The Society for Range Management: Bridging gaps and setting directions

By Karen L. Launchbaugh

On the Ground

• The Society for Range Management and the profession of rangeland ecology were founded about 80 years ago to bring scientific information to the management of rangelands. Sustaining a strong connection between science and management set the foundation for the rangeland profession, though this connection has been challenging to sustain.

• An era of collaborative research and conservation has fueled projects that include a diversity of individuals and organizations and confirm the importance of information from both experimentation and experience.

• Successfully addressing contemporary challenges to rangelands will depend on old-fashioned actions like conversation, a commitment to rangelands communities and landscapes, and engaging a wide variety of backgrounds and experiences to find solutions.

Keywords: collaborative conservation, rangeland research, SRM history, socio-ecological systems.

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Rangeland translation and transformation

As rangeland scientists and managers, we need strong abilities of translation and transformation to successfully navigate familiar as well as novel disturbances in our ever-changing world. Translating lessons learned from the past is a necessity to hone and transform our habits into effective strategies for today’s challenges and foster ideas to establish a solid foundation for future actions.

The Society for Range Management (SRM), established over 80 years ago, has a mission of providing leadership for the stewardship of rangelands based on sound ecological principles and a vision of well-trained and highly motivated professionals and rangeland users working for productive and sustainable rangeland ecosystems. SRM is dedicated to understanding and managing rangelands for the sustainable provision of multiple ecosystem services. What have we been through in our journey? Where are we today? Where does the future lie? To trace this journey and set a path for the future we will need to revisit some dark caverns and rather low places to ascertain how SRM has grown and matured. I will argue that SRM was born from a need to bring people together to exchange ideas and advance our understanding of rangelands. In this current era of fast-paced, electronic communications and social media outlets, I contend we need to keep a focus on authentic ways to exchange ideas and information across the art and science of our profession. As SRM faces new frontiers, it is important to maintain the strong roots anchored in the soil that got us here and build new systems to embrace collaborative opportunities that emerge with multi- and transdisciplinary teams of practitioners and researchers to solve problems.

The journey began

SRM was sparked into existence by the needs of three groups of people searching for answers on how to measure and manage the vast open landscapes of Western North America and other continents. First, ranchers were looking for ways to improve their livestock operations while sustaining and improving the rangelands on which they grazed. A second group, the grassland ecologists, was a collection of educated professionals without a strong academic home; they embraced a unique combination of soil science, plant ecology, and animal husbandry, rather than individual components of ecosystems. The third group was new professional land managers, called
“range men,” in the US Forest Service and the new Bureau of Land Management. Dr. Allen Beetle noted that no one person or specific agency or location was responsible for the birth of the range management discipline. Rather, a widespread and gradual, but steady, mention of rangelands eventually commenced into a discussion among 66 range professionals who met in Moscow, Idaho in 1946 for what was called the Interagency Range Management Conference. There was lively discussion on whether a national professional society focused on rangeland management should be formed. A debate ensued about whether a new society was needed or if this should just be a group inside of another organization. A committee was formed, and a survey was sent to more than 800 individuals working on rangelands. The vote came back 55% to 45% that a new society was needed.

The inaugural meeting of this new society, yet to be named, was held in Salt Lake City, Utah in 1948. A debate ensued at the first meeting as described by Dr. Larry Howery in an article on the history of SRM. Initial discussions included credentials that would be required to join this professional society. There was a motion on the floor to form a committee from this new Society to make sure only “good” ranchers be allowed to join the Society. It was suggested that ranchers had to show they had a “good crop of grass” and a committee would be formed to go out and look at ranchers’ land to determine if they had what it took to become a member. Frederic Renner, overseeing the debate, suggested that if this much scrutiny was to be applied to ranchers, the same criteria should be applied to all Society members. Mr. Renner cautioned, that if such criteria were applied to the public land managers as well, who had already paid their dues, the Society might find itself in the awkward position of having to return money to a substantial number of members. So, they decided that rather than focusing on criteria and requirements to be a member, they could all come together to learn about rangeland management. Thus, the SRM was founded on a collaborative quest for knowledge about the science and management of rangelands.

