



*The Australian Rangeland Society*

# Range management Newsletter

No. 82/4  
December 1982

## EDITORIAL

Margaret Friedel and David Wilcox escaped from their home ranges recently and very kindly took the trouble to write about the things they saw and did whilst out and about. Their contributions make good reading, particularly for those of us whose travels consist solely of journeys to and from the nearest watering hole! So ..... take the hint all you junketeers; share your experiences with others in the society, so that we may all benefit.

Thanks for all the letters. It is pleasing to have comments on articles that have appeared in past RMN's as it creates, I feel, a sense of continuity in the newsletter - or in the jargon of politics, a "continuing dialogue".

Of special importance in this issue are the notes concerning the International Rangelands Congress; and the Australian Farm Management Society. The latter body publicised A.R.S. in their Newsletter (Volume 9, No. 9, October 1982) and we are repaying the compliment. I know it is an extremely active and effective society. On I.R.C. Business, Peter Joss asked me to remind you that the Titles of Contributed Papers must be with him by May 31, 1983. While on the subject I.R.C., read the notice concerning the Primary Producers Symposium. John Heussler, the Convenor is putting together a programme that will be of special interest to pastoralist members of A.R.S.

Finally, keep the contributions coming in to the address below - and Best Wishes for Christmas and a rainy New Year.

Don Burnside  
Department of Agriculture  
P.O. Box 417  
KALGOORLIE, W.A. 6430 (Ph. 090.211666)

LETTERS TO THE EDITOR

From: Margaret Friedel  
 CSIRO  
 ALICE SPRINGS, N.T. 5750.

I wish to comment of Bruce Alchin's letter to RMN 82/3, which outlined his impression of the Australian Conservation Foundation's "Focus on Australia's Arid Lands" Conference in Broken Hill last May.

I share his disquiet at misapprehensions of the extent of degradation in our arid lands, and I was prepared for confrontation between "greenies" and pastoralists. It was particularly refreshing to find that no such thing occurred, and so I am disappointed in the impression of discord that readers will almost certainly have gained from Bruce's letter. In fact, after talking to many participants at the conference, it appeared that people had shared the knowledge they had and that many felt that they had learnt a lot. Conservationists with whom I spoke indicated that in many instances they had not had much prior knowledge of arid lands and had come to learn, certainly not to confront.

I am convinced that the majority of graziers and others who work in the arid zone had no need to defend their positions, and perhaps the few that did were guilty of overstatement. The one conservationist who was outspoken and critical on many issues is a shrewd politician whom I found lively and entertaining. He served as a stimulus even if we did not agree with him.

In my view, the conference opened up lines of communication between many people and groups and broadened understanding of our arid lands. I support Bruce's hope that future conferences can be gatherings in [a] spirit of co-operation rather than confrontation, and congratulate the ACF that their conference was one of the former kind.

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From: Alan Wilson  
 CSIRO  
 DENILIQUIN, N.S.W. 2710.

SHRUB INVASION IN RELATION TO CONSERVATION AND STABILITY

Bruce Alchin's article on shrub invasion in relation to conservation, erosion and landscape in the last newsletter has stirred me to put a few thoughts down on paper.

Bruce suggested that the aim of shrub control programs is to return areas to their "natural condition". Unfortunately both open and dense shrubby states may be considered as "natural" for these semi-arid regions. Shrub densities vary through time depending on previous drought, wet or fire periods so that it isn't valid to choose a particular point in time (i.e. settlement) and then say that's how the vegetation ought to be.

Since both shrubby and open states are natural, our desire to manage for the open state must be ascribed to land use objectives such as animal production (grass is preferred) or to landscape aesthetics (the view is more pleasing in an open savanna woodland). We may not like shrub invasion, but its not a change from the "natural status of the environment".

On the question of erosion, I think Bruce is in error. Shrubs reduce wind velocity and hence wind erosion at all densities and also leave a reasonable cover of litter on the ground to reduce water erosion. The prevention of erosion is a desirable objective, but is not a reason for promoting an open landscape.

