

# Snake River Country—a Rangeland Heritage

James A. Young

THE SNAKE RIVER SWEEPS IN A GREAT ARC through southern Idaho, forming a huge valley bounded on the north by the mountains of the Idaho batholith and on the south by the mountainous lip of the Great Basin. In southern Idaho, the Bear River, a tributary of the Great Salt Lake, encroaches into the Gem State. To the west, the Owyhee River and its tributary streams extend deep into north central Nevada, draining the Owyhee Desert to the Snake. Between the Owyhee and the Bear there is a series of streams which rise in the highlands at the border of the Great Basin and flow north to the Snake. From east to west, these streams are the Raft River, Goose Creek, Salmon Falls Creek, and the Bruneau River. The Snake River itself often had to cut through blocking basalt flows in its rush to the Columbia, leaving the present river to flow through deep canyons with nearly sheer walls. On top of these walls was a vast, empty plain, clothed in sage, sand, and sometimes raw lava flows.

To the 19th century traveler, the land resources of Idaho were disguised and in places appeared hostile. Lacking knowledge of how to approach the vastness and aridity of Idaho, early travelers left descriptions of the land that were seldom favorable. In his volume *Astoria*, Washington Irving gave a description of the Snake River Valley:

A dreary desert of sand and gravel extends from the Snake River almost to the Columbia. Here and there is a thin, scanty herbage, insufficient for the pasturage of horses or buffalo. Indeed, these treeless wastes between the Rocky Mountains and the Pacific are even more desolate and barren than the naked, upper prairies on the Atlantic side; they present vast desert tracks that must ever defy cultivation, and interpose dreary and thirsty wilds between the habitations of man, in traversing which the wanderer will often be in danger of perishing.

Beauty in the sagebrush environment is very much in the eye of the beholder. The 19th century geologist, I.C. Russell, became acquainted with the Snake River country by spending weeks on mule back mapping the geology and water resources of the area. Russell suggested:

One must become familiar with these characteristics, however, and learn to judge the desert by its own standards before their beauties are revealed to the traveler from humid lands, where every hillside is clothed with verdure and every brook flows from a shadowy vale. They will at first seem repellent deserts, on which a long sojourn will be intolerable, when the sun is high in the cloudless heavens, the plains are gray, russet brown, and faded yellow, but with the rising sun and again near sunset they become not only brilliant and superb in color but pass through innumerable variations in tone and tint. When the approaching dawn is first perceived, the sun is seemingly a great fire beneath the distant edge of the plain.—

The distant mountains, rising range above range and culminating in some far off sun-kissed peak, are the most delicate blue, while all below is dark and shadowy. As the sun mounts higher and colors deepen, becoming violet and purple, of a strength and purity never seen where rain is frequent.—The shadows, if canyon walls are near, are sharply outlined and appear black in contrast with the intense light reflected from the sunbathed surfaces.—In the glare of the unclouded noon-tide summer sun, the plains are featureless, or perhaps, their expression is distorted and rendered grotesque or vague and meaningless by the deceptive mirage—As evening approaches there is a gradual change from glare to shadow. The broad plain becomes a sea of purple on which float the still shimmering mountains. The shadows creep higher and higher, until each serrate crest becomes a line of light, margining rugged slopes on which every line etched through centuries by rills and creeks reveal its history."

Despite the forbidding appearance of the Snake River plains, the country was claimed. The Hudson's Bay Company had sent parties of trappers to search for furs along the many tributary streams of the Snake. During the decade of the 1820's, trapping brigades commanded by Peter Skene Ogden trapped not only in Idaho, but ventured far to the south into the Great Basin. Endeavoring to keep the American interest afar, the Hudson's Bay Company purchased in 1837, Fort Hall from the New England merchant, Nathaniel Wyeth, and kept it as an outpost on the eastern perimeter of the Columbia division of the British fur trading company.

Evidence of great pasture potentiality scattered in every direction around Fort Hall. Southeast of Fort Hall, John Fremont camped on the Bear River and wrote in his journal in 1843.

