



The Australian Rangeland Society

RANGE MANAGEMENT NEWSLETTER

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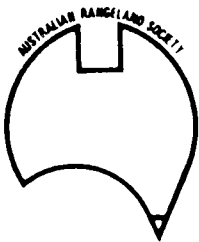
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EDITORIAL

Gary Bastin, Editor

Welcome to another year with the RMN, although by the time this issue arrives in the mail, we will be well into 1991. As Editor, I wish you a successful and productive year.

We all, no doubt, face particular challenges at the start of each year. Without unduly wanting to single out any section of the Society's broad membership, I would like to focus briefly on the pastoral industry. Two constant challenges in managing a pastoral enterprise are the weather and markets. On the weather front, most of northern Australia appears to have experienced a decent wet season after patchy rainfall in recent seasons. From television and newspaper reports, flood damage has been a problem for many communities and stations adjacent to major rivers. The beef industry, at least, can hopefully look forward to a reasonable year.

Wool growers appear to be facing a particularly tough period now that the floor price has been removed. Economic conditions appear likely to deteriorate further from July onwards with the complete removal of government price support. The industry is now in the position where market forces alone will bring supply closer to demand. As an "insulated" public servant, it may sound trite and glib for me to say that I am concerned about your industry, but the wool industry must survive as a cornerstone of Australia's economy. I am sure that RMN readers would particularly welcome any contributions that wool growers in the rangelands have to offer on strategies for surviving the current crisis.

This issue may appear rather parochial as most of the material emanates from Alice Springs; despite this, however the major articles really address the broad issue of land use in the rangelands. These range from a report on a workshop hosted by local members of the Society last November through a pastoralist's perspective to a profile of the local tourist industry. From around Australia, we have a report from Tony Grice on a native grasses workshop held last October, Andrew Drysdale's account of the Carnarvon conference and news from council.

The one disappointing aspect of my first year as editor has been the lack of freely contributed articles. This is YOUR newsletter. The Society has a broad membership with a wealth of information and experience. Surely, there must be sufficient interest amongst members to keep me supplied with a healthy flow of interesting material.

Finally, I draw your attention to the subscription reminder notice on the last page for those of you who have not yet renewed your membership.

ONE PASTORALIST'S POINT OF VIEW

*Bob Waudby, Central Mount Wedge Station,
via Alice Springs. NT 0870*

Mt. Wedge station hosted a field day for the Centralian Land Management Association in November 1990. This article has been extracted from the opening address by Bob Waudby, owner/manager of Mt Wedge.

HISTORY

Central Mt. Wedge Station was taken up by my father, W. J. Waudby, in 1947 as a grazing licence. In 1952, the area of 1550 sq kms was converted to a term pastoral lease. A further 1100 sq kms was acquired in 1960 and an additional 500 sq kms added in 1976. The station was converted to perpetual lease in 1985 with a total area of 3250 sq kms after the adjustment of boundaries.

The name of the station originates from Colonel Warburton, an explorer of the 1870's who, finding this wedge-shaped mountain and thinking it fairly close to the geographic centre of Australia, called it Central Mt. Wedge.

VEGETATION

The Stuart Bluff and George Siddley Ranges make up 5% of the lease area. Other vegetation types include spinifex, desert oak and mallee country (40%); mulga and witchetty bush (*Acacia* spp) with neverfail grasses (30%); salt lakes which grow some useful feed around the fringes (10%) and sweet limestone country with palatable oat (*Enneapogon*) and umbrella (*Digitaria coenicola*) grasses (15%). This listing ranks the country from the least productive through to the most preferred grazing country.

SOILS

The Stuart Bluff Range runs virtually east-west through the centre of the station and we utilize this as a natural barrier to cattle movement. Runoff drains to the salt lakes which are quite close to the ranges and there are no major creeks on the place. The soils are low in fertility and very stable, therefore erosion is not a problem and no significant areas are under threat.

It is interesting to note that under our lease covenant, the mechanism for protection of soils, pasture, trees, land management practices and husbandry are already in place. The trendy situation today of sustainable agriculture, conservation and soil degradation really is a duplication.

RAINFALL

The average yearly rainfall is 225 mm. The highest recording was 900 mm in 1974 and the lowest 41 mm in 1964. We have 10 recording sites on the station which have been maintained over the last 20 years. Huge variations in rainfall occur, even over short distances. In 1989, one site had 148 mm and another

site only 8 kms away received 312 mm. This confirms the old adage that the difference between a good manager and a bad one is 50 mm of rain!

STATISTICS

The station has 210 kms of internal fencing and 140 kms of boundary fencing. Fourteen bores service 60% of the country while another 3 holes are not equipped. More fencing and watering points will be implemented in the future. There are 12 drafting yards on the place making it possible for two of us to trap, draft and shift 50% of the total herd in 24 hours if required. Cattle on the other two waters are controlled by shutting off the water and forcing them to walk to a trucking point.

Depth to water in our bores ranges from 6 m to 14 m. All bores have a secondary hole in which we can use a centrifugal pump pulling up to 2000 gallons per hour as required.

We are presently carrying 3000 Hereford cattle with 8% bulls. We also have a registered Poll Hereford stud with 17 females and 2 bulls, which augment our commercial herd. Consistently, 52% heifers and 48% males are branded. A higher proportion of females are branded on salty waters and vice versa on our good drinking water. In 1989, our calving rate was 82% with a 78% weaning rate.

INTRODUCED PASTURE

Buffel grass was introduced by my father in 1965 to stabilize drifting sand around the station. Wind has played an important part in distributing the seed. Most of the waters have a fenced off area around the windmill and tank to act in part as a seed bank. Buffel has a tremendous root system which holds the soil together and 10 mm of rain will promote a green pick which cattle readily graze. Couch grass also plays an important role in holding our soils together around the waters.

FERAL ANIMALS

Camels and rabbits are the only feral animals on Mt. Wedge. Camels cause considerable damage to fence lines but this problem should be minimized when we are fully boundary fenced.

Many pastoralists do not eliminate dingoes because of the role they play in controlling rabbits. We feel that dingoes do far more economic damage than rabbits. This extends beyond the minimal stock losses that the so-called experts expound to us, to the economic loss sustained on cattle that survive a dingo attack. In one year, 8% of the cattle on one bore were attacked with injuries ranging from a tail or ear missing to massive injuries to the groin, shoulder or anal region which inevitably became infected.

Dingoes are baited using 1080 or strychnine. We count the baits out at night and pick up unused ones early in the morning thus minimising risk to the wildlife. The success of baiting programs is really determined by how many of your neighbours participate.

There are far more efficient predators of the rabbit such as the fox, perentie, goanna, hawk, eagle and Aborigine. The rabbit can be a problem, but we have defined our priorities. Rabbits have been surveyed on Mt. Wedge quite extensively for many years and it is interesting to note the results over the last 3 years:-

1988 - 40.5 rabbits per sq km in the area surveyed

1989 - 22.0 rabbits per sq km

1990 - 3.09 rabbits per sq km

This marked reduction could perhaps be due to three factors:-
the introduction of fleas 8 years ago
an interaction with cattle in the area
poor seasons.