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From: David Wilcox  
Dept. of Agriculture  
SOUTH PERTH, W.A. 6151.

Bruce Alchin (RMN 82/3) noted that scrub invasion can predispose a landscape to soil erosion. This was certainly the case on the Ord River regeneration area where the bare and eroding soils were seeded with kapok bush (*Aerva javanica*). This is a low shrub (1-1.5 m) that colonises disturbed sites readily. Water erosion continued unabated despite the establishment of an almost complete foliar cover of kapok bush. However wind erosion was substantially reduced. Water erosion was not reduced until the perennial grasses birdwood (*Cenchrus setigerus*) and buffel (*Cenchrus ciliaris*) replaced the kapok bush.

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From: Ian Beale  
Dept. of Primary Industries  
CHARLEVILLE, QLD. 4470.

Another contribution on the subject of property records. The sheet shown on the following page is used by Mr. Tom Lasater of the Lasater Ranch in Colorado.

#### SOCIETY BUSINESS

Council has held three meetings (August, 27; October 29; and November 15) since the last Newsletter. The notes below cover, I hope, the important points raised in those meetings. No doubt I will hear about it if I have left anything out!

Firstly.....

LASATER RANCH, Matheson, Colo.

LIVESTOCK INVENTORY

Date.....

Pasture	Acres	Cows 3's & Up	2 Year Heifers	Yearling Heifers	Bulls 3's & Up	2 Year Bulls	Yearling Bulls	Heifer Calves	Bull Calves	Horses	Animal Units
		1.00	.80	.50	1.25	1.00	.75			1.25	
1 - Pear	2425										
2 - Lake Tejano	1920										
3 - Huntsman	2430										
4 - Stove Bottom	30										
5 - House Trap	165										
6 - Barn Trap	65										
7 - Horse Trap	45										
8 - Spring Pasture	590										
9 - South Bridge	115										
10 - North Bridge	200										
11 - Flatrock	2040										
12 - Laurie	640										
13 - Morris Farm	320										
14 - Windowrock	470										
15 - Center Gordon	160										
16 - South Gordon	960										
17 - Mine	160										
18 - Alan	710										
19 - Boyaca	1280										
20 - Resolis	3847										
21 - Park	1710										
22 - West Farm	92										
23 - East Farm	268										
24 - Evan Trap	156										
25 - Rosa Trap	270										
26 - Canyon	5860										
Working Pens											
TOTAL ANIMAL UNITS											

COMMENTS:

TOTAL HEAD CATTLE:.....

Subs due Subs due Subs due Subs due Subs due Subs due Subs due

Just in case you couldn't work that out a BIG reminder that 1983 subscriptions are due soon. Please turn to the back page for the form to accompany your payment, and make sure that Vanessa Chewings, Subscription Secretary has your renewal by March 31, 1983.

#### New Junta Required

In May 1983, Council will make the move from Alice Springs to Western Australia; and Vice President Ray Perry will become the President of the Society. He will need off-siders in the form of a Secretary and a Treasurer, both of which will come from W.A. They will serve from May 1983 to May 1985.

We will also need to elect a new Vice-President for this period. It is New South Wales' turn to host council in May 1985, and the elected Vice-President will become President at that time. Consequently, we need a N.S.W. Vice-President. Nominations for all of these positions must be in by April 10, 1983. If you need a nomination form, write to:

Ken Shaw  
Secretary A.R.S.  
C/- Dept. of Primary Production  
P.O. Box 2134  
ALICE SPRINGS, N.T. 5750.

#### Honorary Membership

At the October meeting, Council supported the establishment of a category on Honorary Membership of the Society. The following proposed amendment to the A.R.S. Articles of Association to allow for this new category of Honorary Membership, is then included here with a request for comments from the "rank and file".

- (i) Any person who has rendered or is rendering distinguished service to the Society or to rangelands, may be appointed an Honorary Member on the written nomination of not fewer than six members submitted to the Council.
- (ii) An Honorary Member shall not be liable for the payment of subscriptions, but shall otherwise be deemed to be a financial member of the Society and entitled to all the priveleges of membership.

