

Coming of Age in Range Management

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WE HAVE ALL BEEN SUBJECTED TO JOKES about range management being the proper care of stoves. Comments heard at the last few meetings of the Society for Range Management lead us to believe that many in the profession are almost as unsure about what our field is as an Easterner who asks naive questions. This comes at a time when the term "range management" is being used much more widely than before, both in this country and overseas, and when more demands than ever are being made on rangelands.

Rangelands are no longer viewed just as areas for red meat or livestock production. They have come to be accepted as multiple use lands that produce wildlife, recreation, water, wood products, minerals, and energy. In addition, since they are usually lightly populated, they are prime targets for waste disposal and for defense installations. We believe that not only has the concept of range and rangeland changed but that the range profession itself is in a dynamic situation responding to changes on the rangeland.

The terms "range" and "rangeland" are apparently American in origin. Range people, however, have seldom defined the terms. Most writers before the turn of the century described range as open grazing land. In 1936, U.S. Senate Document 199, 74th Congress, described range as follows:

The western range is largely open and unfenced, with control of stock by herding; when fenced, relatively large units are enclosed. It supports with few exceptions only native grasses and other forage plants, is never fertilized or cultivated, and can in the main be restored and maintained only through control of grazing. It consists almost exclusively of lands which, because of their relatively meagre precipitation or otherwise climatic conditions, or rough topography or lack of water for irrigation, cannot successfully be used for any other form of agriculture. In contrast, the improved ranges of the East and Middle West receive an abundant precipitation, are ordinarily fenced, utilize introduced forage species, follow cultivation for other crops, and are often fertilized to increase productivity, and are renewed following deterioration (U.S. Senate 1936).

The standard textbooks in range management have likewise been reluctant to define range. Sampson (1923) described rangeland in much the same way as the Senate Document quoted earlier. Stoddart and Smith (1943) followed a similar definition of range as being open areas grazed by livestock. In later editions they have broadened the concept some but still describe range rather than define it. Marion Clawson (1950) was content simply to define range as the land upon which animals graze. A widely accepted and quoted description of range was given by the late Francis

Colbert when he was secretary of the Society for Range Management. He said:

I want to emphasize in the strongest possible way that range—or rangeland or range ecosystems—is a kind of land and not a land use.

I must admit the word "range" has always been associated with livestock grazing (a specific use) on uncultivated lands and that this connotation is still prevalent especially among the general public. . . . Nevertheless, rangelands comprise at least 40 percent of the total land area not only of this country but the entire world, so I believe it is time that we made a serious effort to recognize range for what it is: a kind of land—a major land resource—from which there is, and can be obtained a wide variety of products and values, of goods and services (Colbert 1977).

Although Colbert's description of range as a kind of land is widely accepted in the profession of range management, it is still common to hear people, some in official capacities in government agencies, refer to range as a use. They often lump it with other uses such as wildlife, recreation, wilderness, etc.

THE DEFINITION OF RANGE MANAGEMENT HAS ALSO changed over the years. The definitions given in range management texts will give an idea of the changing concept of range management. Stoddart and Smith (1943) in their first edition of *Range Management* defined range management as "the science and art of obtaining maximum livestock production from rangeland consistent with conservation of land resources." They used the same definition in their second edition (1955). Sampson in his textbook (1952) defined range management as "the science and art of procuring maximum sustained use of the forage crop without jeopardy to other resources or the uses of the land." Thus all students using either standard textbook for range management were taught that range management was an art and science of maximizing either livestock products or forage.

The third edition of Stoddart and Smith's textbook published in 1975 defines range management as "the science and art of optimizing the returns from rangelands in those combinations most desired by and suitable to society through the manipulation of range ecosystems" (Stoddart, Smith and Box 1975).

By examining the definitions or descriptions used for range and range management during the last half century, several changes become apparent. First, range has evolved from a use to a type of land. The management of that land has been broadened to include many goods and services other than forage or livestock. The concept of optimizing a mixture of goods and services as opposed to maximizing a single

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output has been introduced and apparently accepted in the range profession. The concept of considering range a type of land, such as forest or cultivated land, implies that many uses will be made and that the art and science of range management must be integrative rather than single-use oriented.

ANOTHER IMPORTANT ASPECT OF THE CHANGE in range management is the body of knowledge and well-established terminology that has built up over the years. For instance, Sampson, Stoddart and Smith, and other early textbook writers quoted mostly articles from popular magazines or senior student theses as their source of references. More modern literature quotes scientific research from a number of journals throughout the world, and the *Journal of Range Management* has become the standard for publication of rangeland literature.