The young discipline of range science progressed on a strong connection among ranchers, rangeland administrators, and scientists. The ranchers sought grazing methods with predictable outcomes for livestock production and rangeland condition. Land managers working for federal agencies wanted reliable methods to estimate carrying capacity, set stocking rates, and identify methods that could be uniformly applied across vast western landscapes. Scientists, including Frederick Clements and Charles Bessey, applied experimental designs and methodologies to provide theoretical models setting the foundation for grazing systems based on controlling seasons of grazing and establishing sustainable stocking rates. Early range scientists, who largely worked for experimental stations and the US Forest Service, were charged with answering applied questions for the management of rangelands (Fig. 1). This inaugural period of SRM was a bright era of exploration where professionals, ranchers, and land managers came together to build this new Society, in this new science, and this new discipline.

**Fissures and canyons emerge**

About two decades after the emergence of SRM, fissures began to appear in this union among scientists, ranchers, and land managers. The first gaps emerged in the 1970s when many rangeland scientists became engrossed by basic ecological processes with less concern for challenges faced by ranchers and land managers. Systems ecology was in vogue with endeavors like the International Biological Program taking front stage. The audience of people seeking information about rangeland systems grew well beyond ranchers and land managers. New interests and tools of investigation allowed scientists to begin to consider rangelands as whole systems well beyond sustaining forage production. This was also an era when researchers in land grant universities began focusing on research supported by agribusiness and mechanized agriculture and pulling away from research to support farmers and ranchers in rural America. The *Journal of Range Management* initiated in 1948 was gaining prominence fueling a focus on science in SRM. Ranchers and, to a lesser extent, land managers began to see range science as disconnected from the management challenges they faced. As a result, rancher participation in SRM began to wane.

I believe the gap between rangeland science and range management widened and became more overt in the 1980s and 1990s. Many lively debates were fueled by Allan Savory and his bold assertions of the value of short duration grazing. The results described by Mr. Savory seemed ecologically implausible and captured the interest of scientists studying herbivory and plant responses to grazing. Initial scientific studies revealed little or no evidence to substantiate the proposed results of this highly intensive grazing method. But many ranchers applying this grazing method were finding success and their on-the-ground experience was increasingly more relevant to them than scientific evidence. This debate could have fostered a truly collaborative effort among ranchers, land managers, and researchers to collectively address this apparent incongruity at ranch–scales and across components of the social-ecological system. Rather, reductionist scientific approaches constrained by agronomic experimental statisti- designs were conducted on numerous small-scale grazing studies. This contributed to a deepening of the chasm between scientific results and experiential knowledge.

The discordance between scientific results and management benefits of rotational grazing continues today. In 2013, Alan Savory presented a TED talk suggesting that intensive grazing could green the world’s deserts and reverse climate change. This fueled the debate with some researchers asserting that benefits of rotational grazing were not well supported by published research. Other researchers described the management benefits of rotational grazing and suggested that most grazing research was not conducted at a necessary scale or approach to reveal significant results.

The 1990s also brought about changes in universities, which transformed many rangeland departments and degree programs through streamlining of their organizations to save money. Because range is a diverse and synthetic discipline,
it was easy for rangeland degree programs and departments to be combined with or absorbed by animal science, wildlife management, soil science, forestry, or other natural resource programs and ecology disciplines. In many cases, administrators faced little stakeholder opposition to proposed changes to range departments because strong ties to the ranching community had been weakened or lost. At one time there were seven stand-alone range departments in the United States; today, there are none. Rangeland education continues in departments combined with other related disciplines.

Associated with these degree and departmental changes, universities also changed the way in which they filled faculty positions. When a position came open, applicants with robust publication ratings (e.g., H-Index) and strong records of competitive grantsmanship were often favored over those with a record of management-driven or applied research. This resulted in hiring new faculty who had secured grants with high overhead rates from agencies like the National Science Foundation and discounted the value of grants and cooperative agreements with management agencies like the Natural Resources Conservation Service. This change in hiring emphasis slowly eroded the proportion of range faculty with a strong understanding of range management in universities across North America. These actions underestimated the value of stakeholder-driven research and set University rangeland programs on a trajectory away from a range-specific identity and a conjoined focus on the ecology and management of rangeland systems.

