

# The Tsaatan Culture And The Management Of Mongolian Reindeer

Jerry Haigh<sup>1,2</sup> and Morgan Keay<sup>2</sup>

<sup>1</sup> Dept of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK S7N 5B4, CANADA	<sup>2</sup> The Itgel Foundation, 1243 Arroyo Chico Dr, Boulder, CO 80302 USA
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## Introduction

The Tsaatan (or Dukha) people of north-western Mongolia are one of the few remaining reindeer herding groups in the world. Today, territorial homelands of the Tsaatan are confined to approximately 20,000 km<sup>2</sup> in the mountain ranges and forest (taiga) between 51<sup>0</sup> and 52<sup>0</sup> N and 98<sup>0</sup> and 100<sup>0</sup> E in the northern and western parts of Mongolia's Hovsgol province, or *aimag*, in the districts, or *soums*, of Tsaagan Nuur, Ulaan Uul, and Rhenchinlumbe. They live and move with their reindeer in the Eastern Sayan mountains that span the Siberian and Mongolian border (1,500-3,600 m). Most of the herding and camp locations lie between 1,850 and 2,100 m and migrations with the stock occur between seasonal rangelands that are selected by herders based on forage availability, access to town centers, outside visitors, and natural resources such as nuts, berries, and wild game.

The Tsaatan are also the most southerly indigenous reindeer herders known, so their animals are adapted to high temperatures (40<sup>0</sup>C) in summer. The deer in this community are also notable for their ability to be used as pack and riding animals by the Tsaatan people, which has created docility and endurance in the herds. The use of reindeer as transport animals is a dominant feature of the Tsaatan's reindeer husbandry, as is milking deer for dairy products.

A close association between the Tsaatan and their stock has led to a marked degree of domestication. It is common for reindeer to be released from their tethers at dawn, move off to feed for a few hours, and return to camp, without coercion, by about mid-day. Others are herded back in late afternoon by community members on saddled reindeer. Supplemental treats such as salt licks and mineral tonics are offered to deer by hand, aiding in their handleability and familiarity with humans. The mutually beneficial relationship between Tsaatan and their deer reinforces a distinct element of interdependence found in the community.

The Tsaatan's system of reindeer husbandry, characterized by small-scale herding, notable degrees of domestication, and utilization of reindeer for milk rather than meat, and as transport animals is distinct from those of other reindeer herding peoples of the circumpolar region. It is in striking contrast to the large-scale reindeer management systems used by the Saami peoples of Scandinavia and the Inuit and Eskimos of northwestern Canada and Alaska, who have oriented their reindeer economies largely towards commercial meat, pelt and antler production. For the Tsaatan, reindeer

husbandry remains deeply rooted in subsistence traditions as well as cultural and spiritual systems that are uniquely Tsaatan.

Some elements in the Tsaatan community do resemble characteristic of the Evenki and Eveny people of Siberia who use their animals for riding in summer and for hauling sleds in winter (Ermolova 2003, Vitebsky 2005). Three other related ethnic groups, the Soyote, Todja, and the Tufa, all of whom live on the Siberian side of the border, also share common elements, suggesting strong ancestral connection between the various reindeer herding peoples found in the region.

Like many of these reindeer herding groups, the Tsaatan currently face a wide spectrum of challenges as they struggle to maintain their ancestral lifestyle in an ever-changing world. Globalization, modernity, and changing socio-political trends have meant extreme shifts in social, political, economic, cultural, technological, and linguistic landscapes for the Tsaatan in recent decades. Perhaps most notable are the two major political transitions Mongolia underwent in the 20<sup>th</sup> century, each with significant ramifications for Tsaatan herders.

The first occurred in 1921 as Mongolia entered its socialist period as a result of Soviet occupation. The subsequent collectivization, relocation, and sporadic slaughters of Tsaatan herds did much to hurl the subsistence community into unfamiliar territory. Then in 1991, with Mongolia's emergence as a free-market democracy, new changes in legislation, land-use, and the sudden influence of the global community presented further changes. By the dawn of the new millennium, the Tsaatan had endured near constant persecution, disregard, and radical change for nearly a century, each with consequences on the health and sustainability of their interdependent herds.

