

road left him stranded in Oxford, Nebraska. While he was trying to catch a ride on a freight caboose, a young man sitting on the other side was watching him and presently came over. "Son," he said, "you are too sick to ride this thing. How far are you going?" When informed that he was trying to get to Wauneta, the man asked if he knew the Simses. When Artie told him that was his name, he said, "Then it was your people that took my kid brother in and took good care of him when he was starving last summer." It was John Casey's brother. He took Artie under his care until the trains were running and he was able to go home.

During the winter of 1989–90 the country was swept by an epidemic of "grippe," now called the flu. Samuel and Guy had it several times and each time it was harder for Samuel to get over it. The family remembered how he was outside on the evening of March 6, 1890, watching a sunset. He came in and went to bed early. They found him dead the next morning with a distinct smile on his face. His whole life had been a brave struggle against a heart-breaking health handicap in a hard land. At last he found rest and relief from pain. He was buried on a grassy slope in their pasture.

Artie was 19 and Guy was 11 when Samuel died. They continued to live on the place, farming and cattle raising. In the fall of 1890, the Sioux Indians on the Rosebud and Pine Ridge reservations became increasingly dissatisfied and started having war dances. In January 1891 the Indians took the war path and headed south. The medicine men had promised them that when they did the "ghost"

dances, all the fallen warriors would return and help drive the white man out. Artie went into Wanqueta, four miles away, to hear the latest news. He quickly returned with a report that there were 500 Indians south of the Platte. They turned out the livestock and stood guard all night. It was a false alarm. The Indians had started but were turned back. Many of the Indians were later killed at the "Battle of Wounded Knee."

On April 1, 1893, a terrific prairie fire swept across southwest Nebraska. A man-made fire had gotten out of control early in the morning near the Colorado state line and headed east, pushed by a strong northwest wind. By 1 pm it had moved over 80 miles east. The wind suddenly changed 90 degrees, blowing from the north. The fire was now moving south on an 80-mile fire front. Artie and Guy started backfires around their place, which allowed the fire to pass without damaging the homestead. The wind finally died down at sunset with the fire front near the Kansas-Nebraska line 20 miles to the south.

Samuel Sims had lived only 7 years on the homestead. His pioneering spirit was carried on by his family. His widow Alice lived on the original homestead until her death at the age of 97. Artie and Guy Sims fought in the Spanish-American War in the Philippines in 1898–1899. Artie Sims lived on the Frenchman River homestead until his death in 1936. Guy Sims died in Wauneta, Nebraska, in 1975 at the age of 96 plus. Artie Sims is the father of Belle Frasier and the grandfather of Gary Frasier. It took a hardy group of people to survive those early times. How many people would do it today?

Tohono O'odham Range History

Dan Robinett

The Tohono O'odham (formerly Papago) Nation lies in south central Arizona along the international boundary with Mexico. It contains approximately 2,845,000 acres of rangeland. The plant, animal, soil, and water resources of this diverse land have been utilized successfully by the native people for several hundred years without major impacts until recent times.

Two broad climatic areas occur on the Tohono O'odham Nation. Each is characterized by distinctive vegetation. The largest area is the Sonoran Desert. This area covers over 90 percent of the land. It is broken into two subdivisions for the purpose of range classification.

The Lower Sonoran Desert is the hottest and driest country. It occupies about 40 percent of the land area and occurs on the west side of the Nation. Rainfall averages 7 to 10 inches per year. Elevations range from 1,300 to 2,000 feet. Upland sites are characterized by shrubby vegeta-

tion. Grassy areas in this region are found in small bottoms and the large flood plains.