The support for rangeland programs in federal agencies also weakened during this time, as agencies embraced a broader interdisciplinary mandate. Though rangelands continued as a federal responsibility, factors such as an expanding interdisciplinary focus in agencies, fire suppression costs, and anti-agency sentiments within both political parties diverted and reduced agency support for rangeland education and training. There was a time when agency professionals went to weeks of training to be range conservationists and built strong on-the-ground networks with practitioners, which continued through participation in the SRM. Over the years, these agency “boot camps” were reduced to just a few days due to their cost, a change to delay hiring replacements until after the people they were replacing had left their jobs, and the fact that it was increasingly difficult for younger range managers to leave their families for weeks at a time, as most households began to have two wage earners.

**Bridging the gap: Reconnecting rangeland science and management**

After decades of changes that seemingly undermined the development of a strong discipline to advance our understanding and effective management of rangelands, a new paradigm emerged early in the 2000s that began to bridge gaps and set new trajectories. A respect for the value of ranching for conservation benefits and ecosystem services, within the context of social-ecological systems, began to grow. The idea that ranches provide important conservation benefits was outlined in a 2008 article by Drs. Mark Brunson and Lynn

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**Figure 1.** William Little weighing forage clipped during range allotment analysis. Challis National Forest, Idaho. Forest Service photo courtesy of Waldo E. Wood.
Huntsinger.\textsuperscript{10} Today, we openly talk about the need to actively involve practitioners in the co-production and interpretation of science. In this issue, Drs. Leslie Roche and Lauren Porensky provide powerful examples of collaborative research that unites scientists and managers to solve problems in complex systems\textsuperscript{11,12} Also, Dr. Karim-Aly Kassam confirms that there are many ways of knowing and all kinds of knowledge will be required to solve the wicked problems faced today in land conservation and management.\textsuperscript{13} A new paradigm embracing the inherent union among human communities, livestock productivity, and ecological values emerged.

There are still gaps to bridge and new paths to trail blaze. Today, rangeland management encompasses topics of sustainability, complexity, resilience, and disconnects within social-ecological systems. Stewarding rangelands is increasingly complex and dynamic, but I believe our profession will rise to the challenge. I offer a few ideas to light the way.

**Celebrate commonalities and embrace differences**

A persistent sentiment shared by members of SRM is curiosity and fondness for rangelands. I am comforted when I am with SRM members because I do not have to explain what rangelands are and why they are so remarkable. It is oddly comforting to work with people who relish these marginal lands that have been called wasteland, barren land, and even “the Big Empty.” An unknown cowboy once said, “range is where there’s more rivers and less water, more cows and less butter, and you can go further and see less than anywhere else in the world.” Though this is not a flattering description of rangelands, a powerful force that unites SRM members is that we see the value of these often overlooked and underappreciated lands.

SRM is strongly committed to the next generation who will enjoy and manage rangelands. About 1/3 of those attending our annual meetings are students and young professionals. Many SRM members and sections participate in youth range camps, develop classroom curricula, and offer rangeland-judging contests for students (Fig 2.) Programs for teachers and students to learn about and explore rangelands are appropriately held central to our profession and SRM, fostering the next generation of rangeland managers and scientists.\textsuperscript{14}

Building on our common interests and values, I think a “we” approach is needed to address 21st century stewardship of rangelands for the multitude of persons who directly and indirectly rely on this stewardship for provision of desired ecosystem services. It will take fifth-generation ranchers who have survived more than a century of change. It will require young scientists and managers unencumbered by past divides in rangeland science and management. It will need engagement by indigenous people who can build on the wisdom of elders who cared for our beloved rangelands long before professional societies and scientific disciplines recognized their value. We will need people from different backgrounds who have unique knowledge and talents. We face complex problems that will not be understood solely with traditional replicated experimental designs and agronomic statistical approaches where variability is eschewed.

