

# Mongol Adjustment to the Natural Environment

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Some Eurasians, including the ancestors of the Mongols, have been pastoral nomads for millennia. During most (if not all) of this time, they have interacted with agricultural and urban groups. Pastoralists were nearly always dominant militarily, made conquests of and created empires in the sedentary world, but they stood to lose their advantage and much else if they became too entangled with the sedentary world or became sedentary themselves. The Mongols have always seen sedentary life as debilitating and destructive of their cherished way of life. To prevent this, they would return to the old ways and discard whatever adopted elements of foreign cultures that were not compatible with pastoral nomadism. This is a classic pattern of steppe-sedentary interaction: interacting/changing alternating with retreating/renewing.

Draw an imaginary line running from the Pacific Ocean across Manchuria and westward across the pastoral belt into the Russian steppe, through southwest Asia (the Near East) and then dividing, one line reaching across North Africa and another running through the East African Rift almost to the southernmost part of the continent. This line separates people whose way of life is based on agriculture and urbanism from people who are mounted pastoral nomads. This division has given rise to a number of pairs of contrasting terms: sedentary and nomadic, steppe and sown, plow and sword, farmer and pastoralist, Cain (farmer) and Abel (pastoralist). Such polar terms, however, tempt their users to ignore the interaction between the two, which may vary for each pair, and ignore as well differences even among pastoralists in their adjustment to the natural environment.

In order to study the fluid, flexible, pastoral nomadic culture, it is better to separate it from any interaction with a relatively stable and sedentary unit. For this purpose, Myres views pastoral nomadism as if

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*This article is a summary of the first two chapters (and part of the third) of a work in process, Mongols and the Outside World, by Paul Buell and Angelo Anastasio, which is extensively documented and describes patterns of the traditional culture, some of which are no longer practiced.*

it were independent of any other use of the natural environment than on animals. According to Myres pastoral nomadism is:

. . . that mode of life in which a human community is enabled, through its control of domestic animals, and also through its own dependence on them, to dispense with the cultivation or even the necessary collecting of plants or plant food, or any deliberate interference with the natural vegetation of a region. It also dispenses with any permanent abode; for such a nomad community can (and must) wander wherever its animals find pasture; and it maintains itself with the . . . products of its cattle. . . .<sup>1</sup>

In this definition are found the basic elements of Mongol pastoral nomadism:

1. Dependence on domesticated animals which follow a natural seasonal cycle in their search for food, water and shelter.
2. Since the herders do little to assist the animals, they are obliged to follow them in their cycle--i.e., to be nomadic.
3. The necessary mobility makes any sort of permanent settlement difficult or impossible. Hence, the material components of the culture must be stripped for mobility--limited to what can be transported by pack and cart animals.
4. Pastoral nomadism must be self-sufficient since its technical and subsistence resources are obtained only from the animals.

This definition is an ideal which may state a goal, but a goal which cannot be attained in actuality because self-sufficiency cannot be based on domestic animal products alone--there is no known pastoral group which has ever done so. If we think of self-sufficiency as a circle, it is an open circle which may be more nearly closed for one group than another, but is never completely closed for any group. The term pastoral nomadism sets the focus, the values and orientation of the Mongols, but pure pastoralism was and is impossible, even for them.

Historical interest has centered on the long-standing interaction of pastoral nomadism with the sedentary world, hence the frequent

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<sup>1</sup> John L. Myres, "Nomadism," *Journal of the Royal Anthropological Institute* 71, pts. 1 and 2 (1941), 19-41.



failure to present a full description of the nomadic world on its own terms. In describing the interaction and fusion of cultures, Kroeber<sup>2</sup> classified pastoral nomadism as a half-culture, implying (if not saying) that such a group might not exist without interaction with sedentary culture. In our view, a pastoral nomadic group, once it is fully operative, can exist without interacting with the sedentary world. The Mongols depended on hunting, gathering, sporadic fishing and cultivation, and even did a bit of mining, all of which, taken together, enabled them to be independent of the outside world. These supplementary subsistence activities, which could make them self-sufficient, are described below. The Mongols nevertheless also chose to be involved with the outside world.