Myxomatosis was introduced into the population some years ago and has also had an impact on rabbit numbers.

NATIVE ANIMALS

Bird life abounds on Mt. Wedge as it does anywhere in Central Australia, especially after rain. The opening up of waters has also enhanced their numbers. Emus and turkeys are abundant, as are kangaroos. It is amazing how the finger has been pointed at pastoralists for the reduction in numbers of many medium-sized mammals and the extinction of other species. One reason given is the direct competition for food from our grazing animals. Plates of these mammals were sketched more than 100 years ago indicating that many species were extremely rare or extinct then. The pastoral industry here is relatively recent and cannot be blamed for the disappearance of these mammals.

One theory for the demise of these animals could be the indiscriminate burning of their habitat over the years by wildfire. This would have increased their vulnerability to other predators. The kangaroo has survived so well because it can out run a bushfire and dodge an ill-directed spear.

Marsupials noted over the years on Mt. Wedge include the mulgara, fat-tailed dunnart, ooldea dunnart, striped-face dunnart, wongai or ningai, kultarr, marsupial mole and spinifex hopping mouse. Emus, bats, lizards, frogs, spiders, egg-laying mammals such as the echidna, and a host of other animals exist in these pastoral areas. They are observed by the people living here, and rarely seen by the untrained eye of the passer-by.

ABORIGINALS

We get on well with Aborigines here - they respect our rights as we respect theirs. Their use and requirements of the land are different to ours. They have sacred sites in this area and we treat them as such. Conflict arises when outside people intervene. These people are ignorant of the finer issues because they have not lived with the Aborigines. When these outsiders find other emotional causes to campaign for, it is left to the locals to patch up the ill-will that has been created.

DISEASE CONTROL

The brucellosis and tuberculosis eradication campaign (BTEC) never worried us because neither disease was introduced to the station. We completed our required survey testing long before the government imposed deadline.

ROLE OF WOMEN

There is no room for male chauvinism or female liberation movements within the pastoral industry. The family-run station has always had a 50-50 relationship where women's and men's roles are frequently interchanged.

GOVERNMENT ACCOUNTABILITY

We have had generally good relations with government staff and departments. As an example, a one square mile enclosure was erected north of the station in 1968 to study the effects of grazing in a mulga community. Bushfires burnt most of the site in 1975 and 1978 illustrating that fire is part of the natural environment. The site was abandoned in 1981 when it was found that species composition both inside and outside the enclosure had not changed.

Pitting was done here in 1961 and some of the pits can still be seen. Rangeland monitoring has been done since 1976 and using the photos, it is interesting to note the vegetation changes that have occurred over the years.

All pastoralists have found an increase in workload due to the bureaucratic process; whether it be taxation, fuel rebates, statistics, census, BTEC, landrights, living areas, drought policy, and of course, landcare. Pastoralists, as individuals, are accountable for their decisions. I find it very frustrating that people who make sweeping statements are not also made accountable. The following example is from such a person in a government department, and I quote "It is possible that our

arid lands will not be as productive in the future as they have been in the past. The vanishing tree and shrub species is the criterion for this apparently pessimistic viewpoint. With no seedlings developing and with present trees eaten out of reach or gradually dying, this indicates that the basic protection of the arid zone is being removed to allow true desert to dominate. The droughts, which are a normal condition, will complete the reaction begun by grazing animals." (G. M. Chippendale, 1965. Problems of pastoral land use in central Australia. AGROS).

One government bloke said to Dad in years gone by when things were grim on the station "Well Bill, you had better get out". The old man is still here 25 years down the track - where is the other bloke?

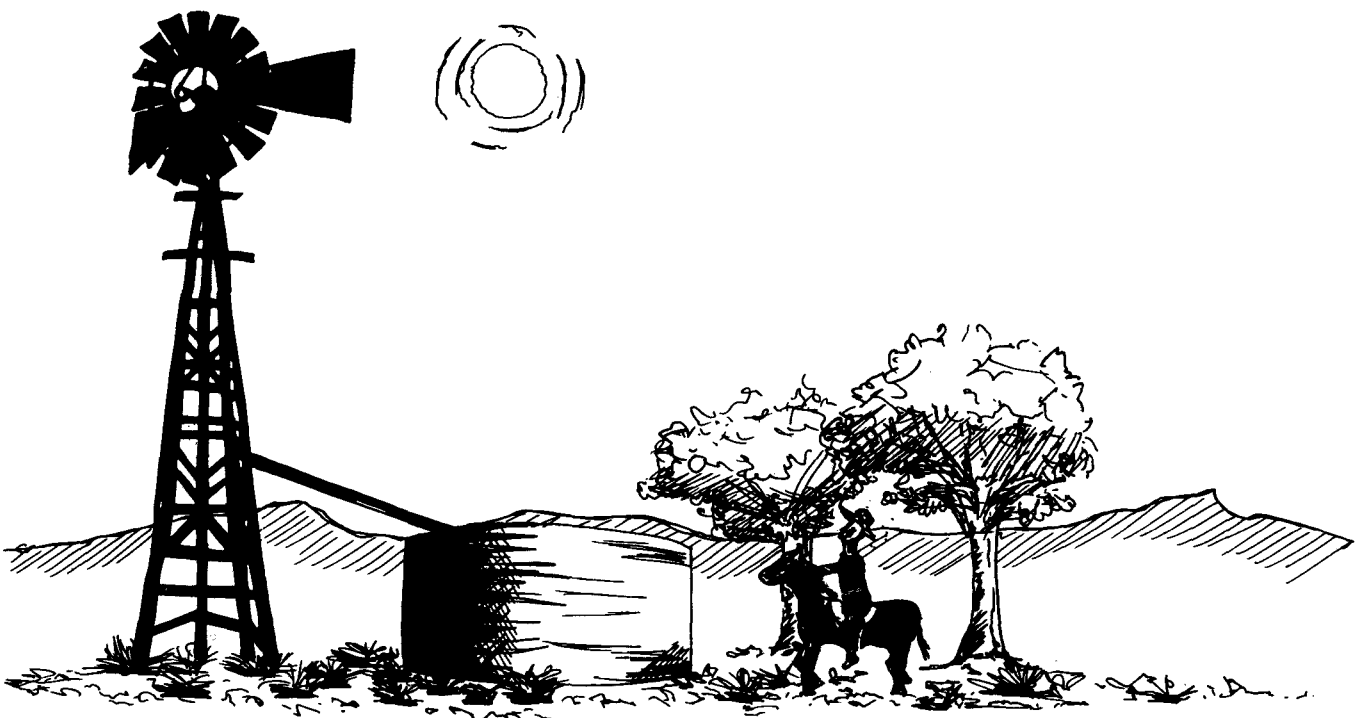
WOODY WEEDS

Much of the bigger mulga and witchetty bush on the western side of the station has died, or is dying. Most of the smaller mulga lives on. If this tree death was due to water stress, then you would imagine that the smaller trees would die first due to their smaller and inadequate root system. I consider this to be a cyclic phenomenon and do not place much emphasis on woody weeds as a problem. This is in direct contradiction of the earlier quote made in 1965. I rest my case.