The bottoms are extensive, water excellent, timber sufficient, the soil good—All the mountains here are covered with a valuable nutritious grass called bunchgrass, from the form in which it grows, it has second growth in the fall. The beasts of the Indians were fat upon it; our own found it a good substance and its quantity will sustain any amount of cattle.

A lot of people moved through the Snake River country during 1840's and 1850's following the trails blazed by the fur trappers. At Fort Hall in southeastern Idaho, wagon trains had a choice between continuing across the Snake River plains on the way to Oregon or turning south to follow the Humboldt River across the Great Basin to Hualpeth cutoff through Raft River Valley, California. Many people passed through but few stayed in southern Idaho.

This lack of interest was changed by gold. E.P. Pierce found rich gold deposits in August, 1860, on the Clearwater River and by 1861 hundreds of miners were prospecting the mountains. Several strikes were made, extending to within 70 miles of Fort Boise. There suddenly became a reason for

people to come to Idaho and therefore, a market for beef.

William Bryon purchased cattle in western Oregon and Washington and drove them to the Boise Basin in 1864 to supply his butcher business. He had cattle left when winter descended on the Boise front. He drove the cattle south toward Nevada hoping to find a low elevation valley where the cattle would have a chance of surviving until spring. A trapper told Bryon the Snake River would be frozen hard enough for the cattle to cross. When the herd reached the river there was no ice, but plenty of cold and wind which caused much suffering among the cowboys. Byron was very worried. He was stuck against the river in an apparent desolate landscape where even sagebrush did not grow. The next morning Bryon awoke to find his cattle content and "full as ticks." He was at a loss to explain what they had eaten for he had already learned that cattle would not eat sagebrush. Watching the cattle forage he found they eagerly consumed the herbage of a half shrub that grew in patches around the margins of the basin where he was camped. The shrub was winterfat and it was to become one of the basic winter forages for the cattle industry that grew on the Snake River plains.

MANY INDIVIDUALS HAD NOTED FOR A LONG TIME the forage resources of south central Idaho, but the lack of markets and the hostile nature of the Indians had limited the development of a livestock industry. Joseph Pattee, who was an agent for the Hudson's Bay Company at Fort Hall, had pushed cattle from Fort Hall as far west as the Raft River Valley. The Indians drove him back, but he had shown that cattle could be wintered in the valley.

James Bascomb took a giant step across the Snake River country and established a ranch and stage station on Rock Creek near present Twin Falls, Idaho in 1867. Bascomb was killed during the Bannock War. The warlike Bannocks left the reservation in southeastern Idaho and cut a swath of destruction across southern Idaho into southeastern Oregon. As the Indians proceeded west they became increasingly violent and destructive. The Bannock War set ranching in southern Idaho back a decade.

THE CONTINUED DRIVING OF LONGHORN cattle from Texas to stock Idaho ranges revitalized the livestock industry. The delivery of Texas cattle to Idaho had started before the Bannock War. Rich mineral strikes in the Owyhee Mountains of southwestern Idaho had fostered the Silver City boom. Con Shea saw the potential market for beef among the hungry miners and started east in 1868 looking for cattle to buy. In the Raft River Valley he met two cattlemen named Miller and Walters with a trail herd they had driven up from Texas. Shea bought the herd and continued the drive across the Snake River Country to the Owyhee Mountains. Miller and Walters returned to Texas and the next season trailed a larger herd to the Bruneau River valley.

In 1869, J.G. Shirley and C.S. Gamble reached the Fort Hall bottoms with 3,000 head of Texas cattle. Shirley had been one of the first ranchers on the Fort Hall bottoms. When the U.S. government bought the bottoms of an Indian reservation, Shirley received in exchange six sections of land on the Raft River at the mouth of Cassia Creek. Shirley moved his Texas cattle from Fort Hall to the Raft River Valley to

winter. The next year he drove 10,000 longhorns from Texas to the Raft River Valley.

THE LINK OF RANCHES ACROSS THE AREA of the Snake River was continued in the early 1870's when A.D. Norton and M.G. Robinson established a ranch on Rock Creek near the present town of Hansen, Idaho. The next big input into the Idaho livestock industry came from the south rather than the east-west area of the Oregon trail across the Snake River Country.