It is likely that pastoral nomadism first developed in central Eurasia. The area of Eurasia within which it is practiced extends for about 5,000 miles--from the Carpathian Mountains in southern Poland, southern Ukraine and northeast Romania and eastward into Manchuria. The western (European) area ranges from below sea level to about 1,200 feet above. About 80 degrees latitude (east of Lake Balkash), the terrain rises fairly rapidly into the eastern (Asian) sector. The climate is cold (since it is cut off from the monsoon climate of southern Asia by ranges of mountains), with the highest temperatures being those of Tibet, south of Mongolia. The three northernmost climate ranges are the Arctic, Tundra and forested Taiga. The extreme cold of these areas is felt in the pastoral belt below the Taiga. Prevailing winds are from the west, but the moderating influence of the Atlantic Ocean diminishes as one moves eastward until it has little (if any) effect in Asia. The result is that the climate of the Mongol territory is the most extreme of the sub-Taiga regions of Eurasia--"Continentality at its fiercest," as someone once put it.

The Mongol heartland includes:

- a) the Mongolian People's Republic, often abbreviated MPR;
- b) the Dzungarian Basin in Sinkiang, Ninghsia Basin, Inner Mongolia and part of Manchuria, all within Chinese political boundaries; and
- c) the Sayan and Baikal areas within the boundaries of the USSR.

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<sup>2</sup> Alfred L. Kroeber, *Anthropology* (New York: Harcourt, Brace and Co., 1948), 277-8.

In general, Mongol landforms consist of connected basins, valleys and plains surrounded and intersected by mountains and hills. The largest of the plains is that with the Gobi Desert in its center. It averages about 4,800 feet in elevation, sloping from 6,000 feet in the north to 5,300 in the south, with a few places below 3,000. While most of the plain is flat, it is broken up by intersecting mountains, hills, valleys and badlands, such as the ravines and gullies created by the frequent violent storms.

The pastoral belt has rainfall of less than twenty inches per year, which is minimal for trees, and hence the pastoral belt consists mostly of grassland and scrubland. The northern part is grassland, called *step'* in Russian. Steppe is characterized as a level area, with fertile black soil, well drained and covered with more or less dense vegetation, mainly grasses which furnish fodder from spring to fall. Vegetation also includes wild onions and mushrooms, wormwood and sage. In June a profusion of various flowers turns entire square miles into carpets of reds, yellows, blues, purples and whites.

While outsiders refer to the central part of the plain as the Gobi Desert, the Mongols do not. Their term is *gov'*, meaning scrubland, which is a more suitable description. Of the four types of desert mentioned above, true sand desert resembling that of the Sahara in North Africa, occupies only five per cent of the area. Most of the rest is gravel (stone) desert. Erosion by winds from the north and northwest removes the soil, transporting it up to hundreds of miles into China (where it is redeposited as fertile loess soil which has leveled the original topography). In Mongolia the result is level plains with the gravel surface worn smooth and protecting whatever earth lies underneath. Other types of desert are clay, loess and sand. Gravel desert has little vegetation, clay desert even less. With the spring rains, Loess and sand deserts bloom with bulbous plants, especially that bulb which produces meadow grass. Other desert plants include wormwood, saksaul which grows as tall as ten to twelve feet and offers food for camels, and the tsulhir (genus *Agriophyllus*) and xarmag (genus *Nitraria*), which are food for both camels and humans.

There are important variations in yearly precipitation. The Mongolian Plateau receives fifteen to twenty inches where it merges with the Taiga on its north, but rainfall diminishes to about six inches in the central Gobi Desert. The Alashan and Ordos deserts get less than ten inches, while the Tarim Basin gets three to four inches at its eastern end and about 0.5 inches in its central Taklamakan Desert. Because of



their heights, the mountains receive between sixteen and twenty inches of precipitation yearly on their windward slopes. This produces forests and lush grasslands. The leeward slopes receive much less precipitation and are quite barren of vegetation. The watered mountain pastures are among the favorite grazing lands of the Mongols.

Aspects of the open, treeless terrain to which the wild animals must adapt are the lack of cover against enemies and weather, and the types, locations and relative abundance of food. Almost half of the fauna are rodents. Some, mole-like, live entirely underground. Others live underground but feed on the surface. These include marmots, hamsters, jerboas, field mice, and a type of prairie dog. Their very numerous burrow openings and mounds make travel dangerous for animals and humans.

The other dominant animals are the ungulates. Like the rodents, they are gregarious and live in flocks and herds. The antelope was once most common and numerous, being reported in herds of thousands. Other ungulates included gazelle, wild ass, wild horse, deer, elk and mountain goat. The camel, not an ungulate, also roamed wild in the more desert areas. These animals, especially the ungulates, were so numerous and so suitable to mounted hunting that they formed a very important subsistence supplement for the Mongols.

