

# Rangelands of Southwest New Mexico—An Upside View

James C. Powell

How do you describe something that seems infinitely variable? Semi-desert grasslands, shrublands, P-J woodlands, foothill grasslands, mountain parks, meadows? A lot depends on how you come to see it. Easy enough from an airplane—the proverbial “bird’s-eye view.” It can be pretty shocking (also misleading) to realize how much of it that is not tree-covered looks barren and wasted.

**One can view it from afar**—the East Coast, for example. Plenty of that goes on. The trouble is, a great deal of what is circulating in those climes borders on the truth about like Australia sits adjacent to the Yukon. No telling where the distortions will end.

Scientific journals and various publications are obvious sources of information. We have an excellent Range Science Department at New Mexico State University. The same can be said for the Cooperative Extension Service, NMSU’s Wildlife Science, Animal Science and Biology Departments, and the New Mexico Department of Agriculture. All contribute to the dialogue about southwestern New Mexico rangelands and beyond.

**Still, a gap remains** that none of the above quite bridge. So what’s left? Well, there is the view from way down on the ground. Basic advice to anyone wanting to write anything is to stick with what you know best. In this instance, home ground is southwestern New Mexico.

Roughly, seven counties make up the region. They are Dona Ana, Catron, Grant, Hidalgo, Luna, Sierra and Socorro. Something over 20 million acres of everything from black grama and creosote-bush lowlands to spruce-fir forest is included. Six Major Land Resource Areas are rec-



*Near the Hidalgo-Grant County line between Lordsburg and Deming.*

ognized. In popular terms, it’s desert, foothills, and mountains. It has cities and towns, farms and both urban and rural subdivisions, highways, utility lines, recreation areas, wilderness areas, a missile range, lakes and rivers, people, wildlife, and livestock. Cities, towns, highways and farms occupy thousands of acres of what once were southwestern New Mexico rangelands.

**Over 65% of New Mexico lands** are occupied by one or more brush species (Garrison and McDaniel 1982), and a similar percentage can be calculated for the southwestern part of the state. Mesquite, creosote bush, tarbush, pinyon, and juniper exist in anywhere from very light to very heavy stands. Rabbitbrush, sand sagebrush, and yucca are problems in certain areas. Broom snakeweed comes

and goes almost everywhere, while green sagewort is confined largely to Socorro and Catron counties and is debatable as a problem. Brush management will be a task before us as long as we attempt to use and manage the land.

**Land ownership** (private, public, and state) on southwestern New Mexico rangelands is typically intermingled. All or portions of four National Forests (Gila, Cibola, Apache-Sitgreaves, and Coronado) are located here. The Las Cruces District of the Bureau of Land Management (BLM) is composed of three Resource Areas and covers virtually the entire area. Ranch conservation plans routinely require coordination between no fewer than two Federal agencies and the New Mexico State Land Office in order to get the job

Author is a range conservationist, South Technical Support Staff, SCS, 1065 S. Main, Bldg. A, Las Cruces, New Mexico 88005.



*Once an active headcut on a ranch near Dusty, Socorro County.*



*Gila National Forest allotment, Sierra County.*

done. A Memorandum of Understanding provides a workable basis for coordination on the local level.

**Of major importance is** range condition and trend. What is the general situation? Most of us are aware of the continuing debate over what is the best way to register range condition. Whatever might be said about the approach the Soil Conservation Service (SCS) has used for many years, it has been the only consistent way I know of relating plant communities found in the field to the land's potential. It is hard to imagine a discussion on range trend without referring to this system of determining range condition.

The main point is, we have all been hearing from other range management professionals that overall range condition is on an upward trend throughout the West—the best it has been in this century. SCS in New Mexico has twice updated estimates of the percentage of private rangeland in excellent, good, fair, and poor range condition since 1977, once in 1982, and again in 1989 (Parker 1990). Consistent increases (almost 18% statewide since 1977) in good and excellent condition have resulted in all quadrants of the state. We are approaching 50% of our private lands in these higher condition classes. Similar views can be gained from talking to field-level range professionals and others working with public lands.

**Unanimity on how positive** we should be about this improvement escapes us, however. Presumably, the fact that some call the glass half full while others invariably see it half empty is inescapable. Some even argue the glass is broken and will never hold water again. Trouble is, many who have entered the argument only came to observe the glass yesterday or today. They weren't out there looking when the glass was way down, a quarter full or less. They haven't noticed as it slowly but surely refilled. Or, as an experienced range man I know was once prone to say, "They just haven't been seen' what they've been lookin' at."



*A riparian area grazed routinely as a part of an intensive ranch management program on private, state and federal land. Sierra County.*

My own view is colored, I am sure, by the fact that I grew up during the drought of the 1950's. I believe we bottomed out to some degree about then. Since that time gradual improvement has occurred that is not only the result of better moisture years. I strongly feel that the sum of the things we have done on the land (proper stocking, vastly improved grazing distribution—largely made possible by plastic pipe furnishing permanent watering facilities—brush management and improved grazing systems) have had an impact that has accumulated at last to the point of realization.

Many who feel this way admittedly struggle with demands for proof positive of what we say. We never take enough photos, or set out enough transects, or quite believe that no one will give much credence to what a trained observer says he or she has observed.