CONCLUSION

Our basic aim is to survive economically, so that we have a way of life for our kids and a heritage. However, this is being eroded by people with limited knowledge who question our experience and our right to live in these pastoral areas - people who deserve less media attention than they get. Hopefully, we will weather it all.

Thank you for listening to "one pastoralist's point of view".



NATIVE GRASS WORKSHOP

*Dr Tony Grice, Dept. Agriculture & Fisheries, PO Box 286,
Cobar NSW 2835*

There has been a growing awareness of the importance and potential of Australian native grasses. As a contribution to exploring this potential, the Australian Wool Corporation commissioned and funded a Workshop. The workshop, held in Dubbo last October aimed to:-

1. provide brief, up to date descriptions of native grass resources;
2. summarise current knowledge of Australian native grasses, particularly in relation to their pastoral use;
3. provide an inventory and brief description of relevant current, recently completed or proposed research and extension projects;
4. identify research and extension needs in relation to native grasses.

The Workshop was attended by 64 participants from a wide variety of backgrounds, including graziers, researchers, extension personnel and seed producers. Speakers were invited to cover the following topics:-

1. An introduction to Australian native grasses, their potential and barriers to their development (Dr Brian Roberts);
2. The pastoral value of, and production from, native grasses (Dr John Leigh);
3. Grazing management and responses of native species to grazing (Dr Alan Wilson and Dr Ken Hodgkinson);
4. Responses of native grasses to factors other than grazing (Dr John Mott);
5. Domestication and agronomy of native grasses (Dr Greg Lodge and Dr Richard Groves).

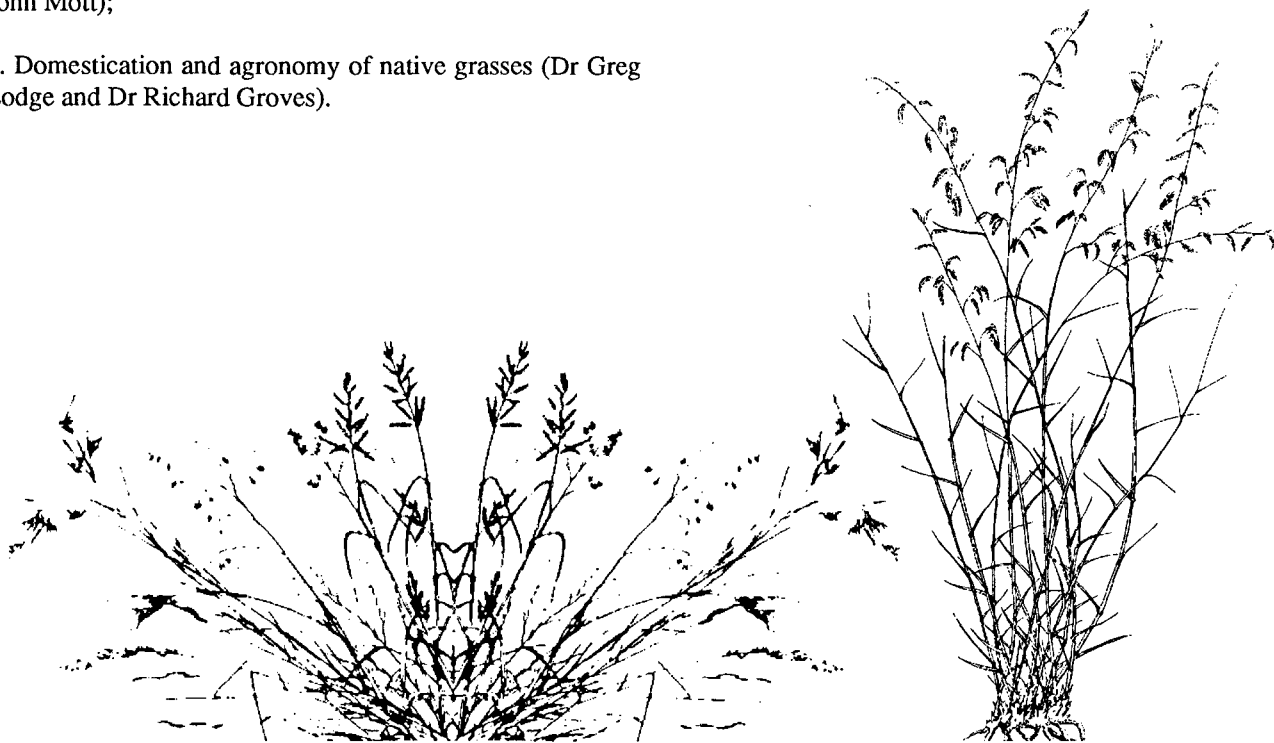
Small discussion groups were used to identify research and extension needs and set priorities in relation to each of these areas.

The main conclusions of the Workshop were that:-

1. Basic research must develop a thorough understanding of the biology, ecology and population dynamics of important native grasses. In particular, the likely responses of the different grasses to grazing, fire and climate must be identified.
2. Appropriate studies must devise practical and economic management systems that can be implemented by graziers to:
 - (i) guarantee persistence of desirable perennial grasses;
 - (ii) manipulate pasture composition;
 - (iii) improve grassland production.
3. Extension activities must encourage and educate pastoralists and other land managers to:
 - (i) recognise the important native grasses in their region;
 - (ii) apply appropriate management strategies to those species.
4. Existing native grass domestication programs must continue. The successful completion of these programs will encourage the acceptance of the principle of using domesticated native grasses for pastoral and other uses.

Copies of the Workshop Proceedings can be obtained by writing to:-

*Mr David Conley
Australian Wool Corporation
GPO Box 4867
MELBOURNE VIC 3001*



WHO CARES FOR OUR LAND?

Gary Bastin, CSIRO, PO Box 2111, Alice Springs NT 0871

"Long way to go, that easy feeling" - is a song composed by rehabilitating petrol sniffers from the Pitjantjatjara lands of northern South Australia that expresses the attempts of these people to break the addictive habit and find a more meaningful way of life. The words of this song rang out from the back of the room as Clive Scollay, the concluding speaker of a workshop hosted by Alice Springs members of the Society, moved to take the stand to explain the importance of communication.

Effective communication is the key to resolving most sources of conflict and Clive left us with the message that one must develop a passion for one's beliefs and be both informed and energetic in making others see your cause. This passion might be as nationalistic as our land, Australia, or it might be associated with bridging the gap between rural and urban Australians. At the local level, effective dialogue in making others understand your cause has a lot to do with resolving potential conflict in land use and management.