Feeding on the large numbers of rodents and ungulates are the many predators native to the area and others which visit from surrounding areas. These include the wolf, fox, jackal, wildcat, tiger, leopard and cheetah. Many types of birds are adjusted to particular micro-environments: perching birds such as owl, grouse and partridge are best-suited to treed areas, ground-oriented birds (such as pigeon and quail) remain near vegetal growth, which provides shelter and concealment. Seed eaters like the grouse prefer clay or gravel deserts because seeds lie exposed. Aquatic ducks, crane, tern and cormorant live in watered areas. There are a number of lizards and snakes, including the viper. The rivers and lakes of the eastern part of the country have over fifty types of fish, including sturgeon, salmon and trout.

Because of altitude, distance from tempering influence of oceans and exposure to the cold north, conditions for Mongol pastoralism are the most extreme in the pastoral belt.

Winter is long, the cold lasting from October to April. There is little snow, three to four inches being average and this is usually blown away by the wind. Rare snowfalls of four to six inches make it difficult

for grazing animals to reach the grass, and the very rare eight to ten-inch depths may severely reduce the number of animals. Winter temperatures average minus fifteen degrees Fahrenheit with lows up to minus fifty-eight degrees Fahrenheit recorded. Winter tends to be a drought season, since moisture is frozen and not accessible for the animals when there is no snow. Prevailing winds, mostly from the northwest and north, are frequent (if not constant). When it is snowing the winds may assume blizzard proportions, making conditions difficult for animals and humans. In some areas winds also pick up fine dust, further worsening conditions.

Spring comes in late March in the west and about a month later in the east. Where there is little snow cover, the earth warms quickly and the grass begins to grow. In some places--particularly in the east--there is little transition between winter and summer. The spring remains cold, with the almost constant wind and frequent severe storms. The late spring and early summer of May and June are the best times for pastoralism.

The summer months are June, July and August. The average temperature is about fifty degrees Fahrenheit, although in the more desert areas (Gobi, Ala Shan, Tarim) temperatures of up to 150 degrees Fahrenheit have been recorded on stony surfaces. Daily temperatures vary greatly throughout the year, but particularly in the summer, with night temperatures near or below freezing even in July. Summer is the rainy season. While most of the rain is in fact drizzle, heavy hail and rainstorms can create torrents and lakes which can cause much damage. In September the weather improves slightly. Solar radiation is intense throughout the year, but especially in summer because of the rarity of cloud cover. Solar radiation also increases with altitude. The seasonal weather cycle to a large extent determines pastoral activities.

The domestic animals of the Mongols are horses, cattle, sheep, camels, goats and dogs. All animals are nondescript in type, for breeding in the Western sense is not practiced. The dogs are used to protect the camp and warn when wolves threaten the herds and flocks.

Sheep are most important for subsistence, providing meat, milk, skins, bone, sinew, and wool (used to make the felt which covers the dwelling tent or dismantlable house--called *ger* by the Mongols and *yurt* by outsiders). Since a sheep is often killed to honor a guest, reports by outsiders give the impression that Mongols eat nothing but boiled mutton. Meat is actually used sparingly, milk products being the



main protein food. A rough estimate is that meat provides one-tenth of the Mongols' protein food. The goat furnishes the same products as the sheep, but is not as highly prized.

Cattle furnish milk (to supplement that of the sheep), and meat, especially when a large quantity is desired, or in winter when large quantities can be frozen. They also supply hides, horn, bone and sinew. Cattle are most important in transportation. Males are castrated in their second year and the oxen are trained to pull carts. The bulk of material possessions are transported by cart.

The camel of Central Asia is the two-hump Bactrian. It is adapted to cold-weather desert and scrubland, unlike the one-hump dromedary of the hot deserts of Africa. It is important as a riding and pack animal. Since it can go for several days without food and water, it does not have to make as many stops as do horse or oxen. The camel also supplies milk, meat, hair and other items.

The horse, however, is the animal most prized by the Mongols. It is the riding animal which most exemplifies mobility. The gelding is the standard mount; stallions are ridden for night watch when wolves threaten the newborn foals, since they are most alert and capable for this task. Mares are not seen as riding animals. The Mongol horse is small but intelligent, swift, and has great endurance. Mare's milk is by far the food most desired by the Mongols, who ferment and distill it into several types of alcoholic products.