Jasper Harrell had developed an agricultural empire in the south San Joaquin valley of California. During the 1870's, he branched out to range livestock operations in northeastern Nevada in the area where Idaho, Utah, and Nevada join. In 1872 Harrell sent his foreman, J.E. Bower, north to look for new range. Bower found extensive grasslands dominated by bluebunch wheatgrass and Idaho fescue along the lip of the Snake River Valley. He was welcomed at the lonesome ranch of Norton and Robinson on Rock Creek. They lauded the potential of the country and claimed cattle could winter in the winter parks along the bottoms without risk of winter kill. Bower returned to Jasper Harrell with a glowing report of the potential of the Idaho country to support cattle. Harrell responded through his family connections in Texas and the southeastern United States to drive tens of thousands of longhorns to stock the south central Idaho ranges. Eventually Harrell sold his Winecup and Shoesole brands to John Sparks and John Tinnin who developed the largest ranch on the western range in the borderlands of Nevada and Idaho.

THE DECADE OF THE 1880's provided a period of boom for the range livestock industry. The hard winter of 1886 and 1887 broke the expansive boom of the livestock industry east of the Rocky Mountains. West of the Rocky Mountains, the boom continued until the terrible winter of 1889 and 1890. Almost all of the sagebrush ranges west of the Rocky Mountains suffered during this winter, one of the coldest and greatest snowfall seasons ever recorded. The pristine sagebrush/bunchgrass ranges had been overstocked with cattle in many locations for nearly a decade and severe drought had accelerated the degradation of rangelands during the 1880's. During the winter of 1889-1890 many ranchers had lost 90% of their cattle by Christmas.

On March 17, 1890, the Snake River Country was trying to recover from the record snow and cold of the mid winter months. Slushy snowbanks still lay on north slopes. The few cattle that survived were working south facing slopes where the perennial bunchgrasses had started to renew growth. Quite suddenly a great storm swept down from the Pacific Northwest bringing rain and sleet which turned to snow. The rain and sleet saturated the shaggy winter coats of the livestock that had survived the winter. The temperature dropped with bitter north winds and the weakened animals were unable to shake the ice from their coats.

WHEN SPRING FINALLY CAME in late April, the melting snows revealed endless carcasses of dead cattle and horses. Cowboys rode with checkered bandannas over their noses to try to filter the stench. The district judge going to hold court at Challis, Idaho, found the stench along the road through part of the Lost River Valley so terrible that he issued

a court order to the county officers to take such action as might be necessary to get the carcasses burned or buried.

The winter of 1889 and 1890 largely forced an end to the yearlong open ranging of cattle in Idaho and forced the tying together of sagebrush rangeland and irrigated farm land for the production of hay. The decade of the 1890's brought deep and prolonged depression for the entire Intermountain area. The adoption of the Gold Standard had severely influenced silver mining states and territories such as Idaho and Nevada. Nevada proposed to annex the southwestern and south central portions of the Snake River Valley with the rest of Idaho going to adjoining states. A move in Congress to strip statehood from Nevada because of its declining population stopped the annexation plans.

**THE TURN OF THE CENTURY BROUGHT** significant changes to the Snake River country on three fronts. First, the destruction of the giant ranches during the winter of 1889 and 1890 had helped open the door for range sheep operations. Some of these were completely nomadic operations with no fixed base of operations. It is often difficult for current range managers to grasp the magnitude and character of the range sheep industry that evolved throughout the Intermountain area early in the 20th century. A truly nomadic society evolved that was partially an expression of agrarian Populism within an emigrant and/or economically defrauded portion of the population and partially blatant capitalistic exploitation of natural resources. The Snake River country not only fostered its own desert nomads, but portions of the land served as stock driveways for sheep bands migrating through the area. Large numbers of sheep came off the winter ranges of western Utah and Nevada and moved to the forest summer ranges of Idaho. The Raft River Valley became a near dust bowl as a result of such migrations.

Secondly, the U.S. Forest Service was established. Grazing on the newly established National Forest was permitted on the basis of historic use and the ownership of commensurate property to support livestock when they were not grazing on the National Forest. This greatly influenced rangelands used during the summer in southern Idaho.

