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A.A. Sirina
Institute of Ethnology and Anthropology,
Russian Academy of Sciences,
Leninsky pr. 32A, Moscow, 119334, Russia
Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), Russian Academy of Sciences,
Universitetskaya nab. 3, St. Petersburg, 199034, Russia
E-mail: annas@iea.ras.ru

Evenki Reindeer Riding Saddle: Certain Principles of Mobility in the Taiga

On the basis of museum collections, field records, photographic and video recordings made in the 20th to early 21st centuries, a reindeer riding saddle with flaps, typical of the eastern Evenki, is analyzed. Its construction and types of fastening are described in detail. Manufacturing technologies are discussed in the context of modern theories of material culture as adaptations to changing natural and social environments under a mobile lifestyle. The key principles underlying mobility in the taiga include the use of a wide range of materials and techniques, modularity (assembled construction with mutually complementary and interchangeable parts), a technological cycle adapted to natural rhythms, adherence to traditional knowledge, the use of artificial materials along with products of nature (since the mid-1900s), etc. In the nomadic culture, the esthetics of an artifact are intrinsically related to function, harmony, and social significance. The manufacture of reindeer riding saddles has been affected by changes in the social structure of nomadic groups.

Keywords: *Eastern Evenki, museum collections, reindeer riding saddles, technology, esthetics, mobility principles.*

Introduction

Some things tend to fall out of ethnographers' sight (Baranov, 2018); this is what happened with the reindeer saddle. Thanks to archaeological research, the scope of evidence associated with saddles (albeit mainly horse saddles) among the population of Siberia of different periods has been increasing (Hudiakov, 2005; Tkachenko, 2009; Stepanova, 2011; and others). However, ethnographic studies of reindeer saddles have not been carried out in recent decades. This article analyzes reindeer saddles with flaps [*sedlo s krylyshkami*, sometimes also translated as "saddle with wings" – *translator's note*] from Russian museums, and aims at making a contribution to research in this aspect of material culture. Saddles are described following the phenomenological approach. Photographs, video, and field evidence from the archives of MAE RAS are used for studying the principles of mobility among the Evenki in the 20th to early 21st century (Lavrillier, Gabyshev, 2017: 369; Sedlo, (s.a.)). Interest in material culture significantly increased in international anthropological studies in the 1980s and 1990s, owing to the adoption of a number of philosophical and sociological concepts (for more details, see (Hahn, 2018)); but its general theory has not yet been developed. In this article, saddles are studied from the viewpoint of the anthropology of mobility and ethnic technological knowledge, with particular attention to such aspects as adaptation to a changing natural and social environment in the context of mobile lifestyle;

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usefulness, practicality, and ergonomics of a particular thing, and plurality of meanings of the thing and changes in their contexts.

Almost all studies of reindeer saddles among the Evenki and other peoples of Siberia who practice pack-and-riding reindeer breeding and lead a nomadic (mobile) lifestyle, date back to the 1950s–1970s (Vasilevich, Levin, 1951, 1961; Veinstein, 1971; etc.). These were carried out as a part of the projects on the ethnogenesis and ethnic history of the peoples of Siberia and the problem of the origin of reindeer breeding in Eurasia. Studying specific aspects of this branch of animal husbandry among the peoples of Siberia (use of riding or sled-driven transportation, design of sleds, saddles, and harnesses, methods of mounting and managing reindeer, castration, presence or absence of milking female reindeer, specific features of grazing, etc.) revealed the Lapp, Samoyed, Tungus, Chukchi-Koryak, and Sayan types of reindeer breeding (Vasilevich, Levin, 1951: 77). By the early 1960s, ethnographers had identified the types and subtypes of reindeer riding- and pack-saddles, and mapped the areas of their existence (Vasilevich, Levin, 1961). On the basis of comparative analysis of reindeer saddles of the Sayan and Tungus types, S.I. Veinstein came to a conclusion about the domestication of the deer by the Sayan Samoyedic people (1971: 47, 51). The Sayan and Siberian (Tungus) types of pack-and-riding reindeer breeding show significant differences. Reindeer saddles and harness of the Tofalars and the eastern Tozhu Tuvans, similar to horse equipment, correspond to the Sayan type. In the reindeer husbandry of the Siberian (Tungus) type, which is practiced by the Evenki, Evens, Dolgans, Northern Yakuts, Oroks (Uilta), and in the past also by the Negidals (Vasilevich, 1964), saddles were placed on reindeers' shoulder blades, and not on the middle of the back. A rider mounted the deer from the right and constantly used a staff while riding. An important feature of the riding saddle is the absence of stirrups. Flapped saddles, saddles with "side-bars", and saddles without flaps and side-bars have been identified.