**Unite experiments with experience**

Another commonly held belief among rangeland scientists and managers is that rangeland management encompasses both art and science. This idea was captured in definitions of rangeland management in early textbooks such as Stoddart and Smith’s,\textsuperscript{15} who defined range management as “the science and art of obtaining maximum livestock production from rangeland consistent with conservation of land resources.” This science-management dichotomy is generally applied to known or unknown, measurable or immeasurable, objective or subjective, and science or application to rangeland management. Early rangeland research was aimed at finding and describing a unifying set of general principles that could be employed across vastly different rangelands and lead to predictable results.\textsuperscript{16} Early in my career I assumed we would find these unifying principles and general theories that underpinned ecological dynamics on rangeland and the “art” of range management would be replaced by scientific understanding. However, as our profession has cast aside this simplistic concept of unifying theories, we have begun to embrace the necessary role of the art and skill needed to conserve and manage rangeland resources in concert with scientific understanding.\textsuperscript{16} Seeking greater scientific understanding of rangeland systems will complement the art needed to conserve and manage specific landscapes at specific times.

The accepted inherent connection between science and management, plus recognition that knowledge comes from many perspectives, has given rise to an era of collaborative research and conservation. For example, the Thunder Basin Grassland Project (http://bit.ly/ThunderBasin) is a highly collaborative endeavor with cooperators including conservationists, landowners, energy companies, and researchers from the Agricultural Research Service, US Forest Service, and University of Wyoming.\textsuperscript{12} This project strives to understand tradeoffs and synergies between production and conservation in a highly complex, heterogeneous landscape. Another collaborative research example is displayed by the University of Idaho Rangeland Center (http://rangelandcenter.org) whose motto is “Science and Solutions for the Range.” This organization was built on the premise that science is important, but you cannot have solutions unless you have people on the ground to pose questions that matter and put science into action. A major project in which the Rangeland Center is involved is the Idaho Grouse and Grazing project (http://IdahoGrouseGrazing.org), which engages scientists, wildlife managers, ranchers, land managers, conservationists, and students to examine the effects of spring cattle grazing on greater sage-grouse (Centrocercus urophasianus) demographic traits and habitat characteristics. Researching complex topics like these requires information from a broad array of disciplines and experience. Collaboration among scientists and
managers is a cornerstone on which we can build stronger conservation outcomes.

Conversation and conservation

Rangelands are vast landscapes where important elements like wildlife, fires, water, weeds, and climate do not respect property boundaries. Thus, many collaborative efforts among landowners, range managers, recreationists, and conservationists have emerged to manage and conserve natural landscapes. Though these collaborations are replete with policy, organizational, relationship, and individual challenges, they all start with conversations. The Blackfoot Challenge (https://blackfootchallenge.org) is a collaboration dedicated to conserving and enhancing the natural resources and rural way of life in the Blackfoot watershed in western Montana. Jim Stone, who chairs the Blackfoot Challenge Board of Directors, once boldly stated at a Conserving the Future Conference (https://youtu.be/Rt5oCJI1VM8) that when pondering landscape conservation, “I think we should term it landscape conversation... because you cannot get to conservation without conversation.” A good example of the value of conversations to fuel rangeland management and conservation is the Art of Range Podcast (https://artofrange.com/) where host Tip Hudson starts each episode reminding listeners that the podcast’s goal is “education and conservation through conversation.” In these podcasts, Mr. Hudson talks with scientists and managers to bring new ideas to light and foster effective rangeland conservation through the powerful tool of conversation. I think conversation is so fundamental that the power of simply talking to one another is often overlooked and underestimated. Setting a firm path that embraces differences and empowers collaborative conservation will undoubtedly begin with many simple and potent conversations.

Timelessly important work takes time

When was the last time you took a Sunday drive? Do you read books? Have you been bored lately? No, probably not as there never seems to be enough time. It is not your imagination. In his book “Thank You for Being Late,” Thomas Friedman highlights themes that are causing us to work harder and faster, and faster, and faster. At the heart of this acceleration forces like globalization, climate change, invasive species, and population growth that are occurring at exponential rates. And though our tools, like computers and communication technologies, are getting faster and more powerful every year, they have somehow tricked us into doing more and more rather than building up banks of spare time and deep thought. The accelerated pace of our modern world seems incongruent with the slow and gradual processes affecting rangelands like succession, building relationships, and collaboration. Coming to terms with doing important work in a time-stressed world will take a few old-fashioned approaches. It is interesting that we relish lightning-fast communication through e-mail, and yet a phone call or a face-to-face discussion exchanges an order of magnitude more information. If it is important, walk down the hall or pick up the phone. You will save time, get more done, and build a reservoir of relationships that you can rely on to solve future challenges. Keep doing important things in effective ways and avoid being lured into the fast turnaround trap. We must find ways to do the timelessly important in an era of less time. Keep talking to each other and sharing wisdom and curiosity. These endorphin-rich interactions will fuel wise management decisions and innovations to
help our profession meet the challenges we face well into the future. Advances in technology will affect our society and profession but I argue that to realize productive and sustainable rangeland ecosystems will require slow and steady conversations with colleagues and walks on the range to learn from the land.