The field of range management has greatly increased its geographic scope. Originating in western North America, the American Society for Range Management was established in 1948. Its concepts were accepted worldwide. As its influence changed from American to global, it changed its name in 1970 to The Society for Range Management. It is now truly an international society, with members in over 35 countries throughout the world.

Not only has the Society for Range Management been successful in the North American continent but similar groups overseas have also formed. In the past there have been short-lived sections of the Society for Range Management in East Africa and Iran. One of the best evidences of success is that sister societies are being formed. The Australian Rangeland Society publishes its own journal and was the host for the second International Rangeland Congress in May of 1984. An informal group in North Africa is now exchanging ideas and may eventually lead to a French-speaking North African rangeland society.

The concept of rangelands and range management has been accepted widely and equivalent terms developed for other languages. Up until a few years ago people working on native rangelands were often called pasture agronomists, plant ecologists, or some other term. Now many positions are advertised asking for someone trained in range management. The concept of the ecological management of arid and semiarid lands has become well established in such agencies as Food and Agricultural Organization of the United Nations, German Technical Aid, World Bank, U.S. Agency for International Development, and other donor organizations.

WHILE OUTSIDE GROUPS HAVE CHANGED their ideas and concepts about range management itself, the concepts and philosophy of the profession have been changing from within. Range management was originally a biological science, calling strongly on plant ecology and animal husbandry. The word "management" in the title implied economic use, so economic concepts were early added to the bag of tools of the professional range manager. More recently sociology and political science and other social sciences have become increasingly important. Almost every range person working in the United States will find that part of his or her work will be associated with the National Envi-

ronmental Policy Act, the National Forest Management Act, the Federal Land Management Policy Act, or some other legislation. A knowledge of markets, taxation, public policy, and human behavior is necessary to the job of range management.

In most overseas posts, knowledge of pastoral people, cultural values, sociology, etc., may be as important as biological expertise. The scientific approach has also changed. Research work has moved from descriptive to experimental

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and become much more quantitative. The range manager of today is by necessity much more thoroughly trained in the basic biological and physical sciences as well as economics, sociology, political science, and other social sciences.

THE KINDS OF PEOPLE WHO CALL THEMSELVES range managers have also changed through the years. Originally the community of range managers was made up of biologists, mostly plant ecologists, animal husbandry people, foresters, soil scientists, and other recognized professions working with rangelands. From the beginning the Society for Range Management has accepted all who had an interest in range management, regardless of their training. Today, the Society is still a mixture of people with varied training. Ranchers and environmentalists, social scientists and biological scientists find themselves mingling at annual meetings. The cowboy image signified by the range boss is not as evident as a few years ago.

Women are having a significant impact on the profession and the way land is managed. A few years ago women at an annual meeting were primarily part of the wives' groups and some discussion was made of forming a range management auxiliary. Today many of the people giving papers on programs are women. A quick count of the papers in the Society's publications indicates that more women are publishing articles than ever before. The leadership ability of women is apparent. A number of student chapters have had women presidents, women are serving on major committees, and at least two state Sections have awarded women the Rangeman of the Year honor. Out of this mixture of people trained in many different fields with interests ranging all the way from protection to productive use has come a demand for a higher degree of professionalism.

IT IS INTERESTING THAT THE DEMAND for professionalism many times comes from people who themselves would not meet a test of a professional range manager. It appears that those people on the fringes of the Society recognize the need for professional competence greater than those in the hard core range field.

With the demand for professionalism we cannot escape the question, "Is range management truly a profession?" There are a number of standard tests for a profession. Some of the major ones are (1) the group is organized primarily for service to others; (2) there is an established body of knowledge; (3) the group has a self-enforced code of ethics; (4) the group has a self-enforced code of behavior; (5) the group is self-policing, self-criticising. In addition to this, it is implied that a profession will have some sort of minimum standards and that the loyalty of the individual will be to the profession rather than to the employer.

The Society for Range Management or the profession of range management exists primarily to serve others and has an established body of knowledge. The Society has also published a code of ethics and a code of behavior. It is our contention that we are moving toward the self-enforcement required to truly qualify as a profession. The Society now certifies consultants. One does not receive a stamp of approval from the Society until he or she demonstrates that he or she meets rigorous standards endorsed by the Society as a whole.

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The Society also accredits curricula in range management at universities. The Society will visit schools that do not meet accreditation requirements and suggest changes that could lead to accreditation.

IT IS NOT AS EVIDENT that the Society has become proficient in enforcing its code of ethics and code of behavior. Although these documents have been published, we know of no instance where a Society member has been reprimanded or disenfranchised for failure to meet ethical or behavioral standards.

