The Grassland Society of Southern Africa's First International Conference

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The Grassland Society of Southern Africa (GSSA) hosted its first international conference in Pretoria, May 6–10. Nearly 350 delegates representing 13 countries participated in sessions focusing on "Meeting Rangeland Challenges in Southern Africa in the 1990s," the conference theme. The purpose of the gathering was to tap a broad spectrum of international expertise and experience to help formulate scientifically and socially sound range resource management programs in the region and particularly in the "New South Africa" in this time of fundamental political and economic change.

Eighty-nine papers and 69 poster presentations addressed the topics of resource management and livestock production, communal rangeland management, range condition and monitoring, technology transfer, and game production and management. Group discussions were convened to identify strategies for the commercial sector, the communal areas, and the scientific community. A high level of interest and participation in sessions on communal rangeland management indicated growing awareness, concern, and commitment regarding the key range and livestock management issues resulting from South Africa's shift away from apartheid toward a more equitable society.

As would be expected the bulk of the papers concerned resource management and livestock production. Many of the previous studies in southern Africa have been descriptive in nature and some of the papers presented here reported this traditional aspect of Range Research. There were, however, many papers reporting research on dynamics and processes with the emphasis on developing a predictive capability as well as population studies. In particular workers studying Savanna systems in relation to both domestic livestock and wildlife are pursuing very detailed projects in these complex vegetation types.

In a critical assessment of grazing management recommendations for southern Africa, the authors concluded that much of the current dogma is little supported by sound research. Whilst this is unsatisfactory it is not really that surprising given that the researchers are faced with more than 24,000 species of rangeland plants. Not all of these are used by animals but a considerable portion of them are affected by rangeland management practices. This makes the application of controlled, statistically balanced grazing research very difficult and in many cases adaptive management is the only option. In response to this, many of the researchers in southern Africa are opting for simulation modelling and expert systems as research and management tools.

Another aspect covered during the Congress was that of the National Grazing Strategy. This government-sponsored programme is aimed at reversing the trend of range degradation in South Africa. Whilst the Strategy has met with mixed fortunes, it has resulted in a modification of state aid to ranchers and an increase in the number of positions for range practitioners in South Africa. Despite this the profession has few posts in relation to Agronomy or Animal Science. In a region where more than 85% of the livestock industry is based on range it seems that there are fewer than 100 professional range scientist posts in the Department of Agriculture, and only two University departments provide range science education for the southern African region.

Papers and discussion concerning communal range management addressed a number of aspects. Theoretical issues included the effects of economic factors on stocking rates and land tenure regimes, the policy implications of community perceptions regarding range and animal resources for management-improvement programs, the projected evolution of communal management systems in the region as South Africa's political climate improves, and the importance of agro-pastoral systems research. More practical topics included the experience gained in implementing various communal management schemes in Zimbabwe, Lesotho and the nominally independent homelands in South Africa, the importance of community participation in communal management schemes and recommendations for achieving it, and the potential of mixed livestock/wildlife production on communal rangelands.

A number of strategic recommendations for communal range management emerged from the synthesis of these theoretical and practical topics. First, the extent and importance of this type of management will in all likelihood increase as a result of land reform in South Africa and rapid human population growth throughout the region. This scenario demands that scientists and resource managers devote much more attention to developing appropriate programs to foster improved communal management. Second, management in communal systems must be based primarily on the objectives of the resource-using population; within that framework, the ecological, social and economic considerations of society at large can be addressed. Third, vital issues such as land tenure arrangements, types and scales of production, and institutional formats for local input and participation must be

addressed on a case-by-case basis.

The GSSA Executive Committee agreed to aggressively pursue these issues further, perhaps convening workshops on communal management and including this topic in future annual conferences.