Thirdly, the reclamation of desert land was initiated through irrigation where the irrigation water was provided by projects financed and controlled by the federal government. Irrigation projects had a tremendous influence on the Snake River Country. The Minidoka Project in south central and southeastern Idaho and the Boise Project were among the first desert reclamation projects in the United States. The development of irrigation provided for the first time a surplus supply of forage and concentrates for finishing range raised livestock. The developmental period for irrigation districts was extremely hard on foothill, sagebrush rangelands. Farmers allowed work horses and cattle to graze on the foothill ranges while they were establishing field and eventually fences. The lower elevation ranges were vacant public lands essentially under the control of no one.

**A SIGNIFICANT STEP TOWARD** the management of Idaho range resources occurred with the establishment of the range management curriculum in the College of Forestry at the University of Idaho. The first course in grazing was

given at the University of Idaho in 1913 as part of the forestry curriculum and grazing became a curriculum in 1917. C.E. Favre received the first Master of Science in range management granted by the University of Idaho. Favre became a forest supervisor (three different national forests) and chief of regional range and wildlife management with the Forest Service, USDA.

**THE DROUGHT AND DEPRESSION** of the 1930's forced changes on the rangelands of southern Idaho. Millions of acres of formerly sagebrush rangeland had been found unsuitable for dryland farming. These abandoned farmlands were subject to wind erosion and invasion by annual weeds such as cheatgrass, which had spread across southern Idaho in response to the depletion of native perennial grasses by improper and excessive grazing. R.L. Piemeisel conducted classic studies of secondary succession on sagebrush rangelands while attempting to stabilize abandoned cropland on the Snake River plains during the 1930's.

After decades of political struggle, President Roosevelt finally closed the remaining vacant public lands in 1934. The Grazing Service was established to administer those lands. In 1936, the Rural Resettlement Administration began drilling crested wheatgrass on 57,000 acres of former dryland farms that had been purchased by the federal government from drought-plagued farmers in Oneida County, Idaho. The victims of dust bowl conditions were hired along with teams of horses and rickety farm equipment to restore a valuable grazing resource. Extensive areas of abandoned cropland were seeded to exotic wheatgrass across the Snake River Country. This was often done to reduce wind erosion or to eliminate alternate hosts for the curly top virus, but many seeded areas provided valuable grazing resources.

**ONE OF THE MOST DRAMATIC** events in the post World War II history of Idaho ranges occurred when it was discovered that the alien weed halogeton was toxic to sheep. Large numbers of sheep were killed in the Raft River Valley in the fall of 1945. Resulting national publicity produced the Federal Halogeton Control Act. Marion Clawson of the Bureau of Land Management stuck by the unpopular decision to suppress halogeton through seeding of perennial grasses. Probably, there was more land seeded to crested wheatgrass under the Halogeton Control Act in the Burley District of the Bureau of Land Management than anywhere else in Idaho. Bill Mathews was District Manager at Burley and spearheaded the program of biological suppression of halogeton. The spread of halogeton was a symptom of the more serious and widespread malady of resource degradation. The treatment helped both the symptom and the basic illness. Essentially, seeding crested wheatgrass gave range managers latitude within which to begin management of sagebrush rangelands.

A valuable side benefit of the halogeton program was the sponsoring of graduate research assistantships at the University of Idaho and other Intermountain universities. The original "Halogeton Boys" have spread within range management from the deserts of the Southwest to the banks of the Potomac. The halogeton monies ended before a comprehensive knowledge of the shrub-dominated plant com-



munities of the salt desert ranges could be evolved. Such a knowledge was the vision of Dr. Lee Sharp. His quest may have been decades ahead of its time, but to seek such knowledge is a tribute to uncommon knowledge of rangeland resources.

Range improvement by seeding exotic wheatgrasses largely ended by the mid 1960's because of concern by some environmentalists about the conversion of degraded sagebrush communities to wheatgrass stands. The emerging field of wildlife management lashed out at range improvement as a convenient cause for the decline in population size of various game species on rangelands. Present day knowledge of the population dynamics of some of these species suggests causes for changes in numbers are far more complex than can be explained by localized range improvement.