We are not suggesting that all members of the Society for Range Management meet a specific requirement for training or background. It would be desirable if all could meet the ethical and behavioral standards agreed upon by the Society. We believe that the Society for Range Management needs a broad mixture of different kinds of people. The virtues of rangelands are called to the attention of the general public by evangelists who preach range management. There are others who are, and should be, analysts, who study specific parts of the range system and provide knowledge for others to use. There are advocates who will take a particular cause and carry it through the political system. There are managers who attempt to apply what has been discovered. All of these types are compatible with true professionalism, provided they conform to a specific behavioral code.

We believe that the profession of range management, less than a hundred years old, has indeed had a significant and beneficial effect on the rangelands of the world. A brief review of the conditions of American rangelands under-

scores the impact made by the range profession. When the first European explorers came into the ranges of North America, they were amazed at their productivity. Literally thousands of head of buffalo, deer, and elk were seen. Grass was described in such glowing terms as "seas of grass," "grass belly-deep to a horse," or "an unlimited supply of forage for thousands of head of cattle." The first settlers, with their experience in more humid areas, accepted the apparent condition of the ranges as constant and expected them to support unlimited numbers of livestock. The truth of the matter is that, in most cases, ranges were grossly overstocked within two to three decades after permanent Euro-pean settlement.

THE DETERIORATED CONDITION of the ranges was recorded by many people. Agronomist Jared G. Smith reported the following about the western ranges in 1895:

There has been much written in the last ten years about the deterioration of the ranges. Cattlemen say that grasses are not what they used to be, that the perennial species are disappearing, and that their place is being taken by less nutritious annuals. This is true to a very marked degree in many sections of the country (Smith 1895).

Not only were the ranges in the Great Plains deteriorating, but others lost condition shortly after the area was settled. The first permanent settlers came to Utah in 1847. The following was taken from the *Desert News* of September 25, 1879:

The stock raisers here are all preparing to drive their stock to where there is something to eat. This country, which was once one of the best ranges for stock in the Territory, is now among the poorest; the myriads of sheep that have been herded here for the past few years have almost entirely destroyed our range.

Similar comments are available for almost every part of the country, during this period. Out of these over-grazed, deteriorated conditions came a concern for the land itself. The seeds for the profession of range management were sown. Individual courses in range management were taught at western universities in the period shortly before World War I. Some control of grazing was practiced on National Forests, private land, and Indian reservations in the 1920's, but it was not until after passage of the Taylor Grazing Act in 1934 that all of the public lands were subject to some sort of grazing control.

Professional range managers in the twenties and thirties made a difference. In 1948 the Society for Range Management was formed and a group of people dedicated to the improvement of a particular type of land became solidified. Today we maintain that the ranges of North America are in the best condition that they have been in the century. Although it is difficult to prove such a statement, we think there is good circumstantial evidence. An investigation of the crude and imperfect range condition figures in the Senate Document 199 in 1936, the Public Land Law Review report in 1972, and the current Forest and Rangeland Renewable Resources Planning Act and Resources Conservation Act reports show a slow but steady increase in range condition. In addition, accounts of oldtimers who have lived and watched the ranges over the past three-quarters of a century report that the ranges are better now. There are many accounts in the West, for instance, of being able to

count the bands of sheep on the mountains from dust clouds. Such conditions are no longer acceptable. Comparison of photographs taken near the turn of the century with recent ones shows an improvement in the condition of the western range. Although none of these indicators can be quantified,

This record of range management has not gone unnoticed. The philosophy and concepts of range management are being accepted worldwide. In almost every continent from China to Australia and Africa, the idea or concept of managing land on an ecological rather than an agronomic basis is now accepted. We believe that range management is beginning to work.

it is our professional opinion that most American ranges deteriorated within two to three decades after first settlement, began a slow but steady improvement sometime after the turn of the century, and are now in the best condition that they have been in the 20th century.

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IF INDEED RANGE MANAGEMENT is beginning to work, what does the future hold? In the future there will be more

knowledge of processes within the system. There will be more available management data. There will be better tools as computers and other electronic devices are adapted to managing the land. There will be more and better-trained range people. But at the same time, there will be more demands put on the land. People will want more meat, more recreation, more water, more of all goods and services. There will also be more accountability upon the people who manage the ranges. Decisions will have to be made on data. To quote Pogo, we believe that we are faced with "an almost insurmountable opportunity." Much more will be demanded of the range managers of tomorrow. We are confident that they will meet the challenge.

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