THE WORKSHOP

The halfday Workshop, held in late November, was framed around three questions:-

1. Who cares for our land? There are many land users in central Australia - eg pastoralists, tourists, conservation, mining, Aboriginal and recreational use. In some places, only one use is possible or desirable, while elsewhere there may be many uses. Inevitably, questions arise about who has the responsibility for land management and for the problems that may result.
2. What are the problems? Some are administrative, some relate to defining responsibilities properly; conflicts of interest may arise, and there can be problems which arise from the use of the land itself.
3. How might the problems be resolved? As a first step, the workshop brought together about 100 interested people representing the major land user groups in central Australia. Selected speakers outlined how the land is used and managed by each group and what they perceived to be the important issues in land use. The second session then took a quick look at some useful ideas - new and old - for the management of rangelands, with the importance of communication being duly recognized. The Workshop then concluded with a general discussion of some of the afternoon's issues and an open question of how a local Rangeland Society branch might facilitate better land management.

LAND USER GROUPS

Margaret Friedel introduced the Workshop theme and the Rangeland Society, emphasising the benefit of a neutral forum for the diversity of user groups.

Invited speakers were then given five minutes each by a fairly relentless chairman (Steve Morton) to outline their perspective on major land use issues facing their industry or interest group and how they, as individuals, or a representative group, were addressing those issues. Each speaker used their limited time remarkably well.

TOURISM

Lynne Peterkin is the Executive Officer of the Alice Springs Regional Tourist Association. As an industry body, the association is aware that an increasing number of visitors and the required expansion of infrastructure (accommodation, better roads and other facilities) does put pressure on the land. Tourism operators have a vested interest in caring for the land as it is the natural features which will continue to draw visitors to central Australia.

The Association has taken its own steps towards coordinated development of the industry. It has proposed the "Desert Rose" strategy which maintains Alice Springs as the hub of tourism activity with trips of varying duration and comfort radiating away from the town. This should cater for the wide variety of people visiting central Australia who want to experience "soft adventure" through to guided four wheel drive camping safaris. This strategy has been developed in consultation with the NT Government and the local Conservation group and is described in greater detail elsewhere in this Newsletter.

The tourism industry has actively fostered links with other organisations to improve communication and encourage change. For instance, the Association has coordinated with the Alice Springs Town Council, Aboriginal organisations, the conservation group and other interested people to improve the appearance of the Todd River.

PASTORALISM

Terry Karger, owner/manager of Orange Creek station 100 km south of Alice Springs outlined his management strategies that would make good range management sense in almost all rangeland areas of Australia. His guiding philosophies are that future income will be generated through looking after the natural resource and that one must assume that it isn't going to rain. He has translated these principles into practice through the strategies of:-

- lifting herd quality. The same money can be made from less cattle at less cost. A smaller, higher quality herd is better insulated against drought.
- spreading the herd out to get more even pasture utilization. Approximately 2000 cows are run on 40 waters using 60 kms of polythene piping.
- utilize the poorer (spinifex) country and don't overestimate the better country. Strategic fencing is needed to protect the softer country and its trend must be closely watched. Cattle require mineral and nitrogen supplementation on the poorer country.

- feral animals must be controlled where possible. Horses can be eliminated but rabbits are a much bigger problem requiring substantial Government research and assistance.
- degraded country does exist - much of it by inheritance or purchase - but it can be regenerated with suitable techniques, grazing management and persistence.

Orange Creek is a good example of successful multiple land use in operation. A conservation area has been excised to the NT Government, negotiations are underway for an Aboriginal living area, an offroad racing club uses part of the station by agreement, tourists participate in camel safaris, an area has been drilled for oil while irrigated lucerne is grown by yet another operator.

I hope to have Terry expand on his management philosophies and strategies in a future issue of the Newsletter.

MINING

Steve Lawrence, a geologist with the exploration company, Pacific Oil and Gas, told the Workshop that the exploratory side of the mining industry was sensitive to any impact on the environment. Mining is a legitimate land use under legislation. Existing landholders only have surface rights to their land and this is a demonstrated case where effective communication between exploration companies, contractors and landholders can reduce conflict. The land and its tenants in central Australia benefit from well tested codes of conduct developed in other parts of Australia. These codes specify environmental procedures for exploration work such as seismic survey and test drilling. Most companies employ a field supervisor who has good communication skills and whose duties include implementing codes of conduct and particularly supervising contractors. Impact on the land is minimised by carefully selecting exploration routes where disturbance is necessary (eg seismic lines). Remote sensing techniques are extensively used during initial investigations. The industry seems to be aware of the benefit of preventing, rather than curing, problems.

ABORIGINAL HOMELANDS

The Central Land Council, based in Alice Springs, has been actively involved in assisting the movement of Aboriginal people back on to their homelands since the Commonwealth Aboriginal Land Rights Act of 1977. Tracker Tilmouth, Assistant Director, explained that in recent years, the emphasis had shifted from land acquisition to management of the large part of central Australia under Aboriginal control. Much of this country has a very low grazing value and long-term sustainability is more related to the well-being of the community. In an analogous situation to the grazing gradient around a watering point, the most intensively used area is the actual living area. Here, the health and well-being of individuals is of concern. Issues include the provision of water, shade and firewood, preservation of native foods and ancillary management such as dog control. At the equivalent to the "paddock" scale, the community area is the number of separate living areas with their discrete management requirements.

Just as most stations have areas of low value grazing country which requires some form of minimal control (eg fire management), so large areas of outlying country have cultural or spiritual significance to Aboriginal people which also need appropriate care.

CONSERVATION

Currently, 0.8% of central Australia is within conservation reserves. The Central Australian Conservation Council would like to see this area expanded to about 4% so as to maintain important habitats, a healthy gene pool and biodiversity. A small proportion of this 4% would contain habitats which are vital areas for flora and fauna conservation. Human usage would have to be strictly controlled here although continued visitation under management plans should be possible on less sensitive conservation areas. The process of negotiation and acquisition will inevitably create potential conflict. However, members are actively pursuing cross-group communication to initiate various strategies and to foster communication. Nan Smibert, the CACC coordinator, stressed how the wider community now has a common interest in the ecology of our rangelands and development and conservation must work together.

This local conservation lobby group advocates that:-

- governments must be more involved in feral animal and weed control;
- the relevant NT Government department (Conservation Commission) has to take a broader role in resource management, not just provision of tourism information and control;
- the tourism industry must be more self-regulating, and in particular, visitation will have to be restricted at some of the ecologically most sensitive areas;
- good grazing management practices need to be adopted by the whole pastoral industry and be supported by appropriate lease covenants;
- there should be no mining in high value conservation reserves;
- community education is important. The public must be informed on the steps taken towards ecologically sustainable development and be in agreement with this procedure.

RECREATIONAL USE

The audience was entertained by a possible futuristic glimpse of the recreational use of Centralian rangelands by Peter Hughes of the NT Department of Youth, Sport and Recreation. Under this scenario, intending users select their recreational pursuits from a possible list at some central control office. Their health and mode of transport are vetted as to their suitability for the intended activity. The clients are then issued with a key card, their bank accounts suitably debited and the "adventure" begins. The key card is used to negotiate each

control point along the intended route; a monitoring program deciding whether the vehicle and its occupants are capable of the next selected segment - further debits being made to the bank account along the way. And so the recreational user might indulge in air conditioned highway sight-seeing or bushwalking or the hunting of feral animals with some economic return for the pastoralist allowing this activity.