In 1977, the population of domesticated reindeer in Mongolia was estimated to be 2,275. In the following decade, this number sank to approximately 600, as relocation of herds and herders and interruption of traditional husbandry practices took their toll. In the mid 1980s, a reindeer collective was established in the district of Tsaagan Nuur as an attempt to transform local subsistence reindeer husbandry into a market-based industry to produce velvet antlers for sale on the Asian market. Herd sizes grew to a reported 1200, with help from state-provided veterinary care, strategic breeding programs, and the import of reindeer from Siberia's Tyva province in 1986 (Jernsletten & Klovov, 2002). But after the political transition in 1991, these resources were removed, leaving a reduced number of reindeer-herding Tsaatan families with the challenge of revitalizing the community's way of life. Since then, the total herd size dropped to approximately 700 head by 2006, with only a handful of years of herd stability or minimal growth.

Today, the absence of state-provided veterinary care in post-socialist times, high rates of calf mortality, an increased dependence on reindeer as a meat source due to changes in hunting scenarios, and an assortment of diseases all stand as threats to a population resurgence. Perhaps not surprisingly given the significant role reindeer play in Tsaatan social, economic, spiritual, and subsistence activities, many herders have identified the precarious state of their herds as the principal threat to the maintenance of

their culture. Therefore, there is a need to address matters of herd health, management, and sustainability if the Tsaatan community is to endure. With requests from and participation by Tsaatan families, we undertook the following research to better understand Tsaatan reindeer husbandry, and to investigate threats to this lifestyle in a manner that is relevant to and compatible with current Tsaatan culture, and which serve to promote herd health and community sustainability. We addresses questions such as, 1) What is the current role of reindeer in the Tsaatan system of reindeer husbandry, and to what extent is Tsaatan culture contingent on the perpetuation of reindeer husbandry? 2) What is the current state of the herds? 3) What threats exist to herd health and population stability? 4) What recommendations, if any, may serve to enhance the Tsaatan's ability to achieve a sustainable system of reindeer husbandry?

## **Materials and Methods**

### *Cultural elements*

Ethnographic and observational findings on culture, language and identity gathered by Keay in 2002 during immersion into the community served as the basis for continued investigations in 2004 and 2005 on cultural significance of reindeer for the Tsaatan. Interviews on religious and linguistic relevance of reindeer to Tsaatan cultural identity were conducted with nearly every Tsaatan family in each taiga during visits in August and October 2004, and August and September 2005. Translators were employed as necessary, but investigator's conversational knowledge of Mongolian helped to facilitate more natural and personal dialogue.

### *Herd structure and management*

Interviews and observational methods were employed in 2002, 2004, and 2005 for the purpose of chronicling Tsaatan management trends and challenges. We collected demographic data during the three years in spring, summer, and autumn field seasons by questionnaire and informal dialogue. Herders were asked a series of questions regarding the make-up and recent history of their herd, in order to provide an understanding of current trends and population demographics.

### *Disease studies*

At the request of several herders, we investigated the disease status of the herd through veterinary methods in August 2004 and September 2005, with particular emphasis on brucellosis. We also carried out clinical examinations on sick reindeer that were presented to us by their owners. Methods and results will be reported elsewhere.

### *Socio-economic context*

Because Tsaatan culture exists within a greater context of socio-economic realities, and because the practice of reindeer husbandry occurs within, and is informed by this framework, we investigated the current conditions and factors present in the Tsaatan context that may have an effect on reindeer husbandry. Investigations in the form of interviews and observational methods were carried out in 2002, 2004, and 2005 to further understand and assess local economic conditions and social trends with a particular emphasis on how and to what extent these impact reindeer husbandry.

## **Results**

### *Cultural elements*

Discussions and participation in daily life revealed that reindeer remain at the core of cultural identity, specifically as demonstrated through shamanic traditions and the preservation of linguistic heritage. Herders cite that shamans play an active role in the maintenance of healthy herds, while observations seem to indicate that the presence of reindeer play a vital role in the perpetuation of shamanistic practice. Thus reindeer and shamanistic practice have somewhat of a mutually dependent relationship, supporting the notion that reindeer are inextricable from Tsaatan culture.

