



The Australian Rangeland Society

RANGE MANAGEMENT NEWSLETTER

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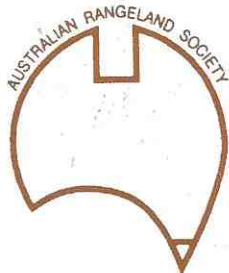
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FROM THE EDITOR

Noelene Duckett, 10 Villa Canyon Place, The Woodlands
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Thanks for reading the March edition of the *Range Management Newsletter*. As usual, this edition is packed full of interesting articles for the rangeland enthusiast!

First up, I would like to announce that the AGM of the Australian Rangeland Society will be held in Brisbane on 19 May 2009. Nominations for Council positions are due by April 10, and Motions on Notice are due by April 6 – see page 2 for further details regarding the meeting location and agenda, nominations and motions. Council has also announced the ARS Membership rates will be increased from January 2010. Details about the increases are available on page 10.

The longer articles in this newsletter describe a number of current projects. Firstly, David Wilcox and David Fitzgerald have submitted a report on the spread of the Coral Cactus in the Western Australian Goldfields. Originally a 'garden' plant in the gold mining towns, this species has successfully established itself across the region in varying ecological locales. The authors are looking to receive information from newsletter readers on similar cactus invasions in other parts of the Australian rangelands – please help them out if you can. Next, you can read about Jane Addison's proposed work in Mongolia, for which she received the 2009 ARS Travel Grant and Scholarship. Jane will be examining the outcomes of different land tenure on rangeland condition and herder livelihood in the Gobi Desert. Following on from this, I have included a colourful travel update from Yarrrie Station's Annabelle Coppin, who was a 2007 recipient of a Nuffield Scholarship. In recent months Annabelle has been very busy gaining an improved appreciation of the Australian live export cattle trade and the marketing chain beyond the farm-gate. Her article is a very interesting and enjoyable read! Lastly, I have included some information on the Carbon Capture Project which recently commenced in the Kimberley-Pilbara region of Western Australia. I am sure we will hear more about this project from Mark Alchin in the future.

Towards the end of the newsletter you will also find John Taylor's report of the 62nd Annual Meeting of the Society for Range Management which was held in Albuquerque, New Mexico, in early February 2009. It must have been a great meeting – John's only criticism was that there were too many interesting sessions running at the same time!

The next newsletter is due out in July so please have your contributions to me by early June. Articles related to any rangeland topic may be included including research reports, conference and meeting summaries and book reviews. Things seem to have been pretty quiet from those of you in the east – be brave, contribute to your newsletter!

WIN FREE ANNUAL MEMBERSHIP FOR TWO PRODUCERS OR LAND MANAGERS!

Tell us how you think the Australian Rangeland Society can attract more Producer / Land Manager members and you can win one of two free memberships for the Producer or Land Manager of your choice!

A very kind member of the Australian Rangeland Society (ARS) has donated two full individual memberships on the condition that preference is given to Producers or Land Managers.

To enter you are required to:

- Nominate a Producer / Land Manager for one annual ARS membership
- Tell us (the ARS Council) your idea(s) for encouraging Producers and Land Managers to become members.

The two best ideas will win a free membership for their nominated Producer.

Council's decision will be final! Winning ideas will be published in the newsletter to be implemented by the Society.

To enter please write or email (one A4 page maximum) to:

Dr Carolyn Ireland
Secretary
The Australian Rangeland Society
13 Woodland Close
ALDGATE SA 5154
Email: cireland@irmpl.com.au



The Australian Rangeland Society

ANNUAL GENERAL MEETING

The 2009 Annual General Meeting of the Australian Rangeland Society will be held on

19 May 2009
at 5 pm (Qld time)

A Block Conference Room, Animal Research Institute
665 Fairfield Rd, Yeerongpilly
Department of Primary Industries and Fisheries, Brisbane, Queensland

The agenda will include:

- Minutes of the 2008 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 4 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
Acting Secretary	Carolyn Ireland – will nominate as Secretary
Finance and Audit Officer	Peter Marin
General Council Members	Annabel Walsh
	Graeme Tupper
	John Taylor
	Sandra van Vreeswyk – will resign
	Vacant (1) – seeking nomination as a General Member
	Vacant (2) – seeking nomination as a General Member

Any financial member wishing to nominate for a position on Council must ensure their nomination form is lodged with the Acting Secretary by post, fax or email by April 10 2009. Nomination forms are available from the website <http://www.austrangesoc.com.au/>.

Motions on Notice

Any financial member wishing to place a **motion on notice** before the Annual General Meeting must ensure that the signed motion is lodged with the Secretary by 6 April 2009.

Motions should be emailed or faxed to:
Carolyn Ireland, Acting Secretary of the ARS
Ireland Resource Management Pty Ltd
13 Woodland Close, ALDGATE SA 5154
Ph: (08) 8370 9207; Fax (08) 8370 9207
Email: cireland@irmpl.com.au

The AGM will be followed by light refreshments. Please let Carolyn Ireland know if you will be attending.