An Honorary Membership, if granted, would normally be for life or until the Honorary Member resigned. Council could revoke the appointment under Article 3(g). Please forward your comments to Hon. Secy. Ken Shaw.

At this same meeting, council considered that Fellowships, Emeritus memberships and life memberships of the Society were not warranted.

Ex-officio Council Membership by the Editor of the A.R.J

Council supports the recommendation of the Publications Committee that the Editor's ex-officio Council Membership rights be removed by deletion of the appropriate part of Article 12(b).

Briefly, the justification of this move is that the editor's duties for which an Honorarium is received, were largely restricted to assemblage of material and organisation of Journal publication. Advice on the Editorial policy is prepared by the Publications Committee. (The editor, in the past, has been a member of this Committee.)

The Editorial Committee is responsible for acceptance of material for publication in the Australian Rangeland Journal.

FROM AROUND THE TRAPS

Broken Hill Branch News

Roger Stanley

The most recent activity of the Branch was participation in the CSIRO Mallee Burning Field Day held on October 6th at "Birdwood", Pooncarie. President Paul McClure and Vice-President Peter Crozier spoke to field day participants, during an informal lunchtime meeting, about recent and future activities of the Branch. While not at the field day, I was told that the talks were quietly received - either we are doing a good job, or everyone was hungry, or both!

The next major function planned is an Open Weekend on Sturt National Park, near Tibooburra, tentatively scheduled for May 14-15, 1983. As this is the middle weekend of NSW school holidays we are hoping to attract both townfolk from the district and city folk up for the holidays. A tentative programme has been drawn up and will be submitted when finalised for publication in the next newsletter. It will include inspection of the Mt. Wood pastoral and Station museums, a 100 km drive through some of the Park's outstanding landforms, and a variety of short talks, all on Saturday. On Sunday a number of people with differing interests will give their views on the "Role and Impact of National Parks", and this will be followed by an open forum on the subject. Sturt Park has a great deal to offer, and a trip planned to coincide with the Open Weekend would be well worthwhile. More details next issue.

In the following month the Branch has rescheduled its "Water Supply in the Rangelands" Seminar which was postponed earlier this year. The Seminar will be held on Thursday, June 2nd, 1983, and a programme will be published in the next newsletter. There is a big

push for branches to hold major functions in 1983 to take the place of the bi-annual conference, but as the Broken Hill Branch tries to stage such a function every year I think we will consider the Water Supply seminar to be our effort.

This contribution has been a fairly hasty effort. With a little more time and a couple of programmes to pad things out my next try should keep you reading a little longer!

Comments from the Adelaide Branch

Andrew Johnson

Despite remarks to the contrary the Adelaide branch is alive and well! We currently have 56 financial members with a number of other interested participants in our various meetings and other functions. To increase the understanding and interaction between pastoralists, the branch has organised a number of activities. Most notable has been the 'Plant Identification Course'.

In October 1981 and again in 1982 the branch has organised a course which assumed no botanical training and which attempted to introduce the pastoral community to a limited arid flora. The live-in course, held over five days, was able to make use of Dr. R. Lange's field station for teaching purposes, with other facilities being generously supplied by the Nicolsons and Middleback Station. Joan Gibbs-Clema very ably instructed the course on subjects such as plant structure, basic taxonomy, use of keys, plant collecting and portable plant guides. Other informal talks by Dr. Lange and some of his students provided added interest.

The course has been so well received in both years that it is likely to become an annual event.

A.G.M.

The Annual General Meeting for the branch will be held in late January or early March on a date to correspond with the meeting of the United Farmers and Stock Owners Association, Wool and Meat Section. Local members will be notified as to the exact date and the subject to be discussed on the evening.

From the Centre

Russell Grant  
Dept. of Primary Production  
ALICE SPRINGS, N.T.

