Individual or Family -		
Full (Journal + Newsletter)/Student	$80.00/$60.00	$100.00/$80.00
Part (Newsletter only)/Student	$45.00/$30.00	$55.00/$35.00
Institution or Company -		
Full (Journal + Newsletter)	$110.00	$135.00
Part (Newsletter only)	$60.00	$70.00

- 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.

For Office Use Only:

Membership Number ..... Date Entered in Member Register .....

Date Ratified by Council .....