UNINTENDED CONSEQUENCES OF AN EARLY GOLD MINING BOOM

David Wilcox, 54 Broome Street, Cottesloe WA 6011.
Email: dgwilcox@westnet.com.au

David Fitzgerald, 89 Daglish Street, Wembley WA 6014

The recent flooding of parts of Northern Queensland has given rise to some alarming predictions about the potential for widespread invasions of weed species after the floods recede. Given that the majority of reports dealing with threats to pastoralism in Australia have identified weeds as the most intractable of the problems now facing the industry, we are prompted to report on an emerging problem with cactus species in the Western Australian Goldfields centred on Leonora which is about 250 km north of Kalgoorlie. We were asked by the Leonora Shire Council to report on the spread of cactus in the immediate vicinity of the small township. Both Leonora and its neighbouring Gwalia were prominent goldmining towns in the early goldrush years from 1896 and were significant centres of population until quite recently. Water sufficient for gardens was always a difficulty for those inclined to grow them and, additionally, the water was somewhat brackish and scarcely suitable for even the robust to drink. In consequence garden subjects were restricted to some local chenopods and to various species of the family Cactaceae.

One of the garden subjects, now recognised as *Cylindropuntia fulgida*, (Coral Cactus; Photo 1), escaped and colonised rocky hill slopes and drainage flats below the Sons of Gwalia mine in the township. A few Prickly Pears (*Opuntia spp.*) had also colonised these flat drainage lines but not in the aggressive manner of *C. fulgida*. Information received in the past decade by the Shire Council suggested that the spread was not confined to the town site. A report was called for, of course. We were asked to compile an account of the spread of cactus in the shire area so that assistance for the destruction the plants could be obtained.

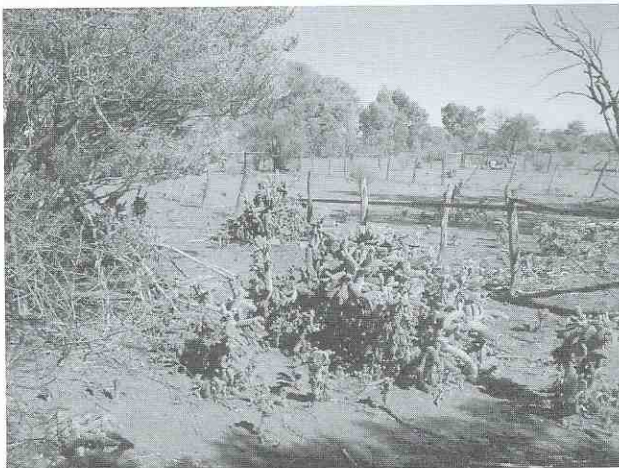


Photo 1: Coral cactus (*Cylindropuntia fulgida*) colonising the flood plain of a stream leading to Lake Raeside.

The Shire has requested assistance from an agency of the WA government to control the cactus in the vicinity of Gwalia. An attempt was made to spray the outbreaks with an unnamed chemical on one occasion, but it was not totally effective.

We found that *C. fulgida* had indeed spread far beyond the boundaries of the township and occurred as far as 50 km away. It had established on flood plains, on the side of lines of flow and on the lower slopes and undulating rises in a range of land systems. It did not appear to have any preference for soil type, being present on sands above sandy clay loams, on red loams and on cobble strewn surfaces on sandy clay loams. Disturbingly, spread from the original point of establishment appeared to be greatly enhanced along flow lines and in areas of shallow overland flow when segments are shed from the plant. The only environments not supporting the cactus were the sandy soils supporting hard spinifex (*Triodia basedowii*).

In the Goldfields, an area of very limited local relief, confined surface water flow is an essential factor controlling vegetation expression, with areas of run-on water being those which support most of the growth suitable for pasture. Stafford Smith and Morton (1990) identify such parts of the arid landscape as "hotspots" vital to native animals (and plants) and to domestic animals, and as being most susceptible to invasion by weeds. These areas of run-on in the Goldfields lead to the natural salt lakes, in this case Lake Raeside, which form the local centres of drainage in this internally drained region. As it is clear that the run-on areas are also those which favour the spread of the cactus, the spread that we identified has the potential to adversely affect the grazing industry. More importantly, invasions of these aggressive plants have an adverse impact on the sustainability of the plant and animal ecosystems of these better watered areas themselves and of the margins surrounding the salt lakes and their important plant and animal communities.

It is a peculiarity of the Western Australian Goldfields that the drainages leading to many of the so-called lakes are interconnected; some, in great flood, lead to vast drainage sumps such as Lake Boonderoo on the western edge of the Nullarbor Plain. Accordingly, the successful establishment of cactus in the Leonora Shire does not end the matter. The invasion will be replicated in time elsewhere and with the same dire consequences for the native fauna and flora.