Steppe and scrubland differ in the type of animals suited to them. Steppe favors horse, sheep and cattle, while scrubland is suited to camel and goat. The horse is a steppe animal and thrives best in the grasslands and on flat terrain. It does not do well at high altitudes or on hilly, stony ground. It also prefers an alkaline (lime) soil. Cattle, like the horse, thrive best in locations with ample grass and water. Sheep are the most important animal for survival because of their versatility--they are best suited to alkaline soil, but preferably not in wet conditions. They also do well in semi-desert and hilly conditions. A study of 600 plant varieties shows that of this number, cows eat 56 varieties, horses eat 72, and sheep eat 570. The goat can live in the same environment as the sheep. In addition to grazing, the goat can browse on branches and thick shrubbery, and can live in the broadest range of environmental conditions.

### **Environmental Adjustment of Domestic Animals**

Since the domestic animals of the Mongols in general receive almost no assistance from the herders via provision of winter food and shelter, they remain to a large extent in the same natural state as the wild ungulates. They also follow a seasonal cycle, the exact nature of which depends on local conditions and on the type of animal. During the summer--from May to September--they graze well and gain weight and strength. In winter, they seek areas which afford some degree of shelter against the cold, but still have food available (for which they must fend for themselves). A snowfall of even four or five inches is enough to cause trouble, and a snow depth of eight inches can bring about heavy loss of animals. Lack of snow, however, can create drought conditions. Floods and winter storms can wipe out entire herds and attacks by wolves also take their toll. In addition, there are losses from disease and accident. The animals that survive the winter lose over twenty per cent of their weight.

Spring is an even more trying time, for the animals are weak, and the spring storms prove the "last straw" for many. In addition, the females begin to give birth and are further weakened, while many of the newborn animals may die of cold or be killed by wolves. Losses are most heavy among the newborn, sixty-seven per cent mortality of the new calves and fifty-nine per cent of the lambs being recorded, while wolves sometimes get up to ninety per cent of the new foals.

The key adjustment of the animals is to survive through the cold season. Because of winter die-offs, the horses and cattle of Trans-Baikalia (east of Lake Baikal) do not increase their numbers although the grass is sufficient to maintain five to six times the number of animals found. Thus the crucial factors in determining the number of animals are not the best conditions, but rather the worst.

### **Seasonal Cycle**

Dependence upon animals obliges the Mongols to follow the animals' cycle of movement in search of food and shelter. Hence rises another criterion of pastoral nomadic life--a need for mobility in order to follow the migratory cycle.

The seasonal round of the Mongols varies widely. It is normally under 150 kilometers and may be as few as two kilometers. In areas more favored with pasturage and water, it may not be necessary to move at all, although moving a short distance may occur to comply with the custom of being nomadic. In the scrubland, the



number of moves may be only two--from summer camp to winter camp and back again--but this depends less on the pasturage than the water supply, which may be entirely from wells.

A favorite highland pastoral site is a mountainside which receives moisture. Here wooded areas, running water, and meadows and prairies with rich grass provide an ideal environment. Here also there is freedom from such bothersome insects as mosquitoes, gadflies and midges. Animals harassed by insects do not put on weight. Sometimes such a summer site is in visual range of the lowland winter site.

The migratory cycles vary in area, and the number of moves per year is dependent on other factors than the availability of grass and water. The herder must have a detailed and accurate knowledge of the area's suitability for his animals; the range of his movement would thus be limited by his knowledge. The loss of weight and laming of the animals (lame animals do not graze well) because of the length of a trek must be balanced against the advantages of the more distant pasturage, for winter is always around the corner. Then, too, the herder normally does not have a homogeneous grazing herd, but different species (which require different pasturage, topography and climatic conditions) with different grazing patterns. Hence the different herds may have to be kept in different pastures, sometimes far removed from each other. The herder must also allow some pastures to lie fallow for a time, or put different animals to graze on them, in order to avoid overgrazing and overaccumulation of urine and dung. The unpredictability of the weather, particularly on a local scale, often leaves even the experienced Mongol at a loss as to his next move.

