

# Cattle-free Rangeland

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"Grazing of livestock on Inter-mountain Basin public lands should not be allowed," stated Ms. Joy Belsky, representing the Oregon Natural Resources Council.

Departing from the topic printed in the program, Belsky instead substituted her version of how to attain her organization's goal.

In a well presented argument, Belsky stressed five points to buttress her demand for removal of livestock. A skilled public speaker, Belsky addressed the recent Sustaining Rangelands Ecosystems Symposium held at LaGrande, Oregon.

Her five points were: (1) Evolution, (2) Cryptogamic Crusts, (3) Soil Nitrogen, (4) Biodiversity, and (5) Weeds and Invasive Trees.

*Evolution* is considered to be important in that the vegetation of the Intermountain Basin did not develop under heavy grazing pressure as did the vegetation in the Great Plains under prehistoric and historic bison, antelope, and deer grazing. Since the Great Basin vegetation is inherently more fragile to grazing, it should not now be grazed, Belsky argues.

This idea is not new. Dr. Joe Robertson of the University of Nevada, Reno presented the idea nearly forty years ago. Dr. Robertson, however, was pointing out this fact to alert graziers that grazing methods successful in the eastern U.S. could not be imported to Nevada. If one examines the habits of bison, one finds they used "flash" grazing. The herds moved into the land, grazed it, and moved on. Most of the plants were grazed only once per grazing season. Domestic cattle on the Great Plains today graze and re-graze each plant, changing the vegetation over time to sod grasses. Dr. Weaver's examination of the Great Plains vegetation just before and again after the Dust Bowl years of the 1930's, found a tremendous change in vegetation, with

the vanishing of tall and mid-grasses and an increase of sod grasses even on areas not subject to livestock grazing. Obviously, the vegetation changes with drought and slowly recovers to taller vegetation in response to precipitation.

In the northern Great Basin, we find bunch grasses which are not resistant to continued close grazing of re-growth, probably because the hot dry summers provide little opportunity for re-growth. Most grazing systems attempt to copy the 'flash' grazing method, such as the Alan Savory method, which through the use of small paddocks and frequent movement of livestock to fresh areas attempts to duplicate the Serengeti Plains use by wildebeests.

Farther south in the Intermountain Basin, we find galleta grass is dominant. The huge areas of this sod-forming grass would probably be excluded by Belsky from her areas that are Evolutionarily too inept to be grazing.

Belsky stated that livestock should be removed only from public lands. The areas of private land were specifically excluded from her proposed ban. She did not explain her bias toward private owners, but it should be clear that if livestock are permitted only on private land, it is not necessary to forbid the private land owner to graze. This will occur naturally since there are no large areas of private rangeland in the Great Basin. Since one cannot afford to pay taxes on such low-value land, early settlers sought patent only to irrigable land. Traditionally, the northern Great Basin rancher owns only enough irrigated land to support his livestock during the winter months when livestock is excluded from public lands.

In the southern portion of the Great Basin, most ranchers qualify for use of public lands through ownership of waters. In this area, where deep snows seldom occur, livestock use the range yearlong. There is no need for haylands to feed the cattle during part of the year. In this portion of the Great



Basin, most of the forage is brush of some type or is tobosa grass or black grama grass, both of which reproduce vegetatively. The Intermountain Basin produces varied vegetation and the climate differs from east to west and from north to south.

*Cryptogamic crusts* intrigue Belsky. These are the lichens and mosses and whatnot that form a thin crust on the surface of bare soils. Similar to those which grow on bare rock, the crusts are quite fragile. The crusts are valuable in breaking rain-drop impacts and thus reduce sedimentation of the rain water. A hard rain or hail, however, will also break these crusts. Belsky theorizes that some of the microbiota are able to fix nitrogen and are thus of inestimable value.

A thorough search of the research reveals no evidence that the microbiotic crusts have any role in fixing nitrogen. Moreover, these tiny plants are active only when fairly warm and wet. They are seldom damp for a twenty-four hour period during the warmer part of the year. When broken by humans, deer, antelope, or livestock, it has been observed that the crusts will reform as soon as enough moisture is received at a time of proper temperature for the plants to grow. Plant litter on the soil surface is much more valuable from a soil erosion viewpoint than the cryptogamic crusts and amounts of litter can be manipulated as needed.

*Soil Nitrogen* is Belsky's third point. As mentioned above, she theorizes that nitrogen-fixing by microbiotic crusts are all important on rangelands. Her theory cannot be substantiated.

One should recognize that nearly all of the nitrogen available to plants on rangelands comes from (a) precipitation and (b) the decomposition of roots. By far the larger contributor is summer thunderstorms. In any desert, the decomposition of above-ground litter is slow and most of the nitrogen escapes into the atmosphere; this is also true of cattle droppings. Droppings are valuable as above-ground litter to break the impact of rain-drop splash. Where drops fall on bare soil the ground is churned causing the incorporation of silt particles into the water. As muddy water flows overland and tries to sink into the soil, the silt is filtered out and seals the soil to additional infiltration. Rangeland plants are widely spaced, compared to your lawn, because of the lack of water and lack of soil nutrients. Water is almost always the limiting factor.

*Biodiversity*, states Belsky, is limited when grazing occurs.

This is very true, where destructive grazing has occurred. And this is where Man, the manager, can prevent the loss of biodiversity or where already lost, can reconstitute the proper mixture of vegetation. The recovery possible with proper management is truly phenomenal. Sometimes proper management is the introduction or perhaps the exclusion of livestock for a time, sometimes it is plowing, seeding, or burning. There are many tools. The site, the soil, the uses desired for the land will determine which tools should be used.

*Weeds and invasive trees* always increase with grazing, insists Belsky.

Unfortunately, this is not true. If it were true, what an easy way to prevent sagebrush invasion or the increase of juniper trees. In one area, (California) sagebrush is a dominant and even though plowed once and sprayed with herbicide twice more, it yet predominates. In another area, (New Mexico) livestock was excluded for nearly thirty years and at the end of this period, the brush had increased enough to eliminate all grass species.

Ms. Belsky presented a very good paper and we are indebted to her for declaring the agenda of the Oregon Natural Resources Council. They seek the elimination of the livestock industry, in the Intermountain Basin at present and who knows where next?

Alston Chase, nationally syndicated writer in his *In A Dark Wood*, (Houghton Mifflin, N.Y. 1995, 535 pp.) thoroughly explores the preservationist theories. These are well meaning people who worship something called Nature and Biodiversity. Humans are just another species on the Earth and deserve less consideration than any plant or animal because Man is more adaptable than a spotted owl. Scientific methods developed to insure Truth are not considered viable; it is what 'feels good' that counts. The goal of those implementing the International Convention on Biological Diversity, signed by President Clinton, is to remove humans from about 47% of the United States to permit wilderness to re-establish, notes Mr. Chase. Policy will be made in the United Nations.

The new policy of the Environmental Protection Agency is to protect Nature, not human welfare. The new priority of the U.S. Forest Service is to restore health to the land, explained Dave Unger at the Rapid City meeting of SRM. Vice-President Al Gore has indeed re-invented government.

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