What we did

We examined the daily rainfall record for Leonora for the period 1898 – 2007. It has received above average rainfall for the past twenty years, the average annual rainfall having risen from 195 mm to 218 mm in the period 1898-2007 while the five year moving average since 1985 has risen to 285 mm. It appears that the increases in annual rainfall have been the result of enhanced summer rainfall over the last twenty years or so. This increased rainfall, it can be argued, has promoted the spread of cactus species as surface water flow clearly aids the dispersal and successful establishment, downslope, of shed segments.

We established a number of monitoring sites based on the WARMS model (Watson *et al.*, 2007); including a standard photo at each site. For each site we recorded land system (as described by Pringle, Van Vreeswyk and Giiligan, 1994), soil type, and vegetation; and made counts of the number of cactus plants in two categories, young plants smaller than 15 cm and large plants. Iterative data should record changes in the numbers of plants at each site.

We investigated a number of sites on which anecdotal reports stated that cactus had established. On all such sites, e.g. Photo 1, it was apparent that *C. fulgida* was flourishing and had the capacity to outcompete the existing vegetation in time.

We took account of the reported spread of other cactuses in the Leonora area and beyond. The Prickly Pear cactus was planted in its many varieties in Leonora and Gwalia. Our observations showed that it had not spread for more than one kilometre from its source, but in doing so it had successfully established on flow lines leading to Lake Raeside.

What we found

We found that *C. fulgida* had established successfully on many ecologically different sites in the Leonora region showing that it was not restricted by soil type or by land form. It occurred on widely separated sites up to 50 km from the townships of Leonora and Gwalia indicating that it is capable of active spread - whether by human agency or by animals is not known.

The spread of the cactus was in areas of surface water flow and in historically disturbed areas, such as the abandoned Mertondale town site, where its spread was further enhanced in lines of flow below the town site.

We were also able to record that *C. fulgida* had invaded sections of the township of Laverton about 125 km east of Leonora and that it and another species, Hudson Pear (*Cylindropuntia rosea*), was rampant in Menzies about 100 km south of Leonora.

C. fulgida has been identified in WA in Kalgoorlie, north of Carnarvon, on the coast, in a riparian area near Port Hedland and in Derby in the Kimberley. A review of the literature showed that *C. fulgida* is found in several areas of western Queensland from Cunnamulla through Blackall, Longreach, Winton and Prairie. It also occurs in western New South Wales and in northern South Australia.

We made a number of recommendations for future action by the Shire including, *inter alia*, a survey of the Shire to determine the extent of the spread of *C. fulgida*, continued recording of change on the sites established by us and the development of a plan of action to combat the weed.

What is the point of this article?

Primarily, we are interested in knowing of other, and current, invasions of cactus in the rangelands in Australia; what is the origin of such invasions; and what control measures, if any, are being implemented and how.

How do others rank the significance of cactus species such as *C. fulgida* as a weed in the rangelands?

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ARS TRAVEL GRANT UPDATE – JANE ADDISON

Jane Addison, a PhD student at the University of South Australia, has been awarded the Australian Rangeland Society's Travel Grant and Scholarship for 2009. The following is a description of Jane's proposed work in Mongolia. Council congratulates Jane on her awards.

Jane will use the 2009 Travel Grant and Scholarship to help her investigate the effect that land tenure has on rangeland condition and herder livelihoods in the Gobi Desert. In collaboration with MercyCorp Mongolia, Inner Mongolia Agricultural University, her supervisors Dr Margaret Friedel (CSIRO) and Dr Fleur Tiver (UniSA), and with additional support through Desert Knowledge CRC, she will seek to investigate the question "Which land tenure model of i) open access, ii) communal grazing or iii) privatized grazing, is the most likely to ensure long-term rangeland condition in the Gobi Desert whilst still ensuring herders receive an adequate return?"

Much of the world's rangelands have seen significant changes in land tenure and subsequent grazing systems in recent years. From about the 1930s, Socialist countries saw a change from largely nomadic pastoralism governed by customary land tenure to communes (Bunn, 2001). With this change in land access and custodianship, rights and obligations, came restricted mobility. The risk of decreased mobility, and subsequent restricted access to forage in these highly variable arid rangelands, was largely offset by new and government subsidized fodder provision, transport systems and winter shelters. A shift in land tenure arrangements, therefore, preceded an overall shift in the grazing system.

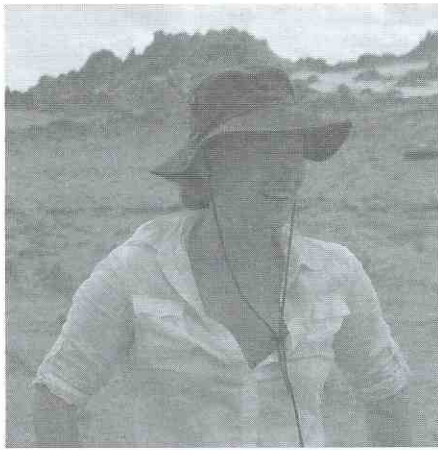


Photo 1: Jane in the northern part of the Gobi Desert, Mongolia, July 2007.