In the mid 20th century, the typology of saddles was built in accordance with an evolutionary and typological approach predominantly as a linear typology. For example, Veinstein regarded the emergence of a riding saddle with flaps as a sequential evolutionary series: as a result of the sporadic use of small pack-bags to support the rider's thighs, the reindeer packsaddle (in common with the Sayan packsaddle) was transformed into the saddle with side-bars, saddle with side-bars with the oval ledge, "and finally, these side 'wings' of the side-bars began to be made in the form of curved arches with supports, lighter and more durable" (1971: 44). In his opinion, the riding saddle with flaps, which is common among the Tungus peoples of southeastern Siberia, could only have reached them from Northern Siberia, where the saddle with side-bars, which served as basis for the saddle with flaps (Ibid.: 45, 47), has survived to this day. Not all groups of the Evenki had reindeer breeding; versions of saddles among those who practiced reindeer breeding also varied. This might have happened because borrowings did not occur simultaneously, and were associated with more than one ethnic group. The development of saddle forms was not linear; there was a diffusion of cultural elements. Saddles of the same type are distinguished by variability.

The distribution area of saddles with flaps in the mid 20th century included the Amur Region, southeastern Yakutia, Khabarovsk Territory, and Sakhalin. Such saddles were used by the groups of the Aldan, Uchur, Zeya, Bureya, Amgun, Chumikan, Ayan, and Sakhalin Evenki, Oroks (Uilta), Negidals, and Yakuts who lived in the adjacent areas (Istoriko-etnograficheskiy atlas…, 1961).

The riding reindeer saddle among the groups of Ayan, Aldan, Zeya, Maya, Tokkin, Tommot, Olekma, Sakhalin, Urmian, Uchur, Chulman, and Chumikan Evenki, as well as Oroks (Uilta) was called *nēme*. It was called *nama* among the Tokkin and Vanavar Evenki, *namakan* among the Tokkin Evenki, and *nāme* among the Negidals (Sravnitelniy slovar…, 1975: 621). The related word *nama*, similar in sounding, means a pack, saddle with a pack (among the Podkamennaya Tunguska and Tokkin Evenki), or a small women's pack-bag for an expanding fur saddle (among the Podkamennaya Tunguska, Tokkin, Tokmin, Nep, and Sym Evenki) (Ibid.: 580).

Analysis of the evidence

This study analyzes Evenki reindeer saddles with flaps from the collections of the Peter the Great Museum of Anthropology and Ethnography (Kunstkamera) of the Russian Academy of Sciences (MAE RAS), Amur Regional Museum of Local Lore (ARML), and Science Museum of the Amur State University (SM AmSU) (see *Table*).

Collection No. 6465 of the MAE RAS consists of three items: a riding sled (No. 6465-1), a finished saddle with flaps (No. 6465-2), and a saddle-frame with flaps (No. 6465-3), received in 1958. In the accompanying inventory description, G.M. Vasilevich mentioned that the riding saddle, just as the riding sled, was widespread in the east of the Olyokma River, including Sakhalin, not only among the Evenki, but also among the Negidals and Oroks (Book of Acquisitions of the MAE RAS, coll. inv. 6465, fol. 4). The simultaneous existence of two types of transportation (pack-and-riding and sled-driven) evolved among the Evenki historically, with the pack-and-riding reindeer breeding preceding sled-driving (Ermolova, 1995: 176).