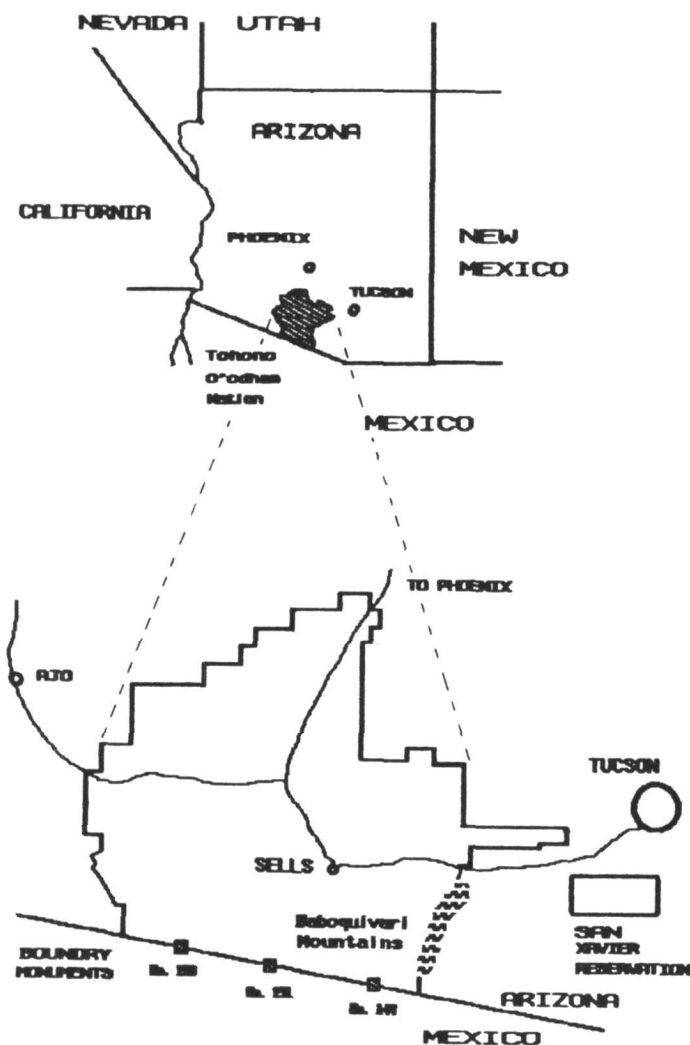
The Upper Sonoran Desert covers over 50 percent of the O'odham Nation at elevations from 2,000 to 2,900 feet. The average rainfall is 10 to 13 inches. Upland sites are characterized by paloverde, ironwood, mesquite, and saguaro forests with an understory of bursage, burro-weed, and snakeweed. These sites have the potential to grow grass instead of these half-shrubs. The bottom sites and the hill (mountain) sites in this region also have the potential for grasses and other forage species in their plant communities.

The other broad climatic area is the Desert Grassland. This area occurs on less than 10 percent of the land area and includes the Baboquivari Mountain Range, a flank of land around it, and the top of the Comobabi Ranges. It is broken into two subdivisions for range classification.

The first subdivision is the Desert Grassland. It occurs at elevations from 2,900 to 5,000 feet and has an average rainfall of 13 to 16 inches. Upland sites were once unbroken, grassy plains which now have covers of mes-

Editor's Note:

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In the summer, "akchin", or arroyo mouth, agriculture was practiced. Flood plain fields were cleared, plowed, and planted to native crops of corn, squash, and beans. Summer floods were diverted from the washes onto the fields to irrigate the quick growing varieties (Bryan 1925). Wild annuals which grew among the crops were used for seed and greens. These included such species as pigweed (chelite), pursley (verde lago), devils claw, and annual panic grass. During the summer various cactus fruits were harvested: saguaro, prickly pear, and pita-haya (organ pipe). Mesquite beans also provided an important food supply.

The summer villages relied on runoff water trapped in small, natural charcos or waterholes on the flood plain for their water supply. When these supplies dried up, the women would have to carry the water in ollas several miles from mountain springs to the "field" villages (Tatom 1975).

In the fall after harvest, each village group would move to their winter village near the permanent waters. Hunting to supply meat, tallow, and hides was an important activity at the "well" village. Examples of the paired villages included the summer (field) village of Kaka used by the winter villages of Moi Vaya and Chiulikam; Hickiwan (field) used by the winter village of Sikort Chuapo; Choullic (field) used by the winter villages of Chutum Vaya and Chui Vaya; and Pisinimo (field) used by the winter village of Stoa Vaya (Bryan 1925).

Commerce consisted of annual treks to the Gulf of California for salt and to the areas of Piman agriculture along the Gila River for trade. The O'odham brought saguaro fruit, chilitepenes, bellotas (acorns), baskets and fibers, dried meats, buckskin, tallow, salt, and red and yellow ochre to exchange for cotton blankets and fiber, rings of willow splints, devils claws, and dried beans, corn, squash, and pumpkin.

Existence, in this land where drought is common, was precarious. If the summer season of planting, harvesting, and gathering was a failure, the following winter brought starvation. Whole villages would move to better water supplies or to villages where crops had been good (Bryan 1925).