Since the early 1990s, much of these rangelands have been privatized. Mongolia's rangelands remain open access. With a national and international focus on transforming Mongolia from a Socialist state to a full market economy, however, debate often arises around land tenure options. One of the suggested 'solutions' to improving both rangeland condition and herder livelihoods in the country is to follow the geographically contiguous Inner Mongolia (China) down the privatization path. But in these privatized rangelands, there is some evidence that such changes in land tenure and subsequent grazing system have been closely paralleled with declining rangeland condition and herder livelihoods (e.g. Williams 2006; Sneath 1998). Despite this, there has been little quantitative analysis of how each country's grazing system maintains or degrades the base resource, and how a shift in land tenure may subsequently affect it.



Photo 2: Omnogobi herders and staff of the Mongolian Academy of Sciences' Institute of Geoecology viewing a newly constructed, Japanese funded handwell. May 2007.

Jane will assess and compare indicators of rangeland condition across three different land tenure models in the Gobi Desert. Available forage will also be ground-truthed at both landscape and herder enterprise scale, and fed into

the forage model PHYGROW (Rowan, 1995) to better understand temporal and spatial forage fluctuations. A series of herder interviews will seek to better understand their grazing system, current and potential grazing pressure, enterprise profitability, opinions on land tenure and other drivers of production decisions. Together, this information will paint a picture as to the potential significance that a change in land tenure may play on long-term rangeland condition and herder livelihoods. In doing so, quantitative information will be made available to policy and decision makers within the Gobi area that may assist them with the land tenure debate.

Jane is very grateful to the ARS for reducing the number of hours she will need to spend busking to fund this research! She would also like to thank the many rangeland scientists who have assisted her with project development to date.

Jane is always keen to hear from any rangeland scientist who has an interest in land tenure or the Gobi, and can be emailed at jane.addison@postgrads.unisa.edu.au.

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NUFFIELD SCHOLARSHIP UPDATE – ANNABELLE COPPIN

What is a Nuffield Scholarship?

Nuffield Australia is part of a unique global network of farmers. Nuffield Australia Farming Scholars provides a scholarship scheme for the benefit of the Australian farming community. Through the adoption of local and international best practice and continuous development of a network of industry leaders and innovators, the scholarship scheme promotes excellence in all aspects of Australian agricultural production, distribution and management.

Annabelle Coppin, from Yarrie Station, Port Hedland, Western Australia received the 2007 Nuffield scholarship supported by CBH and CSBP. She is studying the Australian live export cattle trade and how to develop a sound understanding of the marketing chain beyond the farm-gate.

Annabelle is headstock person and station overseer of East Pilbara Cattle Company in an equal business family partnership. The operation consists of a 500 000 hectare pastoral lease in WA's North West as well as two farming properties 1500km south, that together make up 2300 hectares. The stations are primarily used for running 5500 Droughtmaster cross breeders and the southern properties for finishing the sale animals. The business relies heavily on the live cattle trade as its marketing avenue with 90 per cent of all sale animals sold to South East Asian and Middle Eastern markets.

Annabelle's contact details are:

Yarrie Station
PO Box 805
PORT HEDLAND WA 6721
Email: annabelle.coppin@gmail.com

A Recent Update from Annabelle

In the past six odd months I've covered 16 different countries, been on over 68 flights and able to build a very solid foundation for knowledge and opportunities into the future.

Travelling began in June when a great dynamic of 'food producers' of wheat, cheese, oysters, wine grapes, apples, celery, milk, sheep and importantly beef (and all sorts of other titles too long to mention!) set off on our pre-arranged six week global focus whirl of the world including NZ, Ireland, France, US, China and Philippines.

We roamed or more to the point galloped over a diverse mix of farm tours across the globe. From the 10,000 head grain fed dairies in Texas to the one of the most efficient grass operations in NZ, from the Maryland oysters and crabs to the New Zealand mussel farms and mountain cattle! From French tomatoes, strawberries, cut flowers and carrots, and witnessing extremes of wheat yields from there to Oklahoma and perhaps the similarities of their

piggeries! We saw Chinese peanuts and French chooks, Irish horses and Chinese lobsters. Plus rice and a little more rice, the diverse list goes on!

We also moved beyond the farming tours - the US congress, New Zealand environmental law and European environmental compensation issues! Chinese schools as well as super glue, tarp and mag wheel factories, the International Nuffield conference in Ireland, the very successful dog racing in Kilkenny, bank visits, the battlefields in Somme and most importantly we drove right past the Robinson helicopter factory in LA (I was almost choking the driver to stop and take me back!)

I then returned to Perth and finished my private helicopter license, went home and also worked for a mining exploration company as a field assistant to help bank balance. I really enjoyed my short time following the geologist through the bush chipping rocks and learning about the fascinating geology of the Pilbara. We also spent time in the Great Sandy Desert east of home, which is a very special part of the world.