Unlikely? Well perhaps the increasing and competing demands on our rangelands will require some form of controlled multi-recreational use that takes account of such issues as the user pays principle, safety, land degradation and waste disposal.

CAN SCIENCE AND TECHNOLOGY HELP?

Well, we as scientists think it can. With Blair Wood in the chair, Mark Stafford Smith addressed the question of "Is Ecology Useful?" and highlighted the point that, while whole landscapes have to be managed, factors such as where animals graze and land reclamation often operate at a small scale. Some areas are inherently richer because they collect water and nutrients and create the landscape patterns which we recognize - from river floodplains to gilgais. Another important ecological lesson is that the arid rangelands are event driven whereby a drought or wet seasons can produce big episodic changes after the landscape has been apparently stable for many years. Thus, land managers and their advisers have to be capable of responding to negative change (eg combating woody weeds in wet years with fire) or utilizing windows of opportunity (eg good rains) to improve the land.

There are 1641 plant species in the arid NT, 300 of which are rare or relict species. So what? Peter Latz, that eccentric ecologist from the NT Conservation Commission, left us in no doubt that we have a unique flora and fauna. After a host of other facts, including how introduced plants and animals had not necessarily behaved themselves and how a broad gene pool provided opportunities for adaptation and evolution under global climatic change, we had to be convinced of the value of conservation, appropriate land use and sustainable development. As examples of future opportunity, camel steaks may replace beef on areas of shrub-infested rangelands while witchetty grubs could supplant the polluted oyster as a culinary delicacy.

Computers are not necessarily to be feared - food for thought? Increasingly complex data sets are being collected about the environment at a range of scales. Graham Greenwood, from the NT Conservation Commission, showed how this information could be massaged and displayed via geographic information systems running on computers - tools that should hopefully allow better planning and land management.

In a final glimpse at the value of information (and experience), Peter Hay of the Conservation Commission gave insights into improving the state of the land via such techniques as water ponding, pitting and tree planting. Such improvement need not necessarily be for increased pastoral production; minesite rehabilitation and amenity treatments such as road verges and dust abatement around communities are important and legitimate examples of landscape improvement. A planned

approach to identifying the problem, setting objectives that include working with nature, making design decisions (whether to use a tractor or shovel) and adopting appropriate post-treatment management procedures (particularly stocking decisions) should increase the chances of success.

It was at this stage that Clive Scollay took the floor. Other points to emerge from his talk were that we must be optimistic and that opportunities for communication must be seized upon. Seemingly strange alliances can achieve beneficial results with communication between the National Farmers Federation and Australian Conservation Foundation being a good example.

WHERE TO FROM HERE?

Discussion languished until the touchy issue of land access by different groups came up. It might have been more frank, spontaneous and constructive with a smaller audience. However, the workshop did bring together for the first time representatives of all the land user groups. From this, it was apparent that there is a well developed acceptance of the need to care for the land. The tourism industry, as a body, is perhaps more advanced in communicating its strategies to the wider community. It has taken deliberate steps to coordinate with other management agencies so as to achieve change and minimise conflict.

A number of issues were raised again and again. They included communication, appropriate or multiple land use, sustainable development, who is/should be responsible for the land, land degradation and land management, using technology and the previously mentioned access.

As members of the Rangeland Society, we have cause for optimism. We have already come a considerable distance in identifying the major problems in land use and management and we have the capacity to provide many technical solutions. We need to work harder at communicating these solutions to all users of the land. Most importantly, we need to coordinate our efforts to achieve a common goal - the best and most productive use of our land now and into the future.

The local group of the Rangeland Society may be able to foster further communication between specific user groups in smaller forums. We intend to invite speakers from selected land user groups to describe in some detail their enterprise, and particularly how they have integrated multiple land use into their operations.

THE DESERT ROSE BLOOMS AGAIN

Lynne Peterkin, Executive Officer, Alice Springs Regional Tourist Association, PO Box 2227, Alice Springs NT 0871

Gary Bastin, CSIRO, PO Box 2111, Alice Springs NT 0871

Tourism is very important to the Central Australian economy with an estimated 340000 people visiting the region in the 1989/90 financial year. Visitor numbers, and the value of the industry to the local economy, had been growing under vigorous marketing by the Northern Territory Tourist Commission and private operators until the pilots' strike of late 1989. Surveys showed that visitor numbers declined from a peak of 384000 in 1987/88 and 351000 in 1988/89. Tourism is second only to mining as the major income earner for the Northern Territory. Visitors spent an estimated \$430 million throughout the NT in the last financial year on accommodation, travel, sustenance and other things.

Approximately 20% of visitors to the Centre come from overseas, principally the UK, Germany, USA and Japan. Many of these people visit through the hot summer months and are helping to even out the traditional trough in activity at this time of year. A further 58% are interstate travellers while the balance comprise Territorians from other regions. Surveys sponsored by the Northern Territory Tourist Commission showed that in the last financial year, 62% of visitors came here for holidays and recreation. A further 16% were visiting relatives and friends, 13% were on business trips and 9% came for other reasons.

Most visitors these days want to experience the Centre's attractions, not just see them. There is growing interest in such things as bushwalking, ballooning, four wheel drive camping trips and Aboriginal culture and a swing away from "soft", passive, sight-seeing tours.

ALICE SPRINGS REGIONAL TOURIST ASSOCIATION (ASRTA)

This Association is the tourism industry association for Central Australia. It is an independent body although it receives some financial assistance from the NT Tourist Commission and Alice Springs Town Council. Formed 20 years ago, it now has a very diverse membership of 280 ranging from the five star motels through road-houses to Aboriginal communities involved in tourism, as well as (for example) banks, government departments and any interested community members. Under its constitution, the Association endeavours to:

- bring more people into the region as visitors;
- assist visitors by providing them with all relevant information;
- develop the region through improving and expanding tourist facilities;
- educate the community as to the value and importance of tourism to the local economy.

One recent notable example of the Association taking the lead in fostering tourism development has been the management of

the Todd River within the Alice Springs town boundary. For years, this landmark languished under the invasion of buffel and couch grasses, indiscriminate burning, dieback of the river red gums, assault by drivers of recreational vehicles and the social problems associated with fringe camp dwellers. The Association adopted a policy "to use its best endeavours to have the river made into a national park and to be appropriately managed". It initiated discussions between local government, the NT Conservation Commission, the Central Australian Conservation Council and Aboriginal groups to develop and implement management plans that are intended to restore the river as one of the major attractions in Alice Springs.

The ASRTA is very conscious of industry standards and customer satisfaction. It has established a code of conduct for its members which, in its introduction, states that "it must be fundamental to our philosophy that the customer comes first, second and third". Standards are effectively maintained through advertising exposure. The NT Tourist Commission only promotes tourist operators who are members of the ASRTA. Members know that their survival is dependant on marketing and willingly abide by the ASRTA guidelines.

THE DESERT ROSE BLOOMS AGAIN

The 1989 pilots' strike had a devastating effect on the NT tourism industry. While accommodation houses and tourist operators were immediately affected, the greatly reduced inflow of money into Alice Springs inevitably affected almost all businesses. A survey conducted by the ASRTA estimated that there was a 35% drop in gross income which lasted from August 1989 to March 1990.