The following is a general description of the Mongol seasonal cycle:

In the winter (which begins in November), the Mongols seek a spot that is sheltered from the wind but accessible to windswept areas where the snow is blown away and the grass exposed. The preferred site is a sheltered lateral valley opening on an exposed main valley. The problem of water supply in winter is not too serious, for the animals will utilize the snow. Where there are no mountain passes and valleys, the winter area normally selected is on the sheltered side of a hill, while forest fringes and glades are used to shelter both the tents and the animals. The winter is long and severe, and the animals survive as well as they can.

The spring (in late March) is an even more critical period. At this time the Mongol herder is most anxious regarding the condition of the animals, which are weak and thin from the rigors of the winter. In addition, spring is also the time of birth of the young, and these must be picked up by the herders and sheltered in tents, for even in April they might freeze outside at night. Grass that is dry and scarce, severe winds, rain (which may freeze on the animals), late snow (which makes it difficult for the weakened animals to graze)--these are some of the hazards of the spring season. Under these trying conditions, the Mongols must begin moving their animals (which are hardly in condition for a trek) to search for early spring grass. This is not necessarily found in the best summer areas, but instead in the most sheltered spots where the snow first melts and the grass sprouts early in the sun.

The life of the Mongol calls for endurance and hardiness, especially in winter and spring. The pace of work calls for long hours on horseback under all sorts of conditions and often without food or sleep. Hardiness and endurance are qualities demanded of men, women, and children. The work of herding calls for short periods of intense and strenuous activity broken by long periods of little or no activity. The Mongol finds this rhythm easier than the prolonged hours of monotonous agricultural work.

Once it becomes warm enough for grass to grow everywhere, the Mongols move to summer pastures. Movement, once the summer pastures are reached, is leisurely (if it occurs at all). The herders "try to find a raised area where there is a breeze for better air circulation among the animals and where they possibly may graze for a longer period. This movement also seems to be intended to protect the animals from disease."<sup>3</sup> In summer, water supply must be considered, and the availability of water in sufficient quantity for the animals is one factor in determining summer movement. The chief task of the summer is to get the animals sufficiently fattened and in good enough health to pass through another winter. Summer season runs from May to September and is, for obvious reasons, the best season for the Mongols.

In the autumn begins the move to the winter camp, with hunting along the way.

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<sup>3</sup> Sechin Jagchid and Paul Hyer, *Mongolia's Culture and Society* (Boulder, Colorado: Westwood Press 1979).



In summary, the pastoral seasonal cycle is an interplay of many factors, including humans, animals, time, distance, weather, vegetation, water, soil and topography. The needs and characteristics of the animals are the prime concern. "A wise nomad knows as second nature which kind of pasture will be good for which type of animal according to the season."<sup>4</sup> Add to the above the unpredictability of the weather and the needs and abilities of the human group and it is obvious that the seasonal round is a highly complex operation requiring much knowledge and planning. The pastoralist normally remains in the area he customarily uses because he knows it best and in order not to interfere with the movements of his neighbors.

### **Stripped For Mobility**

The techniques and material items of the Mongols have been developed over millennia to suit their pastoral way of life. A major criterion of these is that they be adapted to a mobile life--that they be stripped for mobility. The *ger* can be set up or dismantled in one hour or less and loaded on one pack animal or cart.

The Mongolian cart is made entirely of wood hewn from logs: the only metal comprises two iron bearing plates above the axle to prevent friction of wood on wood. Wheels are fixed to the axle, which turns with the wheels. The cart must be kept damp, for certain parts may fall apart when dry. It is drawn by one ox.

Karamyshev, who was interested in trade possibilities with the Mongols, made detailed lists of various tools and gear they used.<sup>5</sup> These included saddles, bridles, halters, fetters, tethers, packs, pack saddles, and other gear needed for riding and transportation. He listed forty-eight items in twenty-three categories for household and kitchenware, including kettles, ladles, teapots, tongs, pails, tubs, cups, knives, leather pouches for liquids, axes, baskets and shovels. He also listed various items of a religious (Buddhist) nature. A household would also have several small tables, chests and an altar. Each person carries in his or her garment an eating bowl, made of birchwood (sometimes ornamented with silver or gold)--this is the only utensil used besides a knife. This is by no means, however, an exhaustive list.

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<sup>4</sup> Jagchid and Hyer, *op. cit.*, 21.

<sup>5</sup>W. Karamyshev, *Mongolia and Western China: A Social and Economic Study* (Tientsin: La Librairie Française, 1925), 270 ff.