Indonesia and Sabar were next on the agenda. Through the assistance of Meat and Livestock Australia and some helpful industry members I was able to spend time in abattoirs, feedlots, supermarkets, local markets, and breeding cattle operations through Java, Sumatra and Sabar. A special thanks to Jason Hatchett, a consultant for the MLA who spends his life improving abattoirs and markets and generally monitoring the live export market in Indonesia - his industry knowledge was invaluable and I appreciated to no end the time he took to show me about.

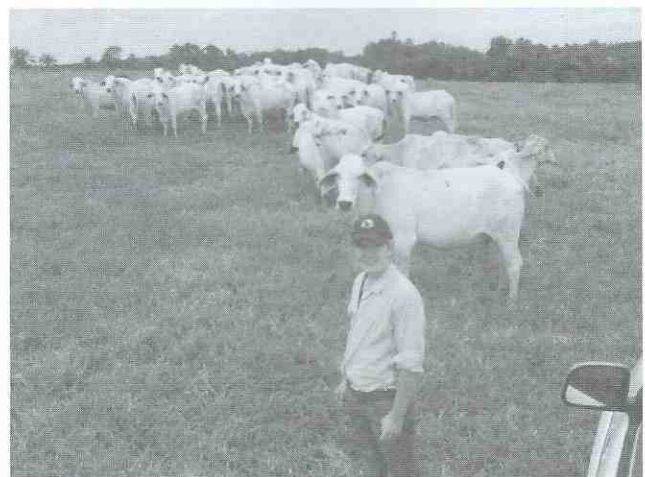


Photo 1: Australian imported cattle in Sabar

Finding Australian cattle (some of our own) through out Indonesia is always rewarding - the value chain of this trade not only supports Australians, it is an industry alone for the country of import. An excellent trip where I was able to meet many inspiring industry members, it has also sparked many ideas and questions around the Australian live export industry for this region which will all be in my final report! In very basic terms though; we have a productive desert full of cattle and a closest neighbour with 240 million mouths who value fresh beef for a healthy livelihood. If these people importantly have

money one of the first things they do is buy fresh beef, it is mainly a matter of consistent supply, the economy and some political barriers.

A few days back at Yarrie to reorganize the bag and rehabilitate myself with some rotor time before heading on my trip to the Middle East. This trip would not have been possible without the help of Peter and Sharron Dundon who are based in Bahrain and work with the Meat and Livestock Australia and Livecorp joint livestock export program. I was very lucky to be able to stay in their home and spend time with their daily activities - a great way to learn the varied dynamics of the livestock export trade and their goals for the region. The program focuses on the sustainability of the trade by improving animal welfare practices and the general productivity of Australian live animals once they arrive in these countries. It still surprises me how many people in Australia even involved with this industry are unaware of all the improvements and hard work that is done in these countries by Australians through Australian livestock levies.

Over the 7 weeks I was able to spend time in Bahrain, Oman, Dubai, Qatar, Kuwait, Egypt and Jordan to give me a small but fortunate taste of the livestock industry as well as the everyday life, culture, values and importantly food in these regions. On the first day of my arrival I was informed by a local that my Arabic name was to be 'Zanib' and it seemed to stick! I was genuinely overwhelmed of the welcoming and kind people in these countries; many will literally walk up to you and ask your name, where you are from and welcome you to their country. They seem to care about your general safety and quality of stay in their country.

Every country in the Gulf have their similarities and also their vast differences with history, livestock operations, markets, consumer demographics, livelihoods and cultures. I managed to witness the discharge of two vessels in Bahrain and Oman, and also met an astronomical amount of colorful, inspirational characters and business operations. I'm still having withdrawals of not being able to visit a slaughterhouse or feedlot everyday or heard the 5 prayers calling from the mosque and also at practicing my very poor attempt of Arabic!



Photo 2: Australian sheep in Dubai

I had a great experience in Egypt at the new Sokna Feedlot and abattoir located south of Cairo. Thanks so much to the kiwi's Richard and Mel and the Argentines Nacho and Maria who are involved in this impressive operation and looked after me so very well on my stay. Hopefully Australian cattle will be there soon! I also managed to trot (and for a very short time canter) a camel around the Pyramids and visit the Cairo museum, which I must say was major highlight of the trip; it just blew me away what the human race were doing 5000 years ago and makes my time on earth very short! We definitely get too hung up in the small things in life.