Change began in 1697 when the Jesuit missionary Fr. Eusabio Kino introduced new species of plants and animals to the Sonoran Desert. During several trips through this region from 1698 to 1706, Kino visited many villages including Pozo Verde, Fresnal, Vamori, Comobabi, Ko Vaya, Ak Chin, Gu Vo, Vaiva Vo, Kohakt, Anegam, and Kaka (Barnes and Granger 1979). He distributed small gifts of cattle, horses, and chickens as well as seed for wheat, melons, and fruit varieties. At San Xavier, his gifts of cattle, sheep, horses, and goats were the foundation herds along the Santa Cruz River (Bryan 1925, Hastings and Turner 1965). With Kino's death in 1711, the mission activity in the northern areas of New Spain declined and many herds of livestock went wild. In 1765, the Franciscans took over the Sonoran missions and their herds and fields prospered. In a very short time, by 1823, Apache fighting and raiding had caused the abandonment of the

quite, snakeweed, burroweed, and cacti. These sites still retain their grassland potential. Natural fires were important in maintaining these grasslands.

The second subdivision is the Oak Woodland-Grass Savannah, which occurs only along the top of the Baboquivari Mountains and Kitt Peak. It has an average annual rainfall of 16 to 24 inches and elevations from 5,000 to 7,700 feet. Hill sites in this area are characterized by grassy slopes with varying cover of live oak and juniper species. At the highest elevations, over 5,400 feet, the cover of oak and juniper thickens to form woodland. This area is little changed as most of it is so steep and rugged that grazing has had limited impact. Natural fires were important in the development of these plant communities.

Prior to European contact, The O'odham people were scattered throughout the Sonoran Desert in both Mexico and Arizona. They lived in the harsh interior surrounded by the Piman and Coloradan tribes along the wet river valleys to the east, north, and west. Village groups were semi-nomadic, moving from the winter village in the hills and mountains (the well—Vaya) to the summer villages in the alluvial valleys (the field—Oidak) (Hastings and Turner 1965).

Spanish missions and ranches in present day Arizona (Hastings and Turner 1965).

The Apache Wars lasted into the 1860's. With the Gadsen Purchase in 1855, European settlement began in earnest. Mining and ranching spread rapidly as the Apache were contained by the US Army (Hastings and Turner 1965). It was during this period of American settlement in the mid to late-1800's that cattle began to play a more important part in the O'odham economy.

The wild herds of cattle were, at the time, viewed as game and hunted by the O'odham. Prior to this time, the one or two appointed hunters in an O'odham village or family group brought in 10 to 15 deer, antelope, or big-horn sheep a year to provide for their group. With settlement, demands on the land increased. The deer and antelope became scarce and the hunters began killing half-wild cattle to provide for the village needs (Bauer 1968). In other instances, cattle were caught and teamed and used to plow fields in the manner taught at the missions.

As ranching spread, many O'odham were employed as vaqueros by the Anglo and Mexican cattlemen running cattle on O'odham lands (Hornady 1983). These operations were abandoned between 1911 and 1917 as the main

body of the Nation was reserved by law for the O'odham People. This large block added to the reserves at San Xavier established in 1874 and at Gila Bend established in 1882 (Tatom 1975).

O'odham who had learned the husbandry of cattle and horses from the ranchers began to form herds of their own (Bryan 1925). Cattle hunting became cattle ranching; the roles changed but the social structure remained. Grazing had the same arrangement as hunting. Village units used their former hunting areas for grazing their livestock. From 1900 to 1925, many new Indian ranches were started.

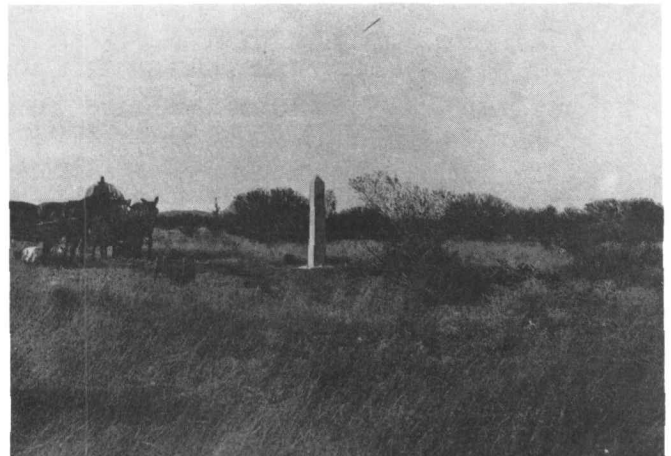
Deep wells were drilled for permanent water supplies during this period, first by Anglo and Mexican ranchers and then by the Indian Service (Bauer 1968). These wells turned summer villages into permanent settlements and lessened the use of winter villages. A tremendous boom in the number of cattle and horses occurred as permanent water supplies were developed in the once dry valleys.