PASTURE MANAGEMENT WORKSHOP  
WOODGREEN STATION, ALICE SPRINGS  
MARCH 1983

Alice Springs members of the Australian Rangeland Society, in conjunction with the Range Management Section of the Department of Primary Production (N.T.), intend to conduct a two-day Pasture Management Workshop on 9-10th March, 1983.

Bob Purvis, of Woodgreen Station, 170 km north-east of Alice Springs, has kindly offered his property as a venue for the event.

The Workshop will cover a number of aspects of pasture and land management. They will include range condition assessment, land reclamation and the establishment of buffel grass, woody plant management in relation to the use of fire, animal nutrition in mulga country, the implications of the BTB eradication program for pasture management, and the latest information on rabbit control.

These topics will be placed in a practical context through being discussed on-site during an inspection of relevant areas of Woodgreen. Of particular interest will be the inspection of some highly successful soil conservation works carried out over recent years, and the demonstration of pitting equipment.

There will be plenty of "grass doctors" and similar from the government departments and CSIRO present, but the success of the workshop depends on the participation of those people really involved with pasture management - the pastoralists. All are invited to attend.

Arrangements are still at an early stage and the workshop will be fully publicized as the event draws closer.

From Carnarvon

John Morrisey

A meeting of the Australian Rangeland Society is to be held at the Department of Agriculture Regional Office in Carnarvon on December 10th at 2 p.m. All members and those interested in finding out what the Society is all about are invited to attend.

The meeting will discuss the formation of a regional branch of the Society. The meeting will be useful in planning a one day seminar on land tenure which is hoped to be held during Pastoral Week in July 1983.



INTERNATIONAL RANGELANDS CONGRESSPrimary Producers Symposium

Convenor - Mr. John Heussler "Denton" Morella

John's assistant convenor for this symposium is Terry Mitchell, Department of Agriculture, Dubbo. John's aims for this symposium are:-

- to concentrate on rangeland use in the Australian context using all Australian speakers. These speakers will be a cross section of graziers and extension workers.
- to sketch the factors affecting the gaining of a living from the grazing industries in the rangelands. These factors will be economic and marketing factors, and the physical restraints to production in the Australian rangelands.
- although there will not be an International component, the symposium will give a picture of rangeland use within a western developed economy.
- to examine the contribution that Australia has made, and can make, to the technology required to use the grazing potential found in the rangelands.

John is looking for more suggestions for his symposium and is keen that the symposium will adequately reflect the situation and trends within the Australian rangeland grazing industries.

HEAR YE! HEAR YE! PUBLIC NOTICES

ECOLOGICAL SOCIETY OF AUSTRALIA

- 1984 MEETINGS IN SYDNEY

August 27, 1984

Open Forum on Ecological Research

Papers for the Open Forum can be on any research subject, as usual. Papers will not be reviewed or screened; a maximum of 15 minutes will be provided; they will not be published but Abstracts will be printed in the Bulletin of the Ecol. Soc. Australia. Abstracts will be expected by May 1984; further details in later announcements. Use the Open Forum to report current research.

August 28-29, 1984

Proceedings Symposium "Are Australian Ecosystems Different"?

Do ecosystems have patterns determined by their physical context, irrespective of their evolutionary history and the taxa from which they have been assembled? Australia is the prime natural experiment on this problem, because its flora and fauna have evolved in such isolation and because such a range of environments are represented on the continent. Ecosystem-level convergence is therefore a specially important problem in basic research for Australian ecology. Further, we cannot tell whether overseas research can safely be applied to Australian management problems until we understand whether Australian ecosystems are similar to their overseas analogues.

We hope for papers on marine, coastal, freshwater, and terrestrial habitats. Papers could consider: species richness, either local or regional, mixtures of plant growth-forms or animal ways of life, energy flow or nutrient cycling, patterns of herbivory, predation, disease, parasitism, or symbiosis, pollination or dispersal, flammability, or other matters. Our criteria are that papers must deal with properties of species assemblages, and must undertake a comparison of Australia with at least one other continent. (For purposes of this symposium we group New Guinea with Australia rather than with other continents.) We are also interested in papers undertaking to match Australian environments with those on other continents and comment on imperfections in the matching, or to review the history of Australian environments comparatively with other continents, since imperfect matching or different history are often invoked to explain divergence.