The very diverse membership of ASRTA means that it is generally difficult to unite all members. Interest groups such as accommodation houses have rallied against the NT Government's "bed tax" while road transport operators are currently concerned about proposed changes to registration regulations and charges. The pilots' strike did, however, unite all Association members (and the Alice Springs community) behind a plan to resurrect the tourism industry.

The ASRTA co-ordinated a public reconstruction workshop in November 1989 titled "The Desert Rose Blooms Again". The concept of the desert rose (*Gossypium sturtianum*) had been adopted by the Association from a strategy proposed by the Central Australian Conservation Council. This strategy located Alice Springs at the "hub" of five major tourist road loops which form the extended environmental destinations of Central Australia - the intention being to market each loop as having unique scenic, scientific and cultural values with the overall intention of encouraging visitors to stay longer in the region.

Invited speakers from the airlines, politics, Tourist Commissions, tourist operators and conservation interests addressed the 150 delegates. The workshop then split into smaller groups which came up with the specific issues of:

- development and product inventory (what the region has in the way of natural and man-made attractions, recreational sites, accommodation etc and how these might be expanded);

- marketing (to inform the local community of the importance of tourism as well as to increase visitor length of stay and encourage all-year-round visitation);
- education and training (establish training courses in customer relations, provide appropriate information for tour guides and coach captains, multi-lingual training etc);
- environment and heritage (a framework for compatibility between tourism and conservation);
- industrial relations (recognizing that provision of services is a seven day per week job that requires award restructuring and the replacement of penalty rates with alternative incentives).

These sub-committees, under the guidance of a steering committee, have since been given the task of investigating strategies that would allow objectives within each category to be implemented. The sub-committees were asked to list specific and realistic objectives, the resources required for their implementation, who would/could provide the resources, actions required and appropriate time frames.

The shortest (3-12 month) time frames have now passed and the ASRTA Executive is currently reviewing progress. Considerable progress has been made under the Desert Rose strategy. Two examples include:

- lobbying the NT Government for upgrading of roads as part of the Desert Rose loop project - from gravel resheeting through to the replacement of gates with grids;
- re-consideration by the NT Government of a major Eastern MacDonnells national park to complement the presently proposed Western MacDonnells national park.

TOURISM AND THE ENVIRONMENT

Visitors increasingly want to know about the environment. They may not necessarily care about conserving it but they do have an appetite for information on the area's nature. An expanding supply of interpretive information provided by the NT Conservation Commission and the Australian National Parks and Wildlife Service at their respective parks generally satisfies this interest. From a conservation perspective, the growing number of visitors is increasing the pressure on some of the ecologically most sensitive areas of Central Australia (see Central Australian mountain ranges study; RMN 90/3). The ASRTA recognizes that the region's "wilderness" is its most valuable asset and it has taken account of this in its reconstruction strategy. Proposed actions include the development of an environmental code of practice for the industry, obtaining and publicising NT Government park management plans and collating community feedback to produce a series of integrated regional plans.

The ASRTA has endorsed the "Code of environmental practice for the Australian tourism industry" covering the Australian Tourism Industry Association. This code will be used as the

basis for a more regionally specific document. The national code recognizes the importance of compatible development and conservation, appropriate land use, planning, sustainability and education under the headings of philosophy, assessment, protection, responsibility, information and public interest.

IS THE DESERT ROSE YET BLOOMING?

The Alice Springs Regional Tourist Association has devised an extraordinarily structured strategy for the revival of the local tourism industry. Perhaps one of the hardest jobs is objectively deciding whether it has proposed the best strategy, and made the right decisions and sufficient progress in implementing this strategy.

Funding has been obtained for the ASRTA to engage the Pacific Asia Travel Association as consultants to examine and report on the local tourism industry. As well as examining facets of the Desert Rose strategy, the consultants will have the specific brief of investigating the social impact of tourism on Alice Springs.

RAIN IN THE CENTRE

Anonymous

Crazy Ants
Screeching cockatoos
Black eerie clouds
Anticipation.

The weather man predicts
Afternoon Showers
Satellite pictures
Empty promises.

Rumble, Crack, down she pours
Drenching the hot, parched earth
Filling gutters
Making puddles.

Releasing the sweetest
Perfume on earth,
Good for the soul
Cleansing, purifying.

The dry river bed
Now flowing strong
Dragging debris
Cutting roads.

Running water
Champagne corks, a
Chorus of frogs and
Slippery sandcastles.

Let's celebrate
the mighty Todd
Today a torrent,
Tomorrow a trickle

PRESIDENT'S COLUMN

Martin Andrew, Federal President, Roseworthy Agricultural College, Roseworthy, SA.

Now is an uncertain time for pastoral land management. Unfortunately, things haven't improved for the rural sector since my last column - indeed, they have got worse. The severe economic pressures now facing the wool industry, and individual pastoralists in particular, threatens their very viability. I am very concerned for our pastoralist members. These pressures also place land care initiatives under threat because of the lack of finances to proceed with planned land conservation activities. The depressed circumstances will also force many to run their properties harder than they should - and with diminishing returns. Let's hope things start to pick up before too long.

Talking of land care, as President of ARS, I was a speaker at a conference titled "The Role of Information Technology in Land Care" held in Brisbane on the 20th February. The aim was to encourage the use of modern communications and computing technology so as to improve land care. I pointed out that rangeland management has three characteristics - multiple disciplines, multiple use and remoteness - which information technology can help overcome. In particular, the development of computer-based Decision Support Systems enables expert knowledge to be made available on the ground, where it is needed. Australia is at the forefront in this field - the Rangepack and Beefman projects of CSIRO and Queensland's Department of Primary Industries respectively are two leading examples. A joint CSIRO - Texas A&M University international workshop on decision support systems will be held in Texas (USA) in April.

The instigator of the Brisbane conference was Daniel Hickson. Daniel is a pastoralist from Cloncurry, spokesperson for the Cloncurry Landcare Group, and a computing enthusiast. An extract from his opening address appears as the next article in this issue. Other highlights were Peter Ellyard's (Commission for the Future) idea of envisioning the future to help us plan to get there, rather than concentrating on solving today's problems which are more than likely merely symptoms of an unsatisfactory system. Prof. Ken Lyons (Dept. of Geographical Systems, University of Queensland) pointed out that many land information databases are hard to access and are in fact "data cemeteries".

Your Council has made a bid to host the 1999 International Rangelands Congress in Australia, either in Perth or Townsville. Wherever it is held, there will be involvement from rangelanders all over Australia - especially given the wonders of modern information technology. The result will be announced at the 4th IRC in France this April. The next IRC is planned for Kenya in 1995 and this will be confirmed at the 4th IRC. Meanwhile, plans for the 7th Biennial Rangelands Conference from 5-7 October 1992 are proceeding well. There is now an Organising Committee, with Russell Harland (NSW Soil Conservation Service, PO Box 211, Cobar 2835) as secretary. It promises to be another excellent meeting.