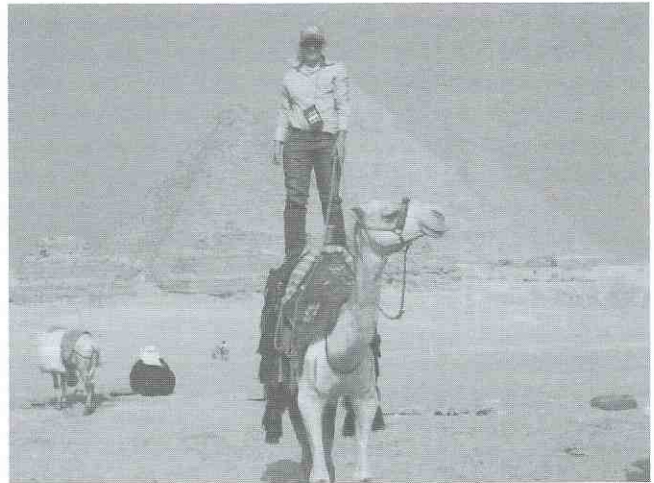


Photo 3: No guesses where this was taken!

Floating in the Dead Sea in Jordan (I now understand where the story of Jesus walking on water comes from!) and discovering Petra was also apart of my small tourist days! I managed to spend time with Geoffery Beere a consultant for over 20 years with MLA primarily designing very practical, economical and proven abattoir improvements to improve efficiency and animal welfare in just about every country we export into. He is a wealth of knowledge and an enormous asset to our industry, and I was very privileged to spend a few days with his work.

I also managed to organize a visit to Princess Alia Hussein of Jordan in her home/palace (I did manage to polish my boots but seemed to have misplaced the lipstick at the time!). The leader of Animals Australia Lyn White was also in attendance. It was a very interesting evening and apart from sipping on tea and eating dates it importantly gave me the chance to try and understand the reasons of such opposed views of the Australia live trade. Clearly there is much misunderstanding from many of these people but there is also some valid points targeting our industry and it is something we should address into the future; more in my report!

I returned to Bahrain (to my new home and family!) in early December for the 3 days leading up to the Festival of the Sacrifice (Eid Al Adha). This is where Muslim people purchase a live animal for a home slaughter and give to the poor over Eid (a little like our Christmas period). Quite often the whole family will arrive at the feedlot to select

their sheep. This is a special occasion to observe; it would be valuable for our society to see as so many are far removed from the food chain these days.

It is these three days of the year that the local feedlot will sell sheep as 'private sales' and a proportion of them are taken home instead of being directly transported to their private abattoir for slaughter. These are the days where less than 10% of Australian sheep sales have caused much of the controversy over the years, mainly due to families putting sheep in their boot to take home. Bahrain Livestock Company with the support of Sharron, Peter and the rest of the Aussie livestock crew worked together this year and no sheep were transported from the feedlot in a car boot. The campaign was 'Keep in Mind to Keep in Kind' and 'Ute It, Don't Boot it'. It was a busy couple of days with some interesting reactions from the public on the first day. However over the next two days there was little resistance and people accepted this practice remarkably quickly.

Compared to many parts of the world Australia is indeed a dry arid piece of country. However it is not until you experience such dry and severely arid conditions in the Middle East that you really understand that logistically these countries will never be able to produce enough animals on their own soil for everybody to have the choice of buying fresh meat (and they do have the money these days to eat more than just dates). 'Fresh' in the Middle East is quite often perceived very differently to Australia. This issue is not simple but I believe there is a strong future for the trade - it will be a major focus of my report.

I was then off to the UK for a quick two week stint - it was my first trip so the traditional London sight-seeing was undertaken. The highlight though was heading out to Stropshire and meeting retired farmer and cheese maker Jill Hutchinson Smith, one of the first women Nuffield scholars in the world. She is over 80 and has attended every hunt for about the last forty years. I was privileged enough to join her and the family for a day. They dressed me in the coat, jodhpurs and jacket and I headed off with a sherry under my belt with a brilliant horse in the English saddle! A great experience and I have to say ditches and hedges can be a bit disconcerting with size and the English mud soft and sticky!

What Have I Learnt

My scholarship has given me the scope to witness global agriculture and world trends in general. Following this we quite often then seek to predict our future influences and direction - dangerous but comes naturally for people who seem to be continually searching for answers! However I now believe that all major issues and influences that lead to the predictions of global agricultural outcomes are usually based on the basic factor of supply and demand, which are generally influenced by seasons, diseases, politics and the economy.

There are always the hot issues of the industry that are dependent on the globe and its influences at the time. These change very regularly and seem to drive this roller coaster of outcomes that we operate under in agriculture.

We only have to look back over the last 24 months - we've gone from excitement of the lucrative biofuel industry to finally fill the farmers pockets, to a rapid acceleration of farm inputs, the carbon farming and carbon reduction scheme, to the global food crisis and (don't worry I haven't forgot it) climate change and water - all hot issues in agriculture that automatically steer our direction in such a short period of time.

Above all this I'm excited in the future of Australian agriculture. We have built many advantages over our global counterparts and there has been many times during my travels where this has really hit home.

Overall feeding the South East Asian, Middle East and African nation population excites me far greater than supplying the developed western world. In particular, as an Australian livestock producer supplying animals to these people, it is about complimenting our advantages of having enough grass and area for my animals to happily breed and grow and then supplying the choice of fresh safe meat for people who value this in their life and culture, whilst making a decent profit and a having consistent demand.

