



The Australian Rangeland Society

RANGE MANAGEMENT NEWSLETTER
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Range Management Newsletter

Official newsletter of the Australian Rangeland Society

Editor - Dr. W.H. Burrows, Charleville Pastoral Laboratory,
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No. 77/2 June 1977

EDITORIAL

After the grand job Graeme Tupper did for both the Range Assessment Newsletter and the Range Management Newsletter, I must confess to some fear of being able to maintain his high standards. I look forward to your support in helping me to do this. The Newsletter is the most active 'arm' of our widely dispersed society - it is up to you as members to ensure that it remains an effective form of communication.

As your new editor I do not propose any major innovations on what I regard as an already successful formula. However, I would like to further encourage the use of the newsletter as a forum for the exchange and even debate of ideas. The letters in this current issue are indicative of the type of responses for which the newsletter is ideally suited.

The major topics of this issue are the report of our foundation president, David Wilcox, and the minutes of the second annual general meeting of the society. There are also items on possible affiliation with the Society for Range Management, our forthcoming meeting at Broken Hill and comments on recent articles in the newsletter.

BILL BURROWS
Editor

Deadline

Copy for the next issue of the Newsletter is required by August 31, 1977.

THE AUSTRALIAN RANGELAND SOCIETY

MINUTES OF THE SECOND ANNUAL GENERAL MEETING - MAY 27, 1977 HELD AT THE SEMINAR ROOM, CSIRO, FLOREAT PARK, WESTERN AUSTRALIA

Present

Members: Messrs. D. Wilcox (President), M. Howes (Hon. Treasurer), A. Payne (Hon. Secretary), R. Perry, R. Rummery, G. Dudzinski, Messrs. A. Mitchell and C. Malcolm by proxy.

Apologies were received from Messrs. A. Mitchell and C. Malcolm.

Minutes of Previous A.G.M.

The minutes of the 1st annual general meeting of the Society held at CSIRO, Wembley on May 31, 1976 were read and accepted as a true record.

Howes/Rummery

Business Arising

The only business arising was a general query about the length of the Council's term of office. The President explained that there had been some discussion from members for and against making the term of office two years rather than one year. This matter would be raised with members

and the incoming Council at the scientific meeting to be held in Broken Hill in July, 1977

Presidents Report

It is my pleasure to present the report of the Council of the Australian Rangeland Society for the period since the last annual general meeting held in 1976. It has been a period during which the Society has consolidated the promise which it made during its fledgling year and advanced, in my view, to become a significant focus of activity for its members. It is a forum for ideas and has become more importantly a medium for interchange between all who use Australia's rangelands. If the Society is to continue to be vigorous and truly represent the views of those concerned with rangeland use, then I urge members of the Society to seize upon the opportunity which they have to canvas their ideas, convictions and beliefs with their fellow members. I am very conscious of the need for Australians to develop commonly held views on rangeland use, presenting reasonable and coherent concepts for rangeland management commensurate with its maintenance. This is the main thrust of the Society and its principal objective. The success of the Society in achieving this aim will depend upon the amount of activity generated by its membership. Your Council has been continually impressed with the support it has received from the membership whenever it has asked for it. In my view, this ready response augers well for the future of the Society. I do urge, however, future Councils to remember to involve the membership closely in the Society's activities. Our members are spread all over Australia, but can, for the most part, operate in small groups for the benefit of the Society and are willing to do so.

Council met on five occasions during the year. We were unfortunately unable to have the benefit of the advice of the Vice President, Mr. Condon, at these meetings. Council hopes that it may be possible for incoming councils to involve the vice president more closely in the affairs of the Society. However, it was recognised that this would always present a difficulty in a society such as this and the Articles provide therefore for all Council members at the one time to be located in a specified state or territory.

Publications

The first issue of the Australian Rangeland Journal was produced during the year. The Editor, Mr. Malcolm Howes, should be commended for the high standard of the publication. Council wishes also to thank the first Editorial Committee under Dr. G. Harrington, for the tremendous task they performed in preparing the various articles for the first issue. Although Council hoped to publish two issues per year, publication costs may now reduce this to one large volume.