We invite potential contributors to the Proceedings Symposium to indicate interest now. Contributions from any source will be considered, and all will be reviewed for quality and relevance, probably on the strength of an extended abstract. Accepted papers will be published as Vol. 14 of Proc. Ecol. Soc. Aust.

We expect to accept papers of several forms and lengths:

- (1) Reports of relevant new data, as briefly as is consistent with necessary detail on methods and results;
- (2) Syntheses of available information to make between-continent comparisons;
- (3) Summaries of comparisons which have already been published. These would appear as short papers in the Proceedings, and we would encourage authors to present them as posters at the meeting.

For further information contact Mark Westoby, Biology, Macquarie University, North Ryde, 2113, Australia.

The Australian Farm Management Society

Membership of the Society is open to all people who have an interest in farming and better farm management. No special qualifications are required for membership. Farmers and graziers, accountants, bankers, academics, professional officers, businessmen - indeed, anyone with any association over the wide spectrum of activities which make our vast rural industries function can be a very welcome member of the Society. Everyone has some skill to contribute.

The major aims of the Society are:-

- To create a National Society which can effectively foster better farm management.
- To establish much better communication within the vast groups of people actively associated with rural production.
- At the Regional level to integrate all of the practical, professional and business skills essential to better management practices.
- At the National level, to create an important forum for the voicing of important issues affecting rural industries. The publication of the Newsletter and promotion of annual National conferences will give the venues by which much progress in better farm business management should eventuate.
- At the Branch level, a local executive committee to organize meetings in the form of local seminars or social functions which feature some current important aspects to farm management.

Presently there are 19 Branches of the Society:

<u>NSW</u>	Armidale, Central West, Albury/Wodonga
<u>Victoria</u>	Ballarat, Bendigo, Geelong, Gippsland
<u>Queensland</u>	Brisbane, Gatton
<u>SA</u>	South Australia, Jamestown, Naracoorte
<u>WA</u>	Albany, Avon Districts, Eastern Districts, Esperance, Narrogin, Perth
<u>Tasmania</u>	Launceston

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NEW MEMBER INVOICE	THE AUSTRALIAN FARM MANAGEMENT SOCIETY
ANNUAL SUBSCRIPTION	\$25.00

1982/83 MEMBERSHIP DETAILS:

NAME: .....

ADDRESS: .....

.....POSTCODE.....

TELEPHONE: .....STD CODE.....

OCCUPATION: .....

PLEASE SEND WITH CHEQUE ATTACHED TO: SECRETARIAT, P.O. BOX 17, BATHURST, N.S.W. 2795.

I WISH TO BE AFFILIATED WITH THE FOLLOWING BRANCHES.....

Water Research Grants

.....Dept. of National Development &amp; Energy

The Commonwealth Government has decided to expand Australia's water research effort through the establishment of the National Research Council.

The Council will advise the Government on national water research goals, needs and priorities, maintain an overview of water research throughout Australia and recommend on funds for research and development projects.

It will also evaluate research and demonstration programs and projects, and advise on an effective program of technology transfer from the research and development sector to users.

Advertisements seeking applications for research grants from the National Water Research Council are likely to be placed in the national press by the Department in mid-November 1982. It is envisaged that the first round of applications will be assessed by the Council early in December 1982.

As further details become available, your organisation will be advised.

National Vegetation Mapping Project

The Second Series of the Atlas of Australian Resources included a map entitled 'Natural Vegetation' (1976), which showed broadly the character of the vegetation of Australia before modification by Europeans began. Work is now under way on a map of the present vegetation of Australia for publication at 1:5 million scale in the Third Series of the Atlas. This new map will provide a sequel to the earlier one by reflecting the changes brought about by European settlement.