Linguistically, reindeer were found to create a significant context for cultural integrity and identity. While the colloquial use of the community's ancestral Tyvan wanes, instead replaced with Mongolian, terms and words from the language specific to reindeer husbandry, such as classification of reindeer types (i.e., castrated male, bull, calf), tools and objects used in herding, and seasonal trends relevant to the tradition, are still used. Tyvan vocabulary is also used to describe and classify floral species relevant to reindeer husbandry (Flenniken 2005). Thus, reindeer act as a context for preserving the community's linguistic roots.

It is worth noting that upon being asked what herders perceived to be of greatest value in their life, family and reindeer were overwhelmingly the most common two responses offered. While the specific role of reindeer continues to be reshaped, findings suggest that reindeer remain the single most defining element in the community's cultural identity.

### *Herd structure and management*

Observational and interview methods established that Tsaatan herds are managed in small units belonging to each immediate family, ranging in size from 7-160. Individual deer are branded (using scissors to hatch letters into fur), but are often grazed together with herds belonging to other families. Deer are free-ranging and are released from small wooden stakes in the ground in the early morning and are free to graze with little interference from herders throughout the day.

There is significant variability among herders' ability to recall herd history and current demographic data. In summer 2004, herders requested record-keeping books which could supplement existing systems of identification and management. We produced and distributed record-keeping books to each Tsaatan family (n=37) in October 2004, but found that only 3 families were utilizing the books by summer 2005.

Some herders cite inability to identify individual animals as a source of difficulty in successful management and decisions such as bull selection, castration of males, exchanges of bulls, intermingling of herds, and selective breeding. Additionally, annual treatments of anthelmintic medication to deal with infestation of parasites such as warbles

and nasal bots are difficult because individuals cannot be properly identified, periodically resulting in double-dosing or skipped animals.

Many Tsaatan herders can identify individual animals, and most families currently use some combination of hatching fur with scissors, ear piercing, tying ribbons around necks, and visual recognition as tactics for animal identification. These strategies are imperative to retain if existing or future management strategies are to be successfully employed.

Existing management activities common in the community are as follows. Daily milking of lactating cows prior to morning release from stakes occurs between 5 and 9 am depending on weather, family habits, and number of deer. The median yield of milk from this process per family is approx.  $\frac{3}{4}$  liter. After milking, deer are released for “free grazing,” during which time groups of reindeer typically cover 1-10 km (Flenniken 2005). Calves are sometimes permitted to graze with cows, or may be released later in the day. Decisions on this are dependent on factors such as a family’s need for milk or the current threat of predators. Herds are actively brought back to camp in the afternoon or evening by Tsaatan herders, a process that often involves riding reindeer to be used as herding animals. Cows are staked down separate from calves at night, and may be milked again if there is a need for additional milk.

Family groups gather in larger encampments during the summer, consisting of as many as 350 deer. Low, open valleys with rich lichen sources are selected as summer grazing grounds. Summer camps typically contain more grass than other seasonal pastures, and families who own “Mongolian livestock” such as horses, goats, or cows, may herd all stock together at this time before separating animals at various locations for the fall. Velvet antler is sometimes harvested in June and July, while hard antler may be cut in August for the purpose of preventing injury or for use in handicrafts. Rudimentary tools such as metal wood-cutting saws may be utilized. Access to sterile equipment and supplies or anaesthetic is uncommon.

As early as August, families migrate to fall pastures, characterized by lichen, willow, and other vascular plants. Fall camps are typically on forest edges, in tighter valleys, and offer more protection from wind, snow, and rain. Rut occurs at these camps, beginning as early as mid-September. Herders maintain an essentially “passive” role during rut, allowing bulls free access to reproductive females during day-time grazing, while separating them by tying bulls to stakes apart from cows at night. Bulls remain docile enough to be handled and even ridden during rut, with few exceptions. None of the Tsaatan herders we spoke with could recall an incident resulting in injury caused by handling a bull in rut. During rut, Tsaatan encampments may contain 1-14 families, with herds ranging in size from 10-250 deer total per camp. Number of bulls varies by camp and from year to year.

Winter camps are often deep within the forest, and will be utilized as early as October. Number of families is usually low. While forage may be buried beneath drifted

snow, or water sources frozen, little action is taken to provide supplemental feed or aid in water acquisition. Castration and slaughtering may occur during this time of year.