**This does not mean** we have no data at all. Certain southwestern New Mexico ranchers began requesting assistance to monitor range condi-

tion and trend on their private lands several years ago. SCS and Cooperative Extension at NMSU responded by setting out frequency transects with photo points. Ongoing monitoring studies conducted by other agencies on public and state lands also add to the evidence. A few ranchers are reading their own transects. Most of these are Holistic Resource Management (HRM), or cell grazing, practitioners. If things are not going right on the land, they want to know about it. Whatever happens will be documented.

Reassurance may be needed to those who suffer job security pangs as the result of such a discussion. Well, my view is that success, not failure, breeds success. A Utopian outlook is not required to figure out that we have long been a little too good at accentuating the negative. We have plenty to do. There is always that brush infestation problem and still too much soil erosion on some areas. And it is very important that people understand that in arid and, semi-arid climates maintaining a pro-

ductive resource in any condition is forever demanding.

Caution is therefore a good idea in the use of optimism as well as in declarations of gloom and doom.

**Take computers, for instance.** Some tremendous opportunities are offered by this technology. Yet, just as the pickup and the four-wheeler may never completely replace the horse as an important tool in getting around on the land, neither will the computer properly replace any of the above. SCS has its prototype "Grazing Lands Applications" (GLA) program. We have been using Phase One for almost two years now in southwestern New Mexico. It has great promise. It also puts a greater than ever premium on the need for skilled, range-trained personnel to use it. I am convinced that computers not only accept garbage-in, they welcome it. And they gleefully spit the same back out. Adequate staffing, flexibility in decision making in the field and a fair bit of time spent on horseback are essential for us to realize the potential of this tool.

**Numerous species of wildlife** on rangeland can and do benefit from properly managed livestock grazing. However, nothing humans can or will ever do can benefit every species. This cannot be the case any more than we can wave the banner of diversity in one hand while insisting on the other that every resource management decision in the West hinge on an action's perceived impact on a single species (or subspecies) of plant or animal. Conflicts continue to arise (example: elk in the Gila National Forest) and more and more good habitat is influenced or destroyed by cities, towns, and rural subdivisions. Some of the latter are taking place in some of the most remote areas of southwestern New Mexico. Easy resolutions fail us.

The bad and the good of fire is another example. The increase in fine fuel, even in the desert areas of southwestern New Mexico, has been substantial in recent years. Wildfires can be a real and expensive hazard on our people-crowded landscapes. Conversely, well-planned prescribed

burns may become more and more an opportunity.

Especially in the good rainfall years, wind erosion on rangeland becomes an easy mark for complacency. Keep in mind that it has been during the major, prolonged droughts of our century that we realized the most severe wind erosion. These same droughts helped increase water erosion by contributing to a reduction in herbaceous plant cover and stimulating brush invasion. The next drought is always just around the corner. It will seem to come even sooner and

the dust will blow even harder if we fail to allow for its likelihood in management plans.

**Lastly, a word about grazing systems.** Many have worked long and hard in this area over the years. Today, southwestern New Mexico ranchers are more receptive than ever to improved grazing management options. None have more directly at stake when it comes to taking care of the land than those who make their living there. Some approach to both routine deferment and properly timed grazings in the management

plan is important in almost all cases, but no one "system" does the job everywhere for every one. It is extremely important that our profession does not quibble when it should be providing solid support. Our options for using and conserving a wonderfully productive resource may escape us if we fail.

### References

- Garrison, G.L., K.C. McDaniel. 1982.** New Mexico Brush Inventory, Special Report No. 1. NMSU, NMDA.  
**Parker, L.R. 1990.** New Mexico Range Conditions, New Mexico Tech Tip. SCS.

## The Sagebrush/Grasslands of the Upper Rio Puerco Area, New Mexico

Dwain W. Vincent

The upper Rio Puerco drainage in New Mexico, may have the farthest south and east population of the big sagebrush/grass ecotype in the United States. This ecotype, covering about 164 square miles, is found mainly in the upland valleys with pinyon juniper woodlands on ridges, mesas, and mesa side slopes. The area extends from the Continental Divide west of Cuba, N.M., southward approximately 31 miles to the village of San Luis, N.M., west of the Rio Puerco. Elevations range from 6,300 to 7,500 feet. This area is described broadly as the south-east portion of the Colorado Plateau.

Big sagebrush is well adapted to the climate, topography, and soil conditions in the area. It has a competitive advantage on the more xeric sites because of its ability to endure drought and root development into the water table (West 1978). The sagebrush root system is generally more vigorous and hardy than that of most grasses, but the grass shoot is more vigorous and quicker to grow than the sagebrush shoot (Beetle 1960). In the absence of drought, certain grass shoots, such as western wheatgrass and alkali sacaton, may shade the sagebrush shoot enough to kill and simply out-compete it.

Once big sagebrush becomes established as the dominant species, it stabilizes succession for long periods (Evans et al. 1978). It is not known how long big sage-



brush will remain dominant, because preserved relic areas that are comparable to the majority of sites currently under sagebrush dominance are difficult to find (West 1978). Big sagebrush may have a life expectancy of over 150 years (Ferguson 1964). Much of the sagebrush in the upper Rio Puerco is over 50 years old, even in areas where livestock are excluded.