By 1919, it was estimated there were 30,000 head of cattle and 30,000 horses on the main reservation (Bauer 1968, Wagoner 1949). This arid, desert rangeland was being subjected to grazing pressure of unnatural propor-



MONUMENT No. 144 (IRON), VIEW TO THE W.
On mesa west of Puro Verde Mountains.

MONUMENTO No. 144 (FIERRO), VISTA AL O.
En la mesa al oeste de la Sierra de Puro Verde.



MONUMENT No. 151 (IRON), VIEW TO THE N. W.

MONUMENTO No. 151 (FIERRO), VISTA AL N. O.



Desert grassland, Monument 144, 1893 (top); 1983 (bottom).



Upper Sonoran Desert, Monument 151, 1893 (top); 1983 (bottom).

tions. Native herbivores (deer, antelope, and bighorn) were few in number, small in size, and exerted limited grazing and browsing pressure. The huge herds of cattle, horses, and burros were stripping the rangeland of its protective cover of grasses and shrubs.

Then came the collapse of beef markets after WWI and the drought of 1921. Cattle sales plummeted. Animals remained on the range and died in great numbers (Wagoner 1949). Accelerated erosion began in the grasslands of the O'odham Nation. It was estimated that about three inches of topsoil was lost on a million acres and nine inches lost on another quarter million acres by 1940 (Bauer 1968). Photographs showed gullies forming in once grassy plains and bottoms (Humphrey 1987). Present day headcuts continue to proceed unchecked and threaten the remaining flood plains.

Efforts by the Indian Service to reduce livestock numbers to the estimated capacity have met with stiff resistance. Such efforts were taken as direct threats against the O'odham way of life. Cattle had become so ingrained in the local economy that they had become a reserve to the cattleowner. The need to be able to sell, trade, or consume livestock throughout the year came to be woven in

the fabric of O'odham social, economic, and ceremonial life. Even as the subsistence and barter economy changed to one of cash, the need for livestock remained the same (Bauer 1968, Blaine and Adams 1981).

The O'odham cattleowners clung to the early day methods of Anglo and Mexican cattlemen. Female stock were never sold. This practice insured that during the good years there would be plenty of animals on the range to use the abundant feed and, in droughts, the cattlemen would stay in business even if half the cows died. The practice largely continues today. O'odham cattleowners who felt their way of life threatened by any action to limit their animal numbers did not see that what really threatened their way of life was the deterioration of the land.

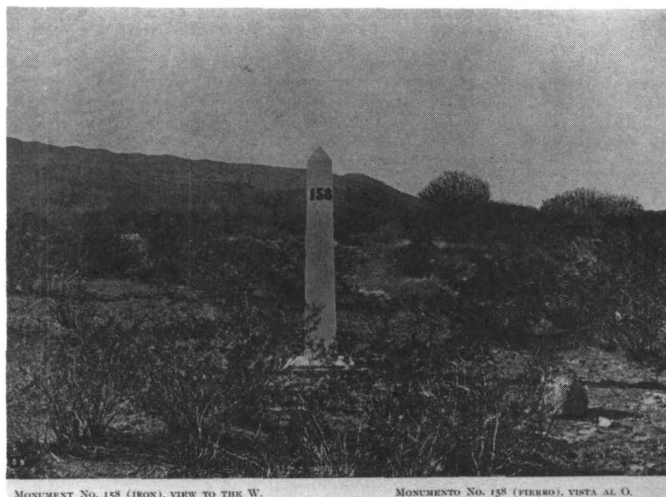
In recent times, little has changed on these rangelands. Herd size grows in successive wet years and is reduced in drought years as animals die off or fail to reproduce. The land continues to deteriorate, and as it does so, it can support fewer animals, less wildlife, and even fewer people.

Vegetative change, especially in the wetter, eastern parts of the O'odham Nation, has been pronounced. Photographs taken in 1893 show grassland areas open and uneroded. Present day photos show these areas now as mesquite-burroweed-snakeweed areas with serious erosion (boundary monument #144). Upper Sonoran lands once had grass under the mesquite, paloverde, and ironwood (boundary monument #151). Now these same areas have only bursage or burroweed growing under the trees. Only in Lower Sonoran areas to the west do the 1893 and present day photographs look the same (boundary monument #158) (Humphrey 1987).