The sagebrush/bunchgrass rangelands of the Snake River Country went from nobody's land in the 1930's to everybody's land in the 1970's. Rangeland managers were often bombarded by a host of conflicting demands concerning the uses and manipulation of rangelands. In frustration, some turned to simplistic grazing systems that were inherently

faulty or haphazardly applied as answers to complex problems. Range management appeared at times to be gripped in a paralysis induced by the shrill complaints directed at any management plan.

Resource managers may have been forced into positions of inertia as range science searched for new direction, but during the last two decades the rangelands of the Snake River Plains have remained dynamic. Much of the change in sagebrush ranges has literally been fueled by cheatgrass. Reoccurring wildfires and resulting annual grass dominance refused to stand still while society established a policy for resource management.

Perhaps we need to ride up to the Shoshone Basin and sit in the saddle on the high ridges where J.E. Bower looked down and saw the pristine sagebrush/bunchgrass communities of the Snake River Country. Such a view may help crystallize a policy where the perpetuation of the basic assemblage of soils and plant communities in equilibrium with the potential of the environment is the overriding principle upon which resource management must be built.

# Native Vegetation of Idaho

E.W. Tisdale

Knowledge of the vegetation of the State is still incomplete, although much progress has been made during the past three decades. We now have fairly adequate data for the forest, sagebrush-grass, and grassland communities, but information for others, including the salt-desert shrub, mountain brush, alpine and riparian types, is still sketchy.

Classification of the state's vegetation in recent years has been done mainly in categories and nomenclature used in the International Biologic Program. In this system the formation denotes the broadest class, such as forest or grassland, and region is used to describe a group of communities with similar appearance and regional climate such as conifer forest or sagebrush-grass. Series are groups of communities characterized by a single dominant species, and habitat types are smaller units with relatively uniform biotic and abiotic composition and structure. Series, which represent easily recognized and fairly extensive communities, were chosen as the most appropriate level for description in this article.

## The Physical Environment

Idaho is a large state (53 million acres), extending about 500 miles from its northern to its southern border. Four major physiographic regions, i.e.: Northern Rocky Mountain, Middle Rocky Mountain, Columbia Intermontane, and Basin and Range are represented. Seventy-five percent of the state is mountainous, and the only large areas of level terrain occur on the Snake River Plains in the southern part. A great variety of surface rock materials occur, including argillites, quartzites and metasediments in the northern part; granitic materials in the central Batholith; and Columbia basalt and other volcanics cover much of the western and southern portion. Alluvial sediments also occur on the Snake River Plains, and

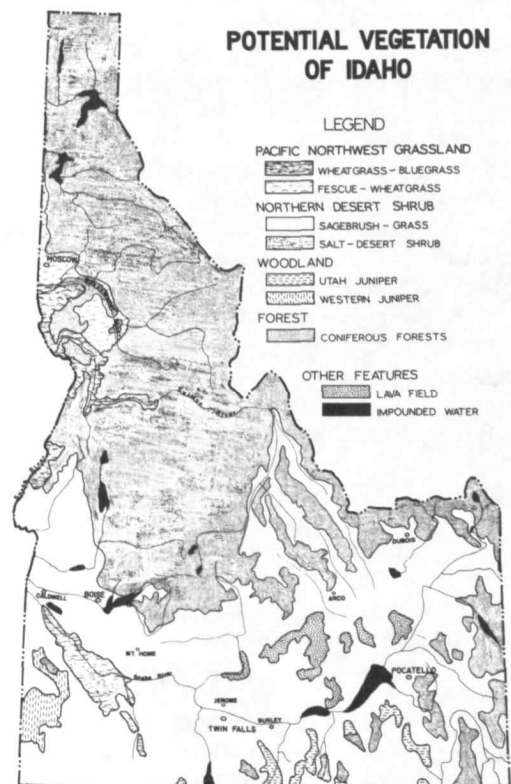


Fig. 1. Map of main vegetation types and other landscape features of Idaho. Boundaries are approximate due to their actual irregularity and the scale of the figure.

deposits of loess and volcanic ash add surface material over much of the northern and western portions.

Climate varies greatly, mainly in response to physiographic influences and latitude. The northern part has annual