These items were made especially for the museum upon the request of Vasilevich in the Evenki collective

Reindeer riding saddles with flaps described in this article

Storage place	Inv. No.	Category	Place of manufacture	From whom and when was received	Dimensions, cm		
					length	width	height
MAE RAS	6465-2	Adolescent?	Evenki collective farm named after Stalin on the Tynda River, Dzheltulaksky District, Chita Region (modern Amur Region)	From G.M. Vasilevich, 1958	40	32	17
MAE RAS	6465-3	Adolescent?	Ditto	From G.M. Vasilevich, 1958	36	26	14
ARML	7015	Male?	Unknown	From V.V. Goskov, 1904	61	50	N/D
ARML	NV 6126/6	Male?	Mazanovsky District, Amur Region	From Yakovlevykh, 2005	61	50	Ditto
ARML	NV 6126/2	Female?	Ditto (Artisan S.I. Yakovlev, 1942)	From L.S. Yakovlev, 2005	59	42	23.5
SM AmSU	439 OF 143/3	Female	Ust-Nyukzha village, Tyndinsky District, Amur Region	From E.S. Gusakova	63	44	21.5

farm, which was located in Dzheltulaksky District of the Chita Region*, and were never used. They make it possible to see the saddle at the intermediate and final stages of manufacturing and to examine the frame in detail (it is impossible to see it when the item takes the finished form). The idea of this collection belonged to Vasilevich.

The rigid frame (tree) of the riding saddle *nēme* with flaps consists of two side-bars *danna*, pommel (cantle) *iye* made of antler, and two flaps *deptylē*. Noteworthy is the pairing of the main parts of the saddle, corresponding to the principles of symmetry and balance (Fig. 1).

*Side-bars "danna"***, *dānne* (the Podkamennaya Tunguska and Zeya Evenki), *dandi* (Ilimpiysky, North Baikal, and Uchur Evenki), *dande* (Northern Baikal Evenki (?)), *danni* (Nep, and Urmian Evenki) (Sravnitelniy slovar…, 1975: 196) are two thin, sturdy, smoothly planed sub-rectangular planks measuring 36 × 9 cm. Close to the center, these get wider and thinner (in this item, about 0.5–0.7 cm). Closer to the transverse edges, the planks become rounded and thicker, reaching 0.8–1.1 cm, because the antler pommel and cantle are attached to them at the edges of the side-bars. The attachment points undergo greater stress and need more durability, which is provided by the additional thickness of the side-bars. When riding, especially at the beginning and end of the movement, the rider rests on the pommel.

*Pommel and cantle "iye"****. The saddle consists of a pommel and a cantle, with the pommel slightly higher than the cantle. Pommel and cantle are made of antler, with a natural outward slope and with specially selected forks. They resemble an isosceles triangle, with a pointed apex and widely diverging "legs". Pommel and cantle fit tightly to the side-bars, and each of them has five through-holes for fastening.

Flaps deptylē. Their main function is to raise the level of the rider's hips and take on their weight while riding a reindeer. The flaps are made of decorticated willow with diameter of about 2.5 cm, attached in an arch to the outer surface of the side-bars. The maximum width of the flaps is 9 cm; their length is 17 cm. The space of the semicircle of the flaps is filled with deerskin straps.

Fastening methods. Similarly to nomadic peoples of the tundra (Arzyutov, Okotetto, 2018), the Evenki widely employ tying techniques. However, their algorithm for using ropes and knots has its own specific features, owing to the abundance of wood with different properties in the taiga. Since deer are tamed in small herds, the Evenki do not use ropes or nets to fence the herd during counting, as the Taimyr Dolgans or the Nenets do. For temporarily restraining the movement of reindeer, the Evenki build small fences or use the features of the terrain. Wood, being the raw material that is in short supply among the tundra Nenets reindeer breeders, is more frequently used in manufacturing the fastening elements. The tying techniques of the taiga Evenki involve widespread use of not only knots, but also seams, with initial and final knots and holes of different diameters for pulling the rope through. The technique of "sewing" the pommel, the cantle, and the side-bars may have been based on the Evenki traditions of sewing, including birch-bark items.

If one looks at the saddle side-bar from the "inside", it all looks as if "stitched" with large stitches of deerskin

*In 1961, this area became a part of Amur Region.

**This name was recorded by Vasilevich.

***This name was recorded by Vasilevich; *ije* – antler; arch of a reindeer saddle among the Aldan, Zeya, and Uchur Evenki (Sravnitelniy slovar…, 1975: 298–299).

Fig. 1. Saddle with flaps from the collection of MAE RAS, No. 6465-3. *The author of the 3D image is G.A. Ityaksov*.

straps (Fig. 2). Each side-bar has 16 holes: eight rounded (0.8–1.0 cm in diameter) ones are located near the ends (four at each end) and are intended for attaching the pommel (cantle); two subsquare holes (0.5–0.7 cm in diameter) are in the middle part; the ends of arcuately bent and decorticated willow are inserted into them, making the base of the flaps, and six rounded holes (0.5–0.7 cm in diameter) in the central part, which serve for attaching the system of straps, forming the shock-absorbing surface of the flaps, to the side-bar. Nails (eight in total; four nails per a side-bar), reinforcing the structure, are used for attaching the pommel and the cantle to the side-bars. Thus, the side-bars are the structural element that carries the main load of the fasteners.

