The Ewenki People: China’s Practitioners of Sustainable Rangeland Management

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During late summer many ranchers in western North America are busy harvesting hay to provide winter forage for their cattle. Half a world away, the Ewenki people of northern China are similarly engaged. The Ewenki people of Chenbar Banner (county) in Inner Mongolia, P.R. China, near the border with Russia, have evolved a lifestyle that derives the necessities of life from the vast grasslands that are their heritage.

The Ewenki People

The Ewenki are one of the 56 ethnic minority groups in China. They are an ancient people with a new name. The name Ewenki was chosen in 1957 as part of the Chinese government’s modernization efforts. Prior to 1957 they were known as Suelon Tungqu Yakute. The name dates these people back to the days of Ghenghis Kahn and the tribes that comprised the Mongol empire. They have a long history associated with livestock production dating from the Tang Dynasty (618–907). Historically, hunting played an important role in their culture and still does for Ewenki people in some portions of China. About 20,000 Ewenki people, consisting of ten tribes, are distributed among about eight counties in China. In Chenbar Banner, the Ewenki are a minority numbering about 4,500 or about 4 percent of the population living among Hang, Mongolian, Dahur and other nationalities. Most of the Ewenki people in Chenbar Banner are herdsmen and earn their living from animal husbandry. Some Ewenki are also artisans famous for creating wood chests and small boxes of birch bark. Sometimes these boxes are covered with traditional paintings. They are also known for crafting leather from wild animal skins into beautiful saddle bags. The leather work is sewn using needles made from animal bone.

Chenbar Grasslands

Chenbar Banner is located in the Northwest portion of Hulunbier League and is a vast 19,195 square kilometer area of lush rangeland that supports herds of cattle, sheep and horses under the guidance of herdsmen. These are some of China’s most spectacular grasslands. Standing on a hilltop watching the long awns of the grand Stipa being blown by the wind reminds one of the rolling motion of waves on the ocean. The plant communities consist of about 23 dominant plant species including a variety of

Map showing the location of the Ewenki people in northeastern China.
hair, wheat, and rye grasses intermingled with a complex component of forbes. In some areas forbes comprise 60 percent of the plant community and it is not unusual for Stipa to comprise as much as 30 percent of the ground cover. Legumes are very common and provide important forage for domestic livestock. Average production of steppe communities in this region is about 614 pounds per acre. The grasslands are also home to familiar plants introduced to North America such as crested wheatgrass and spotted knapweed. These plants grow as native species intermingled with other plants of the grassland in contrast to North America where they are usually observed growing under near mono culture conditions. Fringed sagewort, the same species indigenous to North America, is also an important native forage plant in northeastern China.

**Climate**

Chenbar Banner is located 48° North and thus exhibits a temperate climate. The annual average temperature is from 21°F to 29°F. January is the coldest month with an average temperature of −18°F to −36°F. The recorded coldest temperature for January is −57°F. July is the warmest month with an average temperature of 68°F. The hottest temperature on record for July is 101°F. There are an average of 100 to 140 frost-free days each year. Average annual precipitation is 12 inches with the eastern portion receiving 14–16 inches while the western portion receives 10–12 inches. The average number of days with snow on the ground is 210.

**Livestock**

Stockmen in this region produce cattle, horses, sheep, and goats. However the area really appeared to be cattle country. Herdsmen have taken the traditional Mongolian cattle and crossed them with Holstein, Hereford, Simmental and other European breeds. The result is larger multi-colored cattle and significantly increased production of beef.

Sheep are also important. The traditional fat-tailed sheep is a common sight on the steppe. Horses are very important culturally and are considered a valued commodity by families for the distilled or fermented drinks produced from mare’s milk. Horses in Chenbar Banner are larger than some other regions of northern China. Probably the close proximity to Russia has facilitated the crossing of the traditional Mongol ponies with European breeds. Historically the larger horses were used for pulling horse-drawn mowing machines to convert the steppe grasslands to livestock winter forage.