Four issues of the Range Management Newsletter were also produced. The editor, Mr. Graeme Tupper, resigned in April 1977 and his place will be taken by Dr. Bill Burrows. The Society is considerably in debt to Mr. Tupper for his efforts in connection with the newsletter. Copy always reached the Editor well in advance of the publication date and always contained letters and articles of interest. I wish the new Editor equal success with this important part of the Society's activities.

Council agreed this year to publish the papers presented to the second and fourth US/Australian Panels on Range Science held in Adelaide and Alice Springs respectively. We undertook this task when our counterparts, the U.S. Society for Range Management, found that they were unable to

publish all five of the proceedings. With voluntary labour and under the capable direction of the Editor, we hope to complete the publication of both issues before the end of the present calendar year. Council has asked the Minister of Science for a contribution towards the cost of the publications. With stringent budgeting, we expect to clear costs so that there will be no charge to the Society. Council feels, however, that we should be able to demonstrate to our American colleagues that we have the capacity to produce these important documents.

Affiliations with other Societies

Council has opened negotiations with the Society for Range Management with a view to obtaining reciprocal arrangements between members. The President of the S.R.M., Professor T. W. Box, has advised Council that he is hopeful that the arrangements may be made concerning our respective publications but he would be interested particularly in having some interchange between our members at other levels.

Council also receives communications from learned societies and conservation groups which it has dealt with in an appropriate way.

Conference

No conference was held in the past year since the Australian Arid Zone Conference was held at Kalgoorlie in 1976. However, preparations are well in hand for the forthcoming meeting of the Society at Broken Hill. Here I must pay tribute to the local organising committee there under John Lawrie who have laboured mightily to prepare the way for a successful meeting in July next.

Branches

Council is very pleased to report that two branches of the Society have been formed, one at Adelaide and the other at Armidale, New South Wales. At Adelaide, the branch has allied itself with the Stockowners Association. At Armidale, five highly successful schools have been held under the auspices of the Society and the Department of Continuing Education at the University of New England.

Branches such as these are tangible evidence of the vigour of the Society. They are supported financially by Council. I should like to recommend to future Councils that the level of support should be continually reviewed in order that these branches will continue to prosper.

Symposia

It has been suggested that the Society should support symposia in rangeland science now that it is an established group. Council has supported the proposal in principle but has not committed itself financially at this stage.

Membership

Now stands at about 300 - many applications have come in recently mainly as a result of the activities of S.A. and N.S.W. branches. It is encouraging to note that many of the new applicants are pastoralists and graziers.

In conclusion, I wish to thank the Hon. Secretary, Alan Payne, and the Hon. Treasurer; Malcolm Howes, for the support they have given on Council.

Council owes a considerable debt to our Editor, Malcolm Howes, for his untiring efforts in the field of publications. His dedication to excellence has provided us with first rate communication media of a high professional standard.

I wish the incoming Council good fortune in the year ahead.

D. G. WILCOX
President

Treasurers Report

The Treasurer reported on the financial position of the Society and submitted a financial statement and audited balance sheet for the period 21.2.75 to 31.12.76.

Income

Annual Subscriptions	\$5,055.13
US/Aust Proceedings	582.60
Newsletter Subscriptions	112.45
Journal	45.00
Refreshment Levy (Kalgoorlie)	17.50
	<u>\$5,812.68</u>

Expenditure

Journal	2,255.18
Refund to S.R.M.	578.58
Newsletter printing	418.03
Articles of Association	95.80
Incorporation fees	780.60
Bank charges	16.10
Petty cash	105.00
Subscription Refunds	77.00
US/Aust Proc. Refund	24.00
Stationery	148.14
Postage	170.34
N. Tableland Branch Subsidy	50.00
Kalgoorlie Conference	192.37
Conference Room Hire	10.00
Honoraria	70.00
Surplus	821.54
	<u>\$5,812.68</u>

Balance Sheet as at 31/12/76

Accumulated Funds

Surplus for period ending 31/12/76	<u>\$821.54</u>
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This is represented by:

Current Assets

Cash in bank	398.22
Cash in hand	373.32
Subscription arrears	<u>120.00</u>
	<u>\$891.54</u>

Less Current Liabilities

Sundry creditors	<u>70.00</u>	
	<u>\$821.54</u>	<u>\$821.54</u>

Auditor's Report

I have examined the books and financial records of the Society and in my opinion the Balance Sheet, which covers the period 21/2/75 to 31/12/76, reflects a true and fair view of the financial position of the Society.