Heavy, unrelenting grazing, no doubt, played a major role in these changes, but other things could have contributed as well. Fires which used to sweep grasslands have not been able to burn in the last ninety years. The grass needed to carry fire is grazed off before the period of dry, lightning storms in June and July. These fires may have helped keep these ranges open and shrub free. Also, there is some evidence that periods of subtle changes in rainfall patterns may have coincided with periods of heavy grazing and the combined action resulted in the rapid loss of plant cover, increased runoff, and erosion (Hastings and Turner 1965).

The plant communities that have replaced the grasslands and grass understories consist of plants that are not grazed by livestock. Many of these plants are protected by thorns or spines like mesquite, catclaw, cholla, and prickly pear. Other species like bursage, burroweed, and snakeweed have turpentine-like substances in their foliage and are poisonous to livestock. As the forage species were removed by heavy continuous grazing, these species invaded and occupied the vacant spaces.

The rangeland in the Upper Sonoran Desert and Desert Grassland region has great potential to change and improve. Management of grazing alone will do a great deal in restoring perennial grass cover on the land. Two-village based groups have fenced, crossfenced, and



MONUMENT NO. 158 (IRON), VIEW TO THE W.

MONUMENTO N.º 158 (PIEDRO), VISTA AL O.



Lower Sonoran Desert, Monument 158, 1893 (top); 1983 (bottom).

begun to rotate their herds in the southeastern area of the Nation. The formation of these "grazing associations" and their implementation of basic grazing management is achieving very positive results in terms of range condition. These and other examples prove that land *can* be grazed and produce beef, hide, and bone, as well as wood and wildlife, and still improve in condition.

The rangelands on the Tohono O'odham Nation are a tremendous resource for the people. The results of their deterioration can be seen and felt in the deserted villages, eroded bottom lands, dying animals and trees, flooding and droughts. Yet the potential to improve is there and these lands can become fruitful again.

The challenges of the future are many. There are limits to the land's ability to support large animals. Problems involving historic use areas and communal use must be resolved. Fair and equitable grazing privileges must be addressed. Restraint in the harvest of wildlife, wood, and plants must be practiced to insure survival and reproduc-

tion of those species. Some feel that changes of this nature threaten their rights and way of life. The real threat is to continue misusing the land and destroy its productivity entirely.

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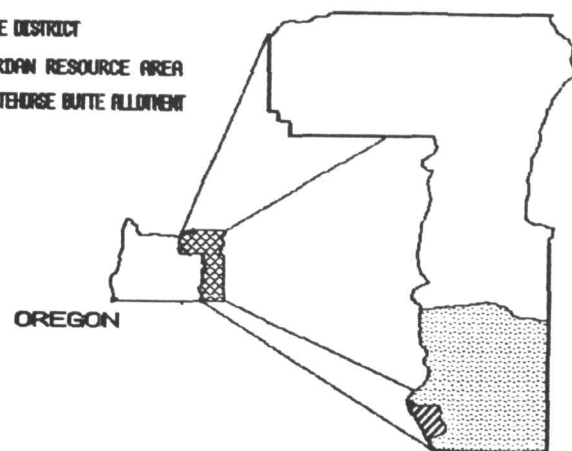
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Whitehorse Butte Allotment— Poor Public Range Policy?

George Wuerthner

There is substantial evidence that suggests that livestock grazing is one of the major sources of environmental degradation in the West, particularly on public lands. However, public land management agencies seldom consider eliminating domestic livestock grazing even when such an alternative would clearly enhance other public values and resources. To illustrate this point, I examined a recent Environmental Assessment completed by the Bureau of Land Management for its 126,982-acre Whitehorse Butte Allotment in the Trout Creek Mountains of southeastern Oregon. The principles and questions I raise could easily apply to thousands of other grazing allotments throughout the West and given the changing uses and value of public lands, one can question if livestock grazing is still an appropriate use of our public rangelands.

In its Environmental Assessment of the Whitehorse Butte allotment the BLM admits that past and present



livestock management in this area has contributed to a downward trend and loss of quality for many public resources including recreation, wildlife, and fisheries. To mitigate the impacts attributed to livestock grazing, the BLM suggests some management changes including expensive range developments to correct the problem (Vale BLM 1989). The remedy will cost taxpayers hundreds of thousands of dollars and return almost no money to the federal treasury. Since the single justification for the improvements is to mitigate negative impacts from livestock grazing, one can question if the best solution