Finally, I remind all members about the AGM to be held on Thursday, 30th May, in Adelaide at 6.00 PM at the University of Adelaide Club. This will be held in conjunction with the AGM of the SA Branch, and will be followed by a meal and address by a guest speaker.

THE ROLE OF INFORMATION TECHNOLOGY IN LANDCARE

Daniel Hickson, Melinda Station, via Cloncurry, Qld.

(Ed. As indicated by Martin Andrew in his President's Column, Daniel is the spokesperson for the Cloncurry Landcare group. He recently convened a national conference in Brisbane. The following is an abbreviated version of Daniel's opening remarks at the conference.)

Landcare is a fantastic concept. It accepts that there are no quick fixes to our environmental woes, and recognises that any prevention or rehabilitation action should be initiated by land managers and not administrators. Yet it is equally important to realise that the two most crucial issues affecting its likely success, namely national cooperation and bottom-up grass roots leadership, are principals alien to Australia's social and political culture. For, despite the image of mateship and equality, Australia is a society built around competition and self interest. We are governed from above by a political system that is hesitant to encourage public participation in any form other than taxation or elections. If Landcare is to survive, we are going to have to develop lateral networks that complement our existing social hierarchy.

The principal cause of land degradation is, in my opinion, the failure of the primary and tertiary sectors to integrate their management and scientific wisdom into a readily applicable knowledge base. The expertise generated by our academic and research institutions tends more often than not to lay idle on book shelves, while most of our bush know-how remains untapped in the heads of rural folk. The tragic result is that only a fraction of our total expertise is employed by land managers.

There has been very little interaction between these two groups in the past, because geographic isolation has provided each with vastly different perspectives; consequently while they both speak English, they rarely use the same language.

Primary producers live and work on the land with their prosperity being closely linked to climatic and market fluctuations. To survive, they must acquire numerous technical and managerial skills, which range from general mechanics, plant and/or animal production, business management and many in between. Those who are successful are usually good all-rounders who understand and balance the numerous inter-related variables that affect their properties.

In contrast, the members of the tertiary sector mostly reside in cities and tend to specialize in a particular vocation which best accommodates their natural and acquired talents. They become

very dependant on each other's diversity of occupation to satisfy their own needs.

So the greatest challenge facing Landcare is the bridging of this cultural gap. These links cannot be superficial, and must provide us with a genuine means of integrating theory and practice.

How can we best link the dispersed Landcare groups to the tertiary sector located close to our shores without exhausting the humble monies allocated to the decade of Landcare?

Put simply, we need to better utilize existing people and resources. It is startling to note that communications and computer technology presently make up 25% of our national debt. A great deal of this equipment is grossly under-used.

Personal computers could be used to provide the Landcare movement with an electronic network to improve communications amongst groups, administrators, researchers and the general public.

By linking theory and practice, city and country, we have a great opportunity to strengthen the middle ground in the environmental debate. We must recognize that economics depends on ecology and that for the time being, ecology is also often dependant on economics.

The achievement of Landcare goals could also be facilitated through the development of Landcare Resource Management Centres at appropriate regional centres. This would provide a network where data, information and knowledge could be collected and integrated from national, state, regional and local sources for use in Landcare projects. These centres would coordinate the provision, interpretation and application of our collective knowledge into a holistic form that can be easily accessed and acted upon by land managers. Such

APPLICATION ABSTRACTS FROM AUSTRALIAN RANGELAND JOURNAL

Volume 12, No 2, 1990

PAPERS

EFFECTS OF RAINFALL AND SIMULATED BROWSING ON THE GROWTH OF *ACACIA GEORGINAE* IN ARID CENTRAL AUSTRALIA

D.F. Robinson, the late J.R. Maconochie and P.J. Hanna

The shrub *Acacia georginae* (gidyea) sometimes serves as a browse for stock in central Australia. This study explored the response of individual shoots to browsing. It was found that if the tips only of the shoots were removed, the lost growth was replaced, while if more of the shoots or all of the leaves were

removed, the shoot did not replace the lost growth within two and a half years. This suggests that while *A. georginae* will recover from light browsing, heavy browsing may have long-lasting effects.

Rainfall, soil moisture, leaf growth and leaf loss showed considerable irregularity from year to year.

ISSUES OF SIZE AND VIABILITY OF PASTORAL HOLDINGS IN THE WESTERN DIVISION OF NEW SOUTH WALES

N.D. MacLeod

Many pastoral leases in western New South Wales are too small to ensure that viable pastoral enterprises will persist in the medium to longer term. Apart from attendant welfare problems for leaseholders and their dependants, there is some evidence that this has exacerbated overgrazing problems and created undesirable and potentially irreversible degradation of vegetation and soil resources.

Arguably, the small size problem has sufficiently weakened the economic welfare of many leases to make private acquisition of additional areas and/or adoption of conservation oriented management practices non-economic. The future scenario is then one of greater public involvement in property adjustment measures; or a growing population of non-viable pastoral enterprises with its attendant efficiency, welfare and resource conservation problems.

The paper examines trends in property enterprise size, structure and concentration and the existence and extent of size economies for wool and livestock production in western New South Wales. Several issues are addressed concerning the economic viability of pastoral enterprises and several public policy prescriptions are presented for addressing the size/viability problem.

SHOULD RANGELAND REHABILITATION BE PAID FOR FROM THE PUBLIC PURSE?

R.K. Lindner

The issue addressed in this paper is the appropriate source of funding for rangeland rehabilitation. Two subsidiary questions are pertinent to this policy issue. Is it profitable for private managers of pastoral properties to rehabilitate rangeland? If not, then on what grounds might it be in the public interest to do so?

Evidence is presented that it is privately profitable to rehabilitate slightly to moderately degraded range, by destocking during seasons when there are good prospects for seedlings to become established, but otherwise matching the stocking rate to feed availability. Conversely, it is unprofitable to rehabilitate severely degraded range unless the cost of reseeding is subsidized by at least \$5/ha. The relevance of various market failure arguments to the case for public funding of rangeland rehabilitation to the extent of \$100 million is discussed, and

the need to estimate the existence value of rangelands vis a vis other conservation goals is identified.

THE USE OF RADIO TRANSMITTERS FOR TRACKING AND SHOOTING FERAL BUFFALO

P. Carrick, D. Thomson and G. Calley

The use of radio tracking to reduce a feral buffalo population is described. The technique may have value in operations against feral horses, donkeys and camels. Radio tracking may have value also as a husbandry tool on large cattle stations. It would appear to have a clear role in the control of disease in inaccessible animal populations.

AN ECONOMIC PERSPECTIVE ON FUTURE RESEARCH DIRECTIONS FOR THE AUSTRALIAN SHEEP-GRAZED RANGELANDS

B.G. Johnston, N.D. MacLeod and M.D. Young

This paper reviews the economic problems facing wool producers in the Australian rangelands. These include the declining terms of trade facing wool growers, the highly uncertain environment, the problem of land degradation and legal barriers to land use and property ownership. It then identifies six main ways in which productivity can be improved - arresting land degradation processes, restoring degraded land, improving livestock and labour productivity, developing better management decision support systems and devising better land use policies. From this review, some priority areas for future research are identified and discussed. It is suggested that scientists and economists collaborate to more objectively assess future research priorities and that inter-agency research teams be formed to address the nominated priority areas.