(signed)
J. R. WATTS (26/5/77)

It was moved and carried that the Treasurers report be received and accepted.

Howes/Dudzinski

The Treasurer presented a list for ratification of all drawings made from the Society's account for the period 21.2.75 to 31.12.76.

It was moved and passed that the list of drawings as presented and included in the minutes be ratified.

Perry/Rummery

Membership Report

The Treasurer submitted a membership report as at 31.12.76

Total members	175
Financial	167
Unfinancial	8

The Treasurer indicated that there had been an influx of applications for membership in the last few months and that, currently, membership stood at 293.

It was moved and carried that the membership report as presented be received and accepted.

Howes/Perry

Mr. Perry suggested that the Society should forward a publicity article to the U.S. Rangeman's Journal outlining aims, membership, activities,

etc. of the Australian Rangeland Society. The President indicated that a similar suggestion had been received from the U.S. Society for Range management and that a short article would be provided.

The Treasurer moved that, as some time was required to organise the Society's Publication Account from the Trading Account, and because some accounts were outstanding, the Trading Account of the Society should be transferred to the Bank of New South Wales, Deniliquin, New South Wales, on or before July 15. If the incoming Council required funds before July 15, an advance would be forwarded. This motion was accepted and carried.

Howes/Perry

Elections

The President advised that the following nominations for Council had been received:

- Vice President - W. H. Burrows, Charleville Pastoral Laboratories, Charleville, Queensland
- Hon. Secretary - G. Cunningham, Soil Conservation Service, Condobolin, New South Wales.
- Hon. Treasurer - W. E. Mulham, CSIRO, Deniliquin, New South Wales.

There being no other nominees, the above officers were declared elected. Council now consists of the above officers and President R. W. Condon, Past President, D. G. Wilcox and Editor (ex officio) K. M. W. Howes.

General Business

No written notices of general business had been received.

There being no further business the meeting closed at 6.30 p.m.

AFFILIATE MEMBERSHIP WITH SOCIETY FOR RANGE MANAGEMENT

Members will be interested in extracts of letters from David Wilcox and the reply received from Thad Box.

To the President, SRM: (April 5, 1977)

"A number of our members have written to me concerning the prospect of affiliation with your Society. In the main, these are members of the Society for Range Management and the Australian Rangeland Society.

Being resident in Australia, these people, are of course, generally concerned with the practice of rangeland science and art in this country. I understand that their membership of the Society for Range Management was occasioned by a need to belong to a corporate body with objectives akin to their chosen vocation.

Since the formation of our Society in 1975, the need to continue to belong to an overseas body is not so compelling. However, resignation from the Society for Range Management would mean that these people would lose the personal subscription to the Journal of Range Management which they currently possess.

The purpose of this letter then is to ask you whether you and your Board would consider the setting up of a reciprocal arrangement, whereby the Journal of each Society would be available to members of the other, at a cost approximately equivalent to that paid by membership generally.

For the Australian Society, we could make the Australian Rangeland Journal available at A\$6.00 per Journal issue.

I realise that we stand to gain much more from this proposal than do you, since we have only ten or so U.S. members, whereas you surely have many more Australians in your Society. Nevertheless, in order to reply to our members, I would be grateful for your advice on this matter.

In the future, of course, more tangible and overt expressions of reciprocal arrangement between our Societies will arise.