Livestock are managed by families, each of which averages about 200 sheep and 50–60 cows. Numbers are variable and families that can maintain these numbers live comfortably; below this level, meeting life needs becomes difficult. Although there is some overlapping use of rangelands or pooling of resources, by government decree each family averages about 600 acres of land on which they maintain their herds. In some areas crops of oats are grown to serve as supplemental livestock feed.
Utilization of Grassland Resources

Survival of the Ewenki people has, for thousands of years, depended on their ability to maintain livestock production in a manner that maintains the sustainability of grasslands. They have evolved with the grasslands and their very existence is tied to the maintenance of rangeland productivity. It is fascinating to watch these experienced managers at work and observe how they utilize the grassland resource without negatively affecting its sustainability.

How grasslands are utilized is dependent on the distribution of water sources for livestock. Grasslands suitable for livestock production are classified into two types. Those with water for grazing animals and those without or with very limited water sources.

Grasslands Without Suitable Livestock Water

Areas in which livestock water is limited are utilized for the production of winter livestock forage by allowing the native vegetation to grow until late summer, then harvesting it similar to the way a hay crop is harvested in western North America. Native grasslands are mowed using mowing machines pulled by small diesel tractors. The tractors recently replaced mowing machines pulled by real "horse power". These are very productive rangelands with a lush mixture of grasses and forbs making good quality hay. Ecologically this also is a wise way to use the range in a sustainable way. The vegetation is allowed to develop fully each year before it is harvested, so the ecological integrity of the resource is maintained as the Asian stockmen harvest much needed forage to maintain their herds. Probably more efficient and cost effective than trying to construct very expensive water developments that may likely lead to continuous summer grazing and rangeland deterioration. Current research by scientists in China indicates mowing in alternate years, providing one year of rest as a management strategy, maintains the grasslands at maximum productivity. An interesting component of these grasslands is a diverse variety of birds and small mammals which indicate the level of sustainability provided by this form of management.

Grasslands With Suitable Livestock Water

Grasslands with suitable sources of water for livestock are utilized as pasture for livestock. Observing how the Ewenki graze animals on these lands provided insight into how they have been able to utilize the rangeland resource in a sustainable way for such a long time.

The relationship between the stockman and his livestock is much different than in North America. Ewenki herding families live with their livestock. The Ewenki stay with their bands of livestock while they are grazing and very closely regulate the animals grazing behavior. A typical day for the herder is to leave camp for the grazing area with a small band of livestock, herding the animals along the steppe with the aid of his Mongol pony. While grazing, livestock are kept constantly moving slowly across the landscape, limiting the amount of photosynthetic material that can be removed from individual plants at any given point in time. As illustrated in the photo, only a small portion of the plants foliage is removed which results in minimal disruption of

Ewenki herders mowing the native steppe vegetation for use as winter livestock forage.
the photosynthetic process and allows the plant to continue essential biological and physiological processes. Once grazed under this approach the plant can quickly recover from the effects of defoliation. The livestock are kept moving to new locations by the herder and if the same area is subjected to grazing later that same season, it may be by a different class of livestock with different forage preferences.

By grazing with a diversity of livestock, horses, sheep, goats, and cattle the Ewenki have learned to take advantage of the preferences of different species to obtain optimum use of the diverse vegetation produced on their grasslands. By passing over the range with cattle, and later with sheep, the plants previously grazed by cattle may not be grazed by sheep as they may prefer different species. Thus the range can be utilized yet the necessary growing season rest can be achieved by close association between herder and his livestock. This approach would not be practical in most situations in North America because of cultural differences and the intensity of manpower required to manage livestock under the Asian method described here. Dogs are also included as an important part of the Ewenki herders operation. However dogs are not used to herd livestock as in North America. The dog serves as protector against predation by wolves which are abundant on the Mongolian Plateau. Dogs appear to be effective enough as protectors that substantial populations of wolves survive on landscapes that maintain some of the highest densities of domestic livestock on the planet.

Implications:

In our world of high technology it is important not to overlook the practical knowledge of experienced range managers like the Ewenki people of northeastern China. Their knowledge of grasslands and their approach to management was not developed through a detached scientific approach, but by day-to-day survival. They are as integral to the grasslands as the vegetation and soils that maintain their way of life. Their survival attests to the resource sustainability of Ewenki land management practices. Scientists would do well to learn from the ways of these ancient range managers.

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