From comfortable to commendable

We humans can readily recognize when we are getting out of our so-called “comfort zone.” But to be effective, we need to occasionally be uncomfortable. We can easily find comfort in familiar places, well-worn philosophies, and deeply held values. We can talk with our friends, or we could join a committee, propose innovations, state our opinions, and be just a little uncomfortable. Push the bar. Lean in. Live large. If we are a little uncomfortable, we might do something commendable. Consider this story of people who stepped forward and got a little uncomfortable to make a global difference for rangelands. Two SRM members, Barbara Hutchinson and James O’Rourke, and several others are doing something for all of us that you may not even know about. Somewhere along the way somebody noticed that the United Nations (UN) annually declares an “International Year of…” For example, 2015 was the Year of Soils, 2020 the Year of Plant Health, and 2021 the International Year of Fruits and Vegetables. Hutchinson, O’Rourke, and others wondered why was there not a year of rangelands? After all, rangelands cover more than half of the Earth’s land surface and house a diversity of values and cultures. The idea of an International Year of Rangelands was readily accepted as a great and important endeavor. But it is quite an involved process to secure an International Year designation. This small team of people was undeterred, stepped forward, and were willing to get a little uncomfortable. The process was unknown. The partners were not identified. The effort would span languages, time zones, and cultures. It may have been easier to sit back and accept this endeavor as too much work for the effort, But the group started working in 2016 to formally request that the UN declare an International Year of Rangelands and Pastoralists (https://IYRP.info). In 2020, the Mongolian government stepped forward and made a formal proposal to the UN to declare a Year of Rangelands and Pastoralists. Currently, the proposal has been endorsed by the UN Committee on Agriculture and is expected to be adopted by the UN General Assembly in October 2021. What if Barbara Hutchinson, James O’Rourke, and others promoting this initiative decided to simply stay comfortable?

What lies ahead for a society of rangeland managers and scientists?

Our profession and SRM were built on a foundation that sought to connect scientific concepts with management expertise to improve the productivity of rangelands and conserve them for future generations. Our mission to provide leadership for the stewardship of rangelands based on sound ecological principles rings true more than 70 years after it was first proposed. We can build on solid ground to meet the challenges on the horizon. Let us embrace what we have in common including our love of rangelands and a desire to continually learn about these landscapes and the people who live, work, and play on rangelands. If rangeland management is truly a science and an art, then our profession will need people from many backgrounds and perspectives for their stewardship. I suggest there are many ways of knowing and understanding rangelands and efforts to unite experience with scientific experiments to advance our collective knowledge of rangelands and our management abilities (Fig. 3).

The ways that ranchers, land managers, and scientists accomplish their work today is vastly different than when SRM was first established. No doubt, the work of rangeland professionals will continue to change and evolve. I suggest that SRM and its members will meet the challenges that face us with a few characteristics that have more to do with being
human than being a rangeland professional. Remember that effective conservation starts with conversations that build relationships and then foster collaboration. All this takes time. Unfortunately, time is a limited resource. So, think carefully about how you spend your time. We all have the same amount of time—just 24 hours a day. So, try to be impactful. Lean in if you think something is important and needs to be done. We may have to leave our comfort zone to do things that are truly commendable.

Those who manage, study, and enjoy rangelands will find opportunities and challenges on the path ahead. SRM has been and will continue to be a place for those who recognize the many values of rangelands and strive to manage and conserve these landscapes. We will continue to espouse the stewardship of rangelands one acre, one idea, and one conversation at a time.

Declaration of Competing Interest

KL is the current second Vice President of the Society for Range Management but was not involved in the review or decision process for this manuscript.

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