I also have the opinion that the world is not necessarily in a global food shortage; it is a political and distribution issue. People are starving to death and people are also eating themselves to death and I have personally witnessed so much valuable soil across the world that is underproductive simply due to these social and political issues.

Things are still busy! I have many loose ends of research to tie up, the final report to complete and the presentation in Cairns in April this year. Don't hesitate to contact me if you have any questions.

MERGING TRAILS: CULTURE, SCIENCE & INNOVATION

62nd Annual Meeting of the Society for Range Management

John Taylor, Rangelands Australia, School of Natural and Rural Systems Management, University of Queensland, Gatton QLD 4343. Email: john.a.taylor@uq.edu.au

This meeting was held in Albuquerque, New Mexico, in early February 2009 when floods and fires were creating havoc in the north and south of Australia.

Over the four days, there were 143 technical presentations, 16 symposia (180 presentations), three forums (24 presentations) and around 200 posters. Abstracts of these are available at: www.srmmeetings.org/abstracts.html.

The technical sessions covered topics such as ecology, grazing, fire ecology, vegetation management and restoration, wildlife, economics and sociology, assessment and monitoring, and invasive species.

The symposia covered topics such as rangeland animal behavior, grazing systems research, using the internet for information transfer, holistic management, grazing policy guidelines, and conservation effects of rangeland practices. Input to the latter symposium came from a team of about 35 scientists who have been critically reviewing the literature and assessing the value of practices like grazing, prescribed fire and riparian management in conservation, the effects of invasive plants on conservation, and the economic and social impacts of conservation practices. The aim is to improve the quality of practice specifications promoted by the US Agricultural Research Service (ARS) and the Natural Resource Conservation Service (NCRS), and identify knowledge gaps. These reviews will start appearing in the literature in about six months time. The grazing systems session was also noteworthy in that there was some good debate and it didn't deteriorate into a slanging match as often happens in this somewhat controversial area.

The forums included a producers' forum, one on management of riparian areas, and another on linking restoration of rangeland communities to social outcomes. In the producer's forum, the following 21st century challenges were identified: weather, economy (and the consumer's ability to buy some foods), diseases (FMD, BSE), rural-urban divide (described as 'nature-deficit disorder!'), capable labor, fuel costs, urban sprawl, PETA, Federal and state land management policies, lack of collaboration among grazing industry groups, and disagreement among scientists. Sound familiar?

I was surprised that there wasn't much on Climate and Climate Change, but then this was covered extensively in a recent edition of the SRM's Rangelands.

There was a lot of interest in the Victorian fires and fire management in Australia, and genuine sympathy for the people touched by this tragedy.

Australians who knew the late Professor Jerry Stuth (Texas A&M University) will be pleased to hear that he was posthumously awarded the Frederick G Renner Award – SRM's highest award for sustained, outstanding accomplishments and contributions to rangeland management. Jerry's wife Nadine, flanked by Jerry's colleagues Richard Connor and Wayne Hamilton, accepted the award to the sound of a standing ovation.

It was an extremely well run meeting, and the organizers and their army of volunteers are to be congratulated. Despite stories of grants drying up and cuts to university funding, the atmosphere was positive. I thought that the symposia were particularly effective, and the ARS might consider one or two sessions in this format for the Bourke meeting. My only criticism is that there were too many really interesting sessions running concurrently, but maybe that's my problem!

The next SRM meeting will be in Denver, Colorado in February 2010. Don't let the cold put you off – you can always thaw out in Bourke!

WESTERN AUSTRALIAN CARBON CAPTURE PROJECT

After several years with the WA Department of Agriculture and Food in Meekatharra, Mark Alchin recently moved to Kununurra to begin work on a new project entitled "Indigenous emissions trading scheme in WA Rangelands – Carbon Capture project".

Background to the Project

The WA Rangelands includes more than 91 million hectares of pastoral lease land; indigenous corporations and communities own approximately 12% of this land. There are large areas across the WA Rangelands which have lost perennial ground cover due to historical overgrazing and mismanagement. The loss of perennial ground cover contributed to the release of carbon which was stored in the soil, shrubs, grasses and trees and reduced the landscape's capacity to take carbon dioxide out of the atmosphere. Despite the loss of ground cover, many pastoral businesses remain profitable, but they have a limited financial capacity to restore the historically degraded areas. There are a number of important issues which need to be resolved to ensure that pastoral businesses are able to effectively adapt to the predicted mid to longer term impacts of climate change as well as any direct or indirect financial impacts of potential inclusion in an emissions trading scheme. There is anecdotal evidence that suggests pastoralists can restore ground cover using good grazing management and can reduce total emissions by reducing the incidence of intense bushfires. If successful, these management solutions could lead to greater storage of carbon, increased livestock carrying capacities and enhanced environmental health and biodiversity. The Carbon Capture project will investigate the opportunities for carbon sequestration and storage and greenhouse gas mitigation in the WA rangelands. The Carbon Capture project will conduct a full business, environmental and carbon accounting analysis on three commercial pastoral businesses in the Kimberley-Pilbara region of WA.