At least 17 papers were presented discussing the general theme of rangeland condition and monitoring. Even though there is keen contemporary interest in rangeland monitoring in southern Africa, Mark Hardy and his co-authors pointed out that "despite massive research and extension inputs since the 1920s, no National or Regional monitoring programmes have been developed in South Africa." Efforts to develop a truly useful approach to rangeland monitoring run from the description of the development of a simplified veld condition assessment technique based on key ecological and key forage species to computer-aided modelling approaches. It was concluded that monitoring must be based on the reaching of rangeland management objectives and be used to evaluate the successes or failures of these management strategies. Rangeland monitoring was carefully considered at this meeting and leadership is being provided that will be helpful to those interested in monitoring the world's rangelands.

In the session on technology transfer, the keynote presentation suggested that farmers sharing a given set of circumstances adopt and internalize new management practices in the same logically ordered sequence, and that effective extension programs must be based on comprehensive understanding of this sequence and be scheduled accordingly. Further, it proposed that the "late adopters" of induced management practices in arid and semiarid livestock production systems tend to be more in tune with their production environment and thus more able to sustain production in the long term.

Most subsequent papers on this topic dealt with the constraints encountered in transferring range management technology in various contexts in southern Africa and elsewhere, concluding that such efforts generally have not been very successful. The constraints identified included: inadequate understanding on the part of extension planners and agents of the complexity of smallholder agricultural enterprises, the complex interplay between economic and environmental incentives, and the importance of psychological factors in the adoption process; differing perceptions of adequate range condition and of the appropriateness of various means of achieving it between resource-management professionals and producers; heterogeneity among producers in a given area; a low correlation between producers' knowledge and use of recommended management practices and the condition of their rangelands; and the lack of specialist expertise (e.g., knowledge of game farming among generalist extension agents).

Fewer papers cited success in technology transfer. Progress had been made in these cases by drawing communities into more active participation in designing and conducting extension activities, by broadening the focus of extension programs to include a range of public and private institutions as well as children, and by designing innovative extension programs to complement extension agent/producer contact (e.g., youth groups, promotional campaigns, tours and field days).

Considerable interest was shown in the papers on game production and management. Game production has only recently (last five years) been recognized as a *bona fide* agricultural industry and many land owners in arid or semiarid environments are reducing their domestic herds in favour of lucrative safari operations. As usual, agricultural research has not kept abreast of these rapid changes and most of the papers were from specialists representing established conservation agencies. A notable trend amongst those agencies is a shift in concept from preservation or limited access conservation to one of community involvement. Some case studies were presented suggesting that communal ownership of game is a viable option in the array of future game conservation strategies in a changing political climate in southern Africa.

A central theme amongst all the papers on game production was economic viability. Researchers from Zimbabwe provided clear evidence of financial superiority under commercial systems, particularly if the "Big Five" are available. Under communal systems particularly systems in Natsi and Bophuthatswana the economic incentive was also the main factor contributing to the success of community based conservation programmes. If this can be further developed, the maintenance of habitats and a reduction of extinctions of endangered species may be possible.

At a ceremonial dinner on 8 May, the GSSA awarded Drs. Harold F. Heady and Ray W. Brougham honorary lifetime memberships in the society for their substantial and sustained professional contributions. They join a group of fewer than 20 recipients, over 26 years, of the GSSA's highest honour. Prestige awards were granted to Denis L. Barnes and Dr. Amie J. Aucamp for their notable efforts on the southern African research scene. Incoming GSSA president Dr. D. Grossman was formally introduced by the incumbent, Dr. J.E. Danckwerts. The President elect for 1992/1993 is Dr. Maureen Wolfson.

The U.S. was well represented at the conference, with Dr. E. Anderson, Dr. N.E. Artz, Mr. H.C. de Garmo, Mr. and Mrs. R.D. Harrison, Mr. D.R. Phillippi, Dr. J.S. Queiroz, Dr. J.L. Schuster, Dr. and Mrs. J.M. Skovlin, Dr. P.T. Tueller, and Mr. L.W. Weaver in attendance.