Yours sincerely,

(D. G. WILCOX)
PRESIDENT
THE AUSTRALIAN RANGELAND SOCIETY"

Thad Box replies: (May 2, 1977

"As you know, I am a member of both the Society for Range Management and the Australian Rangeland Society. In my inaugural speech as president of SRM I listed one of my goals to support closer working relationships between our two societies. At the present time there is not a large number of joint members. You indicate that the Australian Rangeland Society has only ten members in the U.S. We have only 18 members in Australia. However, I think that the potential for joint membership is much greater.

At the present time, we do not have an affiliate member category. We do sell subscriptions to the Journal as opposed to membership; however, we charge \$22 per year for the subscription, which is the same as a membership.

We will bring the item of affiliate membership up at our Board meeting in July and try to have some firm recommendations for you shortly thereafter.

There are some things that we could do immediately. For instance, I would welcome a statement or short article from you for publication in the Rangeman's Journal. It would be helpful to give our entire membership some idea about what the Australian Rangeland Society is and what affiliate or full membership in your organisation could do for us. We would welcome letters, articles, etc., from others in your membership.

Sincerely,

(THADIS W. BOX)
PRESIDENT
SOCIETY FOR MANGEMENT"

AUSTRALIAN RANGELAND SOCIETY GENERAL MEETING, BROKEN HILL, JULY 8, 1977

John Lawrie advises:

1. Meeting Arrangements

Thursday July 7

Field Day - Fowlers Gap Arid Zone Research Station, includes reports on rabbit control, sheep breeding management, marsupial and emu behaviour, ecology of seed collecting ants, rainfall-runoff relationships and solar energy housing.

Starts - 10.00 a.m. CST

Transport - Departs 8.15 a.m. CST opposite the Crystal Motel near the Railway Station in Crystal Street.

Lunch - A substantial lunch, beer and soft drinks supplied at \$2.50/head.

Friday July 8

General Meeting - at W.S. and L.B. Robinson College, Wentworth Road.

Starts - 8.30 a.m.

Transport - Departs 8.15 a.m. opposite Crystal Motel.

Lunch - 12 noon to 1.00 p.m. A smorgasbord lunch at the College, at a cost of \$3.60/head, including morning and afternoon teas.

Dinner - A buffet dinner has been organised at the R.S.L. Kododa Room (next to Crystal Motel) at \$8.00/head including beer and wines. Starts 7.30 p.m.

Saturday July 9

Mine Tour - Surface tour of Zinc Corporation Mine, including inspection of mine dump stabilisation techniques, nursery, plantation, and brief description of mining operations.

Starts - 9.00 a.m. from Twin Lakes.

Transport - Departs 8.45 a.m. opposite Crystal Motel.

Lunch - 12.30 p.m. - 2.00 p.m. Find your own!

Afternoon Tour - to Dean Graetz's CSIRO grazing trial ("Graetz Rolling Downs") on the Mundi Mundi plain.

Transport - Departs 2.00 p.m. opposite Crystal Motel.

Dinner - 6.00 p.m. A B-B-Q tea at the Silverton Hotel has been organised to wind up (or down?) the Meeting Cost \$2.00/head, buy your own drinks.

2. Transport on Field Trips

To keep costs down private or employer vehicles should be used on the field trips wherever possible (Be prepared - but those without such transport will be catered for).

3. Visual Displays

There will be space available at the meeting venue for visual displays, e.g. photographs, new equipment, any other items of interest to members. Bring such gear with you if you wish to avail yourself of the opportunity to tout your wares.

RECORDING OF POINT QUADRAT DATA

From: Greg Robinson, Agricultural Research Station, Glen Innes, N.S.W.
2370

Alex Williams' comment on the recording of point quadrat data RMN 77/1 serves to highlight the common dilemma of how to strike a balance between the technical and practical aspects of a problem. The important point is that lack of technical exactitude or non-comparability do not necessarily result in a bad estimate.

While I have to agree with Williams that the data from each method are not strictly comparable the calculated co-efficients of variation for each system were similar. The results of the exercise were sufficient to satisfy me that data collected during five years of completed work provided an adequate measure of pasture changes encountered. Williams was obviously concerned that results only related to a single pasture situation, in an attempt to reduce his concern I would like to provide the following additional information concerning the data.