With little notice and in a short time, the Mongol household can pack up everything it has and move. In a short while there will be little trace of the campsite.

### **Supplementary Subsistence Activities**

The criterion for pure pastoral nomadism is that human subsistence should be based entirely on the products of domestic animals. The Mongols use every part of their animals: meat, milk, hides, skins, horn, bone, sinew, hair and argal (and even the dried dung of animals, used for fuel in the treeless environment). From these sources they produce food, clothing, shelter, fire, tools, containers, furniture and other items. The circle of self-sufficiency is never completely closed, however, and the Mongols engage in a number of other subsistence activities exclusive of interacting with sedentary people: hunting, gathering, cultivating, fishing and mining. Though pastoral nomadism is the activity around which the way of life is centered, and pastoral nomadism is a fitting label for the culture, the supplementary subsistence activities presented below make possible the maintenance of a pastoral nomadic way of life.

### **Gathering**

Gathering plant food is a very important part of the Mongol diet but it is not noted by outsiders and is derided by the Mongols: "Grass is for the animals and meat is the food for man, and if you eat grass, you will not have a strong body."<sup>6</sup> Mongol sources show that they use over 100 plant food items in the categories of cereals, fruits and berries, mushrooms, onions (including garlic), nuts, spices, tea substitutes, starches (roots, tubers, rhizomes), various greens, and sweeteners.<sup>7</sup>

Items gathered by the Mongols other than food include wood for tent frames, various tools, containers, etc., soda and bark for tanning hides, and salt. Some metals--gold, silver and iron--are crudely mined and worked in small quantities.

Fish are available in large numbers and many varieties in some of the lakes and rivers. Fish make up an important part of the diet, depending on time and place. The Mongol custom of eating all food items necessary for survival applies to fish. In Buddhist times it was

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<sup>6</sup> Jagchid and Hyer, *op. cit.*, 45.

<sup>7</sup> Paul Buell, "Pleasing the Palate of the Qan: Changing Foodways of the Imperial Mongols," *Mongolian Studies* 13 (1990): 57-81.



believed that one who ate fish would turn into a fish in an afterlife. The main aversion may have been not to fish, however, but to fishing, a sedentary activity.

Mongol hunting is closely related to pastoralism. Both depend primarily on animals for food and other raw materials. Both are basically mobile, both require very similar knowledge of animals, their habits and habitat, food and shelter requirements; and both employ similar techniques in the tracking, surrounding, and capturing of animals, and in the products derived from them.

Subsistence hunting is important in procuring wild slaughtered animal products (meat, sinew, bone, skins, furs and hides), thus sparing pastoral animals for their live products (wool, hair, milk and argal). In the steppe areas (up until relatively recently), ungulates such as deer and antelope (and to a lesser extent wild horse and elk) ran in large herds. Other large game of more limited distribution include wild camel and wild pig. Small game, perhaps mostly the widespread rodents (rabbit, bobac, marmot, suslik) are also important. Fox, bobac, marmot, sable and ermine are hunted for furs. Predators, including wolf, tiger and bear, are also hunted, as are various birds.

Hunting techniques vary according to the game, whether hunting is mounted or on foot, and whether by an individual (*angi*) or group (*av*). In the empire of Chinggis Khan, mounted group hunting assumed great political and military as well as subsistence importance. The hunting is carefully organized with outlooks marked and advance guards posted, and the line of hunters trying to move toward the game without alarming the animals. When the encirclement is completed, shooting begins and all game animals surrounded, even down to hares, are killed. In addition to the skill, training and courage of each hunter (as in facing tigers and bears), the coordination of the enterprise calls for leadership of a high caliber--neither leader nor hunter dares err and strict discipline is maintained. Leading the hunt also calls for diplomacy and political knowledge. Selection of which hunting areas to use, division of the spoils, assignment and coordination of groups, and other problems of group endeavor are all the responsibility of the leader. Alliances can be reinforced or ruptured, friends and enemies made, and reputations enhanced or ruined.

Mounted hunting essentially used the strategies, tactics and techniques of warfare. Mongols saw them as the same, but with humans instead of animals as the quarry in warfare. Under Chinggis Khan, military organization affected political and even kinship

organization because warfare was continually in progress or being planned, and because he had developed a highly disciplined society under his personal control. Hunting served several purposes. Group hunting was training for warfare, and served to keep the troops from getting restless when not occupied in fighting. It was also important for subsistence, providing material for the feeding, clothing and otherwise equipping of thousands of troops and dependents.