Pursuing the objectives of the SRM International Liaison Program, International Affairs Committee Member/Lesotho SRM Liaison Dr. N.E. Artz, South Africa SRM Liaison, Dr. P.T. Tueller and South Africa Host-country Liaison P.J.K. Zacharias met with GSSA President elect Dr. D. Grossman to broach the subject of collaboration between the two oldest professional range societies in the world. The GSSA Executive Committee heartily endorsed the idea and requested that these individuals proceed to

lay the groundwork for formal interchange between the two societies. Substantial, mutual benefits are anticipated as this relationship evolves.

The clear consensus among delegates was that the conference was well organized, intellectually stimulating, productive, and enjoyable. The Programme Handbook and Abstracts contains extended abstracts of the papers presented. The proceedings of group discussions and various other information generated will appear in GSSA bulletins, and a number of the papers presented will appear in the GSSA Journal, the *Journal of the Grassland Society of Southern Africa.* These materials will be available from the Publications Editor, Pete Zacharias, Grassland Society, Natal University, P.O. Box 375, Pietermaritzburg 3200, Republic of South Africa.

The State of Range Management on Public Lands

Charles D. Bonham

I make no pretentions that the following is a complete analysis of the current state of range management on public lands. I am relying on my observations over the past 35 years.

I have witnessed the decline of range management as a viable discipline. In short, the range management profession began to reach its peak in the early 1960s. During this period public and political interest in allowing livestock grazing on public lands subsided. Soon, an indifference toward livestock grazing was replaced by demands for removing livestock from public lands.

Funding decreased at all levels of government including governmental agencies engaged in the oversight of public lands. The reduced funding provided fewer opportunities for employment as a range professional. The impact of declining support was not realized until the mid-1970s when universities offering range degrees noted a decline in enrollment. Potential students failed to see future employment opportunities. In turn, we in education failed to capitalize on the public's interest in environment and ecology. We gave only lip-service to the role of ecological concepts as applied to range ecosystems. Public interest in ecology, then, continued to influence opinion concerning public lands used for livestock grazing. Many people emphasized only grazing's negative impacts on these lands.

Range professionals regularly talk and complain to each other about the threat of loss of public lands to livestock grazing. Obviously, we should have been selling grazing's merits such as stability, diversity, and other ecological concepts that have been known for almost a century. Ranchers' and other range managers' knowledge of "sustained yield" is older than most grandfathers of those talking about the concept today. Yet, we have failed to inform the public that these concepts have always been applied when the land is properly managed by range professionals. Instead, we have tried to defend the use of public lands by attacking vocal opponents rather than the problem. The problem is not that people want to eliminate grazing. The problem is that many people are uninformed about the effects of grazing on these lands.

We do not need to learn more facts about grazing and its ecological benefits. We need for information, already learned, to be taught. We should strive to get the truth out to the public, especially to decision-makers, or public lands will soon not be available for livestock grazing. We will not accomplish our goal by complaining to local or regional land management agencies or to one another.

Those of us employed as academics knew better, yet did little to ensure that ecological concepts were rightly incorporated into ecology courses. I include courses taught in range departments as well as those taught in traditional biology departments. We defaulted when we allowed the teaching of "ecosystem ecology" as if only "natural ecosystems" exist or should exist. We should have insisted that most, if not all, ecosystems are "domesticated systems" and will remain so as long as man is part of the system. We have always been engaged in the management of domesticated ecosystems and we still should be responsible for obtaining optimum production from each of them. The appearance of livestock in an ecosystem did not cause the system to become domesticated; man is a "domesticator" of all that can be used for his benefit.

The state of range management did not arrive at its fallen condition without a concerted effort by professional range people, both in land agencies and universities. Land managers did not keep current on new research results after receiving degrees. They were neither encouraged nor motivated by their respective agencies to implement new ideas. Therefore, even if these range pro-

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