Spring camps, similar to fall, are located on the edge of forest and taiga valleys, and are characterized by diverse plant resources and landscape which offers protection from elements. Calving is more or less passive, and typically occurs while cows are grazing in spring pastures away from encampments. Calf mortality is significant, and remains a prime challenging factor to the sustainability of the Tsaatan's herds. Causes include wolf predation, inability or unwillingness to suckle, diarrhea, general weakness, and others.

Limited investigation was conducted regarding the slaughter of reindeer for meat. Because this matter is somewhat of a cultural taboo, findings were limited to informal dialogue and observations on the practice. On average, families seem to slaughter between less than one and three deer per year to accommodate food needs, with frequency largely dependent on family size, and the number of reindeer owned by a given family. Herders cite concern over the practice, both for cultural reasons, and based on the perception that herd sizes may dwindle as a result. Typical slaughter animals were male castrates.

#### *Socio-economic context*

A diverse array of socio-economic factors were identified as having a moderate to significant impact on reindeer husbandry and its ability to be sustained. These included interest in shadow economic activities by herders such as the collection and sale of natural resources (i.e., berries, nuts) or employment in settled areas, desire to have improved access to education (schools), medical care (hospitals), and political activities (places of voting and local government function) and consequent shifts in migratory movement and pasture selection, ecotourism and increased visits by non-Tsaatan individuals including NGOs, researchers, and students and related cultural/biological impacts, decreases in desire to lead a nomadic subsistence lifestyle, and loss of cultural transmission.

With regard to each of these factors, it is imperative that careful consideration of impact on herd health and the sustainability of reindeer husbandry be given in the development and pursuit of these activities. This will help to minimize interference or damage to the community's primary subsistence and economic resource, their deer.

#### **Conclusion**

It is clear that reindeer play a critical role in the cultural and economic integrity of the Tsaatan community, and that the perpetuation of Tsaatan culture as it is defined and understood in cultural, spiritual, linguistic, and economic terms is fundamentally dependent on reindeer husbandry. While conditions and context have changed dramatically for the group over the last century, reindeer have remained the cultural constant through which decisions, actions, and priorities are informed and determined. In light of this fact, there is a real need to evaluate present conditions, and determine what

steps may be necessary to ensure the sustainability of this critical cultural and economic resource. That said, it is concerning that present herd conditions were found to be unstable, threatened by disease, management difficulties, mortality, and even socio-economic trends. If these factors are to be mitigated with the ultimate goal of sustainability in mind, it is imperative that a more comprehensive consideration of reindeer husbandry in all its complexity be considered both from within and outside of the Tsaatan community so as to move away from instability and towards sustainability.

We believe our work has contributed to a deeper understanding of the Tsaatan community, and that this research qualitatively and quantitatively assesses current conditions of reindeer husbandry in this system. We hope the information gathered herein can serve to assist this community in maintaining a successful reindeer husbandry tradition, and an optimistic outlook on the future.

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Dr. Jerry Haigh BVMS MSc FRCVS is employed at the Western College of Veterinary Medicine, University of Saskatchewan in Saskatoon, Canada. Before moving to Canada he worked for ten years in East Africa and has published a memoir of those times called *Wrestling With Rhinos: The Adventures of a Glasgow Vet in Kenya*. He has thirty years of experience with several species of both wild and domestic deer on four continents as well as a long-term continuing interest in African wildlife. He has published a book on deer farming as well as over 300 scientific, extension and magazine articles on a variety of topics related to deer farming, wildlife and wildlife utilization.

Morgan G. Keay BA is co-founder and Executive Director of The Itgel Foundation, a non governmental organization based jointly in the US and Mongolia that is committed to protecting Mongolia's cultural and environmental legacy through grassroots projects. Conversant in the Mongolian language, Keay has worked extensively with the Tsaatan community since 2002, catalyzing sustainable development initiatives at the local level in close collaboration with Tsaatan herders. She is actively involved in Mongolian cultural organizations throughout the world, and was awarded honorary membership in 2004 for outstanding service to the Mongolian community by the Mongolian Community Association of Colorado. She holds a Bachelor's degree in Environmental, Population, and Organismic Biology as well as Religious Studies from the University of Colorado at Boulder.