Pastures ranged from lightly grazed tall grass pastures with and without white clover to closely grazed pastures with limited clover. Further particulars of pastures and treatments can be gauged by reference to Robinson and Lazenby (1976). Details of *Sporobolus elongatus* and white clover frequency estimates for two methods for each pasture type are shown in the accompanying table, and I believe demonstrate a close similarity between methods.

Percentage frequency 20/2/75	Low Stocking Rate			High Stocking Rate		
	Superphosphate kg ha ⁻¹			Superphosphate kg ha ⁻¹		
	<u>Nil</u>	<u>250</u>	<u>500</u>	<u>Nil</u>	<u>250</u>	<u>500</u>
White clover (a)	0	16.4	3.6	0	0.4	0
White clover (b)	0	17.6	3.4	0	0.8	0
<i>Sporobolus</i> (a)	27.2	3.1	34.4	25.0	20.8	39.6
<i>Sporobolus</i> (b)	22.1	2.1	27.1	32.5	15.3	35.7

(a) Percentage frequency recording first touch.

(b) Percentage frequency recording ground strikes.

Note in both cases bare ground recordings have been excluded.

References:

Robinson and Lazenby (1976) - Effect of superphosphate, white clover and stocking rate on the productivity of natural pastures, Northern Tablelands N.S.W. *Aust. J. Exp. Ag. Anim. Husb.* 16 209-217.

On the same subject: Alex Williams corrects his formula quoted for the variance of a binomial distribution in RMN 77/1 as:

$$\sigma_A = npq$$

to now read:

$$\sigma_A^2 = npq$$

MULTICAMP GRAZING SYSTEMS - SECT OR SCIENCE

From: Ken Hodgkinson, CSIRO Division of Land Resources Management,
Private Bag, P.O. Deniliquin, N.S.W. 2710

Like Vic Squires (see last Newsletter) I was impressed by the underlying philosophy and results of "Multicamp Grazing Systems" seen when I visited South Africa at the end of 1975. However, the range of beliefs on what the paddock (camp) number, duration of grazing etc. should be, was considerable, as was the range in climatic conditions in which the systems were supposed to work. I left S.A. convinced that where tried grazing systems have improved range condition (see articles by Mr. and Mrs. Howell in Proc. Grassld. Soc. Sth. Afr., (1976), the cost of labour is very low, and that no experiments have been conducted conclusively proving animal production is higher under rotational compared with continuous grazing. I visited a large grazing trial at Glen Agricultural College (near Bloemfontein) which compared animal production under different grazing systems, but there was no continuously grazed control.

In relation to any future experimental work on grazing systems that may be contemplated here in Australia's rangelands I would like to make the following points:

1. Grazing systems cost more to set up and operate than continuous grazing. Animal production must be raised to pay for these additional costs.
2. It is unlikely that animal productivity would be significantly raised by a grazing system, when range condition is average or above. Grazing systems deprive animals of full access to annual species while they are green and highly nutritious.
3. Grazing systems may accelerate the restoration of degraded rangelands and hence raise animal productivity, especially where the dominant species are unpalatable grasses, e.g. *Aristida* spp.
4. A rationale for a grazing system should be developed before an expensive trial is conducted. This must be based on the known responses of the plant species to grazing pressure in relation to their phenological development. There is a need to establish when grass species, both palatable and unpalatable, are adversely affected by grazing. I suspect that grazing does little damage to perennial grasses during drought ("stock die before the plants") and that they are most sensitive to heavy grazing when they are growing rapidly. The length of vulnerable periods may be very short as grazing pressure on individual grasses rapidly declines as biomass builds up.
5. After a rationale is developed, there is a need to show experimentally that palatable grasses do replace unpalatable ones when a range site is managed in a particular way. Only when this is proven should a trial to measure animal productivity be contemplated.

I do not wish to pour cold water on Vic Squires' suggestion for research on grazing systems in Australia but I stress the need for caution. In my opinion, there is a chance (not high though) that a grazing system may substantially raise annual production in some rangeland area in Australia. The increase must be shown to be substantial to convince significant numbers of graziers (and lenders of money) that it is worth adopting.