Like the 1976 map of natural vegetation, this map is being compiled by Dr. John Carnahan of the Department of Botany, Australian National University. Dr. Carnahan is working in close collaboration with the staff of the Geographic Branch of the Division of National Mapping.

As far as possible the present vegetative cover will be classified by the same structural and floristic criteria used for the map of natural vegetation. Some extensions and elaborations will be necessary in order to accommodate cultural vegetation, but it is hoped that these can be incorporated into a consistent system. It is also intended to use cartographic conventions similar to those used for the map of natural vegetation. Again, however, some modification will be necessary to take account of the complex effects of settlement.

A wide canvass is being conducted for constructive comments and suggestions, and in particular for advice on possible source materials, especially in graphical form. Communications from interested persons who have not yet been consulted would be welcome: these may be sent

either to Dr. Carnahan or to the Director, Division of National Mapping (P.O. Box 31, Belconnen, A.C.T. 2616: for the attention of Mr. L.K. Hazlewood).

Ed: The covering letter with this information explained that Dr. Carnahan is spending six months from 1 August 1982 gathering data and working up the initial compilation sheets at scale 1:1 million. Staff of the Division's Geographic Branch will be working closely with him in compiling these maps and, later, the final map; and they will also be working simultaneously on closely related projects, notably land cover mapping at 1:1 million for our Australia 1:1 000 000 Land Use Series and a new map for the Atlas showing forest resources. In all this work recent Landsat imagery will be used to the maximum extent practicable. Dr. Carnahan's address is:

Department of Botany  
Faculty of Science  
Australian National University  
G.P.O Box 4  
CANBERRA, A.C.T 2600

## FEATURES

### How the West was Won

....M.H. Friedel

In September, I joined West Australian Department of Agriculture officers to travel through the rangelands around Carnarvon, Meekatharra and Kalgoorlie. Alec Holm introduced me to the Carnarvon area, where we visited exclosures and monitoring sites, and spent some time at Hamelin Station discussing aspects of management with Brian and Mary Wake. We also encountered the W.A. land survey team and joined them for half a day to learn about their operation - plant identification, soil and topography descriptions, vegetation and erosion assessment and accurate location of sites and land system boundaries on air photos.

I rapidly found that interesting comparisons could be made with the Central Australian area where I work. In the centre, summer rainfall provides 70% of the annual 250 mm and produces long-lasting grass pastures. Around Carnarvon, summer rainfall is far less reliable than winter rainfall and herbage is relatively short lived. The annual rainfall is 200-225 mm.

Sheep devour the herbage far more completely than cattle and so the maintenance of herbage is considered to be less important ("use it while you've got it") than maintenance of shrubs in the long term. Sheep are the main livestock carried, although feral goats are widespread and are being mustered and sold successfully in some areas. In the centre, cattle are run almost exclusively but, in the drier, calcareous country south of Alice Springs, rabbits cause considerable problems. On the whole, rabbits did not concern pastoralists in the

west. Saline pastures and waters restrict sheep movement in the west and many concentrate grazing in relatively small areas compared to cattle grazing in the centre, where salinity is generally not a problem.

There are many structural similarities in the plant communities of the west and the centre. For instance, the W.A. wanyu (*Acacia ramulosa*) communities are very reminiscent of the centralian mulga (*A. aneura*) communities. Chenopod pastures are common to both regions, but the species vary; many *Maireana* species (*sedifolia*, *pyramidata*, etc.) occur in the west, whilst *M. astrotricha* is the major blue bush pasture of the centre. Chenopod pastures dominate the west whereas they are scattered through the south of central Australia and in fact form the northern-most extension of the S.A. chenopod shrublands. Other genera of shrubs were common to both regions, although the diversity of *Eremophila* species in the west was striking. In the centre, *Cassia* is probably the more diverse and abundant genus.