RANGELAND CONFERENCE

A LEARNING EXPERIENCE

Andrew Drysdale, Spring Hill Station, via Charleville, Qld

Andrew was the recipient of an ARS Travelling Scholarship to attend the Society's 6th Biennial Conference in Carnarvon in September 1990. He presented a paper on behalf of the United Graziers' Association of Queensland compiled with Gordon Stone on the UGA's Centenary Landcare Award. Andrew has provided RMN with his thoughts on the Conference.

The paper, titled "UGA - Centenary land management and conservation award 1990", was generally well received especially as it followed one by Bill Burrows who painted a stark picture of the condition of our rangelands.

The Conference to me foremost was a lesson in how to run a conference most professionally and efficiently. To start this report without congratulating the organizers would be most unfair; congratulations and thank you.

I shall endeavour to give a brief run-down of the conference for those of you who were unable to attend. The first session on Tuesday started with an address from the WA Minister for Agriculture, Water Resources and the North West, Mr Bridge. He hit us with a very thought provoking idea of a water pipeline from the Kimberleys to Perth via South Australia providing irrigation along the length of the line. He felt it very important to have a vision to strive for and our Society should have such a vision.

After Mr Bridge opened the conference, Alan Wilson delivered the keynote paper on "High technology to old systems". There were three other papers delivered in this session on Traditional Livestock Production.

The second session was also on Traditional Livestock Production. The keynote paper was by Mark Stafford Smith titled "Waters and the patterns of animal use". The pastoralists who attended the conference found this paper, and the next on self-mustering of sheep, particularly interesting and applicable. The third session of the day titled Developing Livestock Industries was opened by George Wilson with a paper "Developing complementary livestock industries". As the title suggests, this paper gave possible ways in which pastoralists can diversify thus easing the burden on the grazing enterprise.

As a grazier I feel it important to heed a warning that whilst diversifying may be a good thing, it isn't done at the peril of their grazing enterprise as often happens.

Also in this session, we heard papers on goat production and the impact of feral goats on our rangelands as well as a paper on "Kangaroos - rangeland product or vermin".

The last session of the day was titled "Other Land Uses". Of all the papers, I felt that John Holmes's paper on "Non-pastoral uses of Australia's rangelands" was the most provocative. It laid down a challenge to us as a Rangeland Society to widen our horizons; a point of view I do not necessarily agree with and will cover in my summary.

Also in this session were papers on Aboriginal lands and use, nature conservation and rehabilitation, and protection of conservation areas.

The second day of the conference involved a field trip to Boolathana station looking at the Western Australian Department of Agriculture grazing trials. We were also shown a local pastoral land care group's reclamation plough. The day ended informally with a barbecue at Brickhouse shearing shed where a great many degradation problems were solved!

The final day of the conference started with a keynote paper by Bill Burrows on "Conservation rangeland management in Australia - a personal viewpoint". Bill was his usual provocative self and raised many problems which must be addressed both by rangeland scientists and graziers.

Other papers delivered during this session were "Putting the 't' into property management plan-s", "Getting at risk before it gets at you" and the UGA's paper. This session came under the title of "Conservative rangeland management".

Also under the same title was a paper by Geoff Pickup on "The impact of soil erosion on Australia's rangelands". In this paper, Geoff raised some very interesting theories pertaining to floods and their magnitude and causes of degradation which had previously been blamed on grazing. It was refreshing to know that all degradation is not caused by pastoralists!

Other invited papers for this session were "Runoff and soil loss from four small catchments in the Mulga lands of South West Queensland" and "How erosion history affects the development of pasture and scrub - a central Australian case study".

There were two sessions on Rangeland Rehabilitation. The first consisted of a paper by Noel Fitzpatrick titled "National overview". Noel posed some questions on rehabilitation and its viability and felt that sound management was the only way to go. The second keynote speaker on rehabilitation was Professor Lindner who presented a paper titled "Private profitability of rangeland rehabilitation and the case for public funding". This was a very interesting paper as for nearly three days we had been listening to various people telling us how we should address our degradation problems and suddenly we were posed with the question - is it economical to rehabilitate country.

In essence, it is economical to rehabilitate slightly to moderately degraded country but tax incentives or similar schemes should be introduced to make rehabilitation of severely degraded country profitable.

The final few papers were "Burning and enclosure can rehabilitate degraded *Heteropogon contortus* (black spear) pastures", "An evaluation of the potential benefits of integrated shrub control strategies" and "Contour furrowing technology for range cultivation and reseedling".

In summary, for anyone to have attended this conference and not learnt, they would have to have been suffering from a combination of three conditions; blindness, deafness and dumbness.

I found that the papers were very listener-friendly and not written in scientific lingo that only scientists can understand. I think the strength of having a conference such as ours lies in the exchange of ideas and information. Most of this occurs outside the conference room and I applaud the organisers for their choice of venue which enabled this.

The strength of the Rangeland Society is the make up of it. There would be no conservation group, and that is what we are, more highly regarded by pastoralists in the Society. Whilst we have those pastoralists, we will remain strong.

I urge the Society not to lose sight of their original purpose, which as I see it, is a means by which rangeland scientists

exchange ideas and information amongst each other and with pastoralists. To go down the path of presenting submissions on various issues may be seen by pastoralists as a step towards being another interfering conservation group. This will breed suspicion amongst producers and if that happens, then I think the Society will suffer enormously.

In conclusion, I would again like to thank the Society for giving me the opportunity to attend the conference through their Travelling Scholarship.

I would like to leave you with the words of Ray Perry "Australian rangelands are the least degraded and the best managed in the world and our rangeland scientists are world leaders". It sort of makes you feel a little proud doesn't it?

NOTICE OF ANNUAL GENERAL MEETING

Martin Andrew, Federal President

The Annual General Meeting of the Society will be held on Thursday, 30 May, at 6.00 PM in the University of Adelaide Club.

The business will include:

- (i) report of the Council
- (ii) financial report
- (iii) report on the election of office bearers for the next Council
- (iv) amendments to the Articles of the Society relating to the changes proposed by the Publications Committee (see RMN 90/2, July 1990, p 11). These amendments are supported by Council.

The Council will move to Alice Springs following the AGM. Nominations for all Council positions are now called for and are to be with the Honorary Secretary (Dennis Barber) by 10th April.

If you are unable to attend the AGM, you may appoint a proxy by notice in writing to Dennis Barber by 3.00 PM on 30th May.

The AGM of the SA Branch will take place immediately after this AGM, to be followed by pre-dinner drinks, a meal (\$25/head) and an address by a guest speaker. Please advise me by Monday 27th May at the latest if you are going to attend (c/- University of Adelaide - Roseworthy Campus, Roseworthy, 5371; tel: 085-248111; Fax: 085-248111).

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