Historical records show that despite their disdain for it, Mongols have practiced agriculture at various times and places. Sometimes they have even abandoned pastoral nomadism completely, but normally had subordinate populations do the agricultural labor. In the absence of such captive farmers, the Mongols themselves engaged in small-scale cultivation as part of a supplementary subsistence complex. The question of the Mongols' relationship to agriculture involves profound distinctions made between their highest values and traditions and routine daily tasks. Total embrace of an agricultural way of life spells extinction to pastoral nomadism, as shown in Figure One.

### **Summary of Subsistence Complexes**

A study of the supplementary subsistence activities of the Mongols indicates that they did not have to interact with the sedentary agricultural urban people for sheer survival. They did so for other reasons. Not only did the Mongols have a strong base in pastoralism, but they had the added advantage of the base of a hunting and gathering people, particularly mounted hunting such as that of the eighteenth- and nineteenth-century North American Plains Indians. Hunting products added to those supplied by domestic animals and required that fewer of the latter be slaughtered. Gathering provided vegetal food in quantities not fully recorded by non-Mongol sources, as well as other materials such as wood and minerals. Haphazard cultivation of cereal crops, such as by sowing in the spring and returning in the fall to harvest what might remain of the crop, was an added (if infrequent) source of food. Where possible, fishing produced food as desired. Without contact with the outside world, Mongol pastoral nomadism might well have continued indefinitely and basically unchanged as was true of the previous hunting/gathering adaptation, which in various forms, served humans through millions of years of existence.



## **Conclusions**

Survival is a key factor for the Mongols, who live in the harshest natural environment of the pastoral belt. Mongol survival is largely determined by geography and geographically determined relationships to, and dependence on animals, seasonal cycles, diet, clothing and shelter and supplementary subsistence complexes. Social organization also adjusts to environmental conditions. The local community is a mobile camp by necessity--ideally it consists of members of a patrilineally extended family, in which case it is called an *ail*. Very often, however, it will include non-related people as determined by herding tasks--such a group is called *xot* (translated as herding camp). The importance of the patrilineal kinship system to the Mongols is manifest in their frequent reference to the herding camp as *ail* even when non-kinsmen are members.

However, there are adjustments to the basic patrilineal kinship system and the employment of other social systems (mostly for political reasons), which go beyond environmental/ecological requirements. These cannot be included in this article. But for these reasons the Mongols practiced a minimal form of pastoral nomadism. They offered no winter shelter or feed for their animals and accepted the resulting minimal yearly increase over the winter losses. And yet on this sometimes precarious base, they could offer to a leader such as Chinggis-qan an army of mounted pastoralist/hunters to build an empire.

**FIGURE ONE:**  
**Comparison of Elements of Pastoral Nomadism and Agriculture**

Element	Pastoral Nomadism	Agriculture
Use of land	Extensive: does not destroy natural cover	Local and fixed: removes natural cover
Subsistence	Animals	Plants
Importance of animals	Paramount: attitude toward animals reflects close relationship with them	Secondary: includes different animals (pig), animals used for plowing; treated as commodities
Relationship of humans to land	Temporary; migratory; right to use land, not private ownership	Permanent; sedentary, eventually private ownership of land
Type of labor	Mounted herding; hunting; short, intense periods of heavy labor, long periods of relaxation and ease	Pedestrian, long periods of hard labor
Techniques	Herding, riding, stalking, preparation of meat, hides, skins, etc.	Preparation of land, plowing, sowing, harvesting, etc.
Foods	Dairy products basic; pig and sometimes pork disliked; wild vegetal foods utilized; trade grains consumed as available	Cereals and vegetables basic; milk considered disgusting by Chinese; pork eaten by non-Muslims
Material culture	Little, centered around mobility and life in a tent; stripped for mobility	More in total amount and complexity, centered around sedentary life in a house
Storage of produce	Not possible on a large scale	Necessary, helps to maintain sedentary nature of agriculture
Transportation	Horse and camel for riding; carts; clothes, boots not adapted to walking or working on foot; dislike walking; carts and camel packs	Foot, carts
Trend to specialization	Not possible to any great extent; not desired; threatens pastoral nomadism as a way of life	Possible; desirable; need not basically destroy agriculture as a way of life, but incorporates it