Travelling to Meekatharra via the Gascoyne catchment, it was apparent that management problems are similar. Woody plant increase, including *Eremophila* and *Acacia* species and needlewood (*Hakea preissii*), was notable and could be compared to increases in *Cassia* and mulga in some centralian pastures. The increasers may still be valuable as stabilisers of active soil loss, so are not necessarily "weeds". We discussed the use of fire in management and I concluded that fire frequency in the past may well have been less in parts of the west than in the centre, due to the lack of adequate grass fuels for long periods of time. Others may wish to disagree! The implications for shrub control are not clear, although we saw where fire had killed mature needlewood.

Soil loss on the river frontages was probably more severe and general in the Gascoyne catchment than that in the centre. We discussed the hummocking of soil around long-lived shrubs on the plains and to what extent this represented the natural movement of soils in drought conditions, regardless of management. I believe much of the hummocking in central Australia chenopod pastures is natural.

Encounters with the wandarrie banks (low sand rises) in the mulga plains had me cursing the use of common names. Broad leaf wandarrie, wire wandarrie, fine, soft, buck, creeping, etc. wandarrie had this observer very confused, since these grasses (how can we guess that, even?) belong to different genera.

Andy Mitchell, mine host at Meekatharra, took us to the Coodardy grazing management trial, where spelling is being studied on an area that had previously been little grazed. The project is only recently underway but it will provide much useful information on stock and vegetation interactions and therefore management.

En route to Yandal Station, via Lacey's Hillview Station, discussions continued on many aspects already mentioned above. I was struck by the existence of hardpan underlying so much of the area, and the way in which its proximity to the surface related to plant production, presumably through its influence on hydrology. The impact of local storms and rapid run-off, reminiscent of the centre, was clearly

demonstrated by an enforced overnight stay at Yakabindie Station and an ensuing foray in search of travellers initiated from Yandal. Despite lack of sleep, owner Len Boladeras and Kalgoorlie adviser Don Burnside showed us the Yandal grazing management trial. Dry ewes are kept in mulga pastures from October to April and are moved into better bluebush pastures for lambing in June, the reverse of usual practice. This provides better nutrition when it is most needed and prevents eating out of pastures around waters in hotter periods. Problems may arise if summer rains fail for several seasons, given double stocking rates for six months of the year in each paddock.

2 | Closer to Kalgoorlie and in the early stages of the train trip to Adelaide, the Casuarina and mallee landscapes were notable, but still with chenopod understoreys. Rabbits, grazing and inappropriate use of fire had all taken their toll in areas of the Nullarbor, where chenopods should have occurred.

Throughout the trip, we were constantly occupied with discussions on a topic previously unmentioned, but which was the subject of an all-day meeting at Kalgoorlie to set down our conclusions: range assessment. Assessment methods in the west and the centre have been very different in the past, since W.A. monitoring is of shrub dynamics, including composition, while centralian monitoring is based almost entirely on herbage composition without reference to production. Nevertheless, our thoughts were converging on future needs. Both the W.A. Department of Agriculture, and the CSIRO with the N.T. Department of Primary Production are planning to experiment with incorporating assessments of the tree/shrub layer, the ground layer and soils into monitoring programs. I envied the West Australians their fenceline effects (a product of heavy stocking and the sheep's close cropping of pasture) bordering holding paddocks, and also their exclosures. (Land managers and administrators may not sympathise with me!) The long-term impact of grazing cattle is not so readily observed and interpreted in the centre.

Perhaps I am unwise to promote the W.A. rangelands that I saw as such an interesting region to visit, since the tour guides might be inundated with requests for further tours. Despite the danger, I will emphasise how useful these exchanges really are. Similarities and differences are clarified, problems shared and solutions discussed. My thanks to all the people concerned.

The Second International Ranchers Roundup  
Comments on a Visit to USA in August 1982

...David Wilcox

Texas A and M University is responsible in Texas for running an extension service for farmers and ranchers in conjunction with county and state bodies. When the Land Grant Colleges were established by Congress they were given sufficient endowments to allow them to provide this service and a research arm as well. The Second International Ranchers Roundup which I attended in August this year was organised by the Extension Service of the University and was directed towards ranchers in USA and Mexico and particularly to those ranchers in South West Texas where sheep and goats are quite common. There were ranchers from as far away as Kansas at the meeting, but most were Texans and about a third of the 450 attending would have been Sheep and Goat producers. Most of the mohair produced in USA is grown in South West Texas, but meat goats, called Spanish goats, are also important for exports to Mexico.