What is the Project Vision?

Profitable indigenous pastoral businesses that are improving land condition and playing a pivotal role in mitigating the adverse effects of climate change.

Key Outcomes of the Project

1. Estimate the net amount of greenhouse gases that a pastoral business emits per year in the Kimberley-Pilbara region.
2. Estimate how much carbon can be captured and stored by sustainable grazing management and the level of reduction in greenhouse gas emissions that can be achieved through adopting prescribed burning practices.
3. Identify the economic thresholds and carbon price signals that may require pastoral businesses to make a shift to alternative management practices or enterprises.

Project Activities

The Carbon Capture project will involve three commercial pastoral businesses in the Kimberley-Pilbara region. The study will involve three primary activities:

1. Audit existing business productivity, financial returns and greenhouse gas emissions for the previous five years. Complete an environmental audit of the pastoral leases.
2. Conduct a soil and vegetation carbon accounting survey across each of the three pastoral businesses.
3. Complete carbon and economic modelling to evaluate and discuss the most profitable, low-emissions and environmentally sustainable enterprise and management practices for each individual business.

Who is involved?

The Carbon Capture project will be undertaken in close partnership with the Western Australian pastoral industry and is an initiative of the Department of Agriculture and Food Western Australia and Rangelands NRM Western Australia who have allocated a total of \$692,809 to the project. The Carbon Capture project will involve two full-time DAFWA researchers, collaboration with other State and Federal R&D agencies and the technical support of other DAFWA employees. The project commenced on 1st November 2008 and will be completed on 30 June 2010.

Further Information

More specific information about the project is available from Mark Alchin. His contact details are as follows:

Mark Alchin
Industry Development – Rangelands
Department of Agriculture and Food, WA
PO Box 19, Kununurra WA 6743
Ph: 08 9981 1105
Email: malchin@agric.wa.gov.au

2009 BANKSIA AWARDS

Nominations have opened for the 2009 Banksia Environmental Awards which promote environmental excellence and sustainability, and are among the most prestigious environmental awards in Australia. The Banksia Category Awards comprise ten separate Awards and entrants for these Awards can be individuals, groups, communities, governments and corporations.

Further information about the awards and how to enter are available from the Banksia website (www.banksiaafdn.com). Early bird entry for the Category Awards ends on 17 April 2009 and the final deadline for all entries is 11 May 2009. The finalists will be announced on 12 June 2009 and the winners on 24 July 2009.

NEW ARS MEMBERSHIP RATES ANNOUNCED FOR 2010

At its meeting on 30 September 2008, the Australian Rangeland Society Council decided that Membership Rates should be increased as from 1 January 2010.

The new Membership Rates are outlined in the table below:

Membership Rates; GST inclusive, if paid by 31 st March	Australia	Overseas Airmail
Individual or Family -		
• Full (Journal + Newsletter)/Student	\$100/\$80	\$125/\$100
• Part (Newsletter only)/Student	\$60/\$45	\$70/\$50
Company -		
• Full (Journal + Newsletter)	\$135	\$165
• Part (Newsletter only)	\$75	\$90

Membership Fees paid after 31st March 2010 will incur a penalty of an additional \$15.00 per subscription. Membership Invoices issued for the 2010 year will show \$15.00 as a discount if paid by 31st March.

- 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. New member subscriptions paid after 1st October are deemed as payment for the following year. **Any member who has not paid his/her subscription by 31st March of the financial year for which it is payable shall be deemed unfinancial, and all his/her rights and privileges as a member of the Society are suspended until the subscription is paid.**

NEW MEMBERS

Juan Janssen
Nicaragua 2095
11800 Montevideo
Uruguay

H. Richard Porritt
329 Aramahoe Rd RD1
Taumarunui 3991
New Zealand

Kenneth Scott
PO Box 263
Tennant Creek NT 0862

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, Carolyn Ireland, before **30 November**. An application form can be downloaded from the ARS website at www.austrangesoc.com.au. For further information contact Carolyn by phone on (08) 8370 9207 or email at cireland@irmpl.com.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, Graeme Tupper, PO Box 141, Orange NSW 2800.
Ph (612) or (02) 6361 7734: Fax (612) or (02) 6362 5719: grmtupper@yahoo.com.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/company* for the calendar year 2009.

(* delete as appropriate)

☐ Charge my Mastercard VISA Bankcard AU\$.....for full/part* membership for an individual/student/institution* for the calendar year 2009.

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
Part (Newsletter only)/Student

\$85.00/\$65.00
\$50.00/\$35.00

\$105.00/\$85.00
\$60.00/\$40.00

Company -

Full (Journal + Newsletter)
Part (Newsletter only)

\$115.00
\$65.00

\$140.00
\$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.