I went to talk about anticipating crises in rangeland management and about the operations of a sheep ranch in pastoral Western Australia. But I do not want to talk about this here for we have enough crises in range management in Western Australia and as for the other I think that I would only be preaching to the converted. Instead, I would like to talk about two of the things which really impressed me at the meeting.

The first would undoubtedly be the Savory Grazing Method which is arousing so much interest in Western USA ranch lands. It is a method being sold by Alan Savory, recently from Zimbabwe, but now of New Mexico. It was developed in South Africa, and the then Rhodesia, for use on the grassy ranges of those countries. Quite briefly it divides up a ranch into a number of separate cells each of which consists of a number of paddocks. On a ranch of say 40,000 ha, there may be five or more cells, each cell having ten paddocks of about 800 hectares each.

In the system stock are permitted to graze in each paddock in turn from five to seven days before being let into the succeeding paddock. In a ten week period each paddock would be rested for nine weeks and grazed for one at stocking rates which would apply over the whole cell. Alan Savory therefore does not reduce stocking rates in his system. They stay at least at the same level.

More than this though, ranchers are promised an increase in stocking rate of 50%, 100% or even 200% once the system is implemented. An while stocking rate increases are promised, this method is also alleged to improve the quality of the range and to halt and reverse range degradation, for it is held that range deterioration is brought about by understocking as much as by overgrazing.

The argument is that reducing stock numbers does not reduce the overgrazing of the valuable parts of the rangeland which a person may wish to rehabilitate for animals will continue to use these selectively.



Equally as importantly it is held that reducing stock numbers and long spells overrests the range allowing it to stagnate at a low level of recovery.

The Savory system of very heavy grazing for short periods followed by rests of up to sixty days is alleged to provide the proper type of management for almost any rangeland.

It must be said here that this approach to grazing management is very common in South Africa where it probably developed. When I was there about six years ago it was the system adopted by most progressive farmers. These same farmers were convinced that it had improved their stocking rates and rehabilitated their country.

In reviewing the prospects for the system in Australian rangelands there are a number of aspects which have to be considered. A first group being those concerned with the pastures themselves and a second those concerned with management and economics.

There are very significant pasture differences between southern Africa and Australia. In African pastures developed under quite heavy grazing pressures by sharp hooved animals. The introduction of domestic stock to that country was not the sharp and violent change which occurred in Australia when domestic animals were introduced onto pastures which were only lightly stocked by soft footed animals. It is reasonable to expect that the grasses in Africa developed growth characteristics which responded in a positive way to the transient but heavy grazing of native herds, the pattern followed by the Savory System. In Australia our observations seem to suggest that some grasses at least do not respond to this system and this sort of grazing.

One other difference between Southern Africa and Texas on the one hand and Australia on the other is the seasonality of rainfall. Rainfall in the pastoral areas of W.A. tends to be strongly seasonal or may even fail altogether. The Savory System appears to me to depend upon a reasonably long spread of the growing season for it to be effective and certainly in Texas there are usually rains in spring and summer. But it was interesting to note though that the system works well in New Mexico in 250 mm summer rainfall country where conditions are rarely if ever better than in most parts of pastoral W.A.

The main point for us in respect of the Savory System is that it should cause us to question the use of year long grazing systems anywhere in the pastoral areas. Some pastoralists are using their country on a six month on and off basis on our advice and this appears to be a good system providing both for the needs of stock and pastures. We are investigating the matter at Coodardy near Cue and will be incorporating a sub-treatment in the new grazing management study being implemented at Ord River Station in the Kimberley.

Fire has always fascinated range scientists and there have been a great number of reviews on the use of fire. Foresters in USA and ranchers there and pastoralists in Australia have always had a horror of fires and have suppressed them as they occurred - one because