Two through-holes are made on the frontal side of each "leg" of the antler pommel (cantle). The fifth hole in the form of a tunnel is located in its upper part. The strap connecting the pommel and cantle with the side-bars passes through that hole from one "leg" of the pommel (cantle) to the other. The pommel (cantle) is "sewn" to the side-bar using "seam over the edge" and "stitching" methods, which are also used by the Evenki for sewing clothes and footwear. There is an initial and final knot in attaching the pommel (cantle) to the saddle's side-bars; other intermediary fasteners are absent, which ensures the strength of the attachment. The knot is made on the outside of the pommel (cantle), closer to its edge. It does not come into contact with the body of the animal or person. The fastened strap goes through the hole in the side-bar and, after making a stitch, comes out through the second hole. Then it wraps around the "leg" of the pommel (cantle), passing to its other side, is pulled through the hole on the side-bar, comes out of it onto the "leg" of the pommel (cantle) and, turning out to be passed under the first "stitch over the edge", goes up along the long narrow plane of the pommel (cantle). In its upper part, it passes through the "tunnel" hole to the other "leg" of the pommel (cantle) and is attached by repeating the movement in reverse order. To ensure the strength of the structure, the strap is intertwined on the pommel (cantle) and is attached to the board as this is done in sewing.

The ends of the arches forming the flaps are attached to the saddle with a groove joint. The flaps are attached to the side-bars at different lines of the plane at a distance of 3–4 cm. On female saddles, the flaps are steeper, that is, installed at a sharper angle to the side-bar than on male saddles (Mazin A.I., Mazin I.A., 2003; Evenki Priamurya…, 2012). Out of four connections between the straps and edge of the flaps, two "starting" fasteners are located on the frontal surface of the edge. The strap is fastened without knots: it is wrapped around the edge, and the end of the strap is pulled through the slit specially made in it. The straps are attached to the side-bar with three "stitches". The extreme strap is pulled through the hole on the side-bar, is returned to the space of the flap, intertwines with the previously stretched strap, and goes to the edge of the flap. It is wrapped around it, twisted around itself twice, and is pulled through the second hole in the side-bar; passes under the plane of the stretched strap and goes to the rim, where it is attached. The second "starting" strap is attached to the side-bar with one stitch. The strength and shock-absorbing flexibility of flap design is ensured

Fig. 2. Saddle with flaps from the collection of MAE RAS, No. 6465-3. Bottom view. *The author of the 3D image is G.A. Ityaksov*.

by straps "sewn" to the side-bar at different distances and by their mutual interweaving.

Artisans use different materials for making a pommel (cantle), and follow different methods for their attachment to the side-bars. The technique of attaching the pommel (cantle) to the side-bar, which was used in creating the saddle from AmSU No. 439 OF 143/3, was the same as technique used for making a packsaddle: there is no hole in the form of a tunnel; the number of holes increases up to three on each leg of the pommel (cantle) and up to six on the side-bar. In the late 1940s, the Evenki from the Tokarikan collective farm (modern Neryungrinsky District of Yakutia) made pommels (cantles) of flapped saddles for reindeer out of two pieces of wood, fastening them crosswise at the top (Fig. 3). Gold has been mined in this area since the late 19th century. It is possible that riding saddles of this type were made in Evenki collective farms not for their own use, but for geologists.

The "Historical and Ethnographic Atlas of Siberia" reports: "The 'wings' are fastened vertically or slightly obliquely outward in the middle of the side-bars. They constitute arches with vertical support or plates, cut to receive the oval shape" (Istoriko-etnograficheskiy atlas…, 1961: 22–23). It can be argued that there were at least three methods of attaching the flaps to the side-bars. It is not possible to establish what kind of fastening method was used to create other saddles that I have seen, because of the prohibition on performing any manipulations with museum's exhibits. When I probed one of the saddles with my hand, I had a feeling that there were two flaps in the form of planks on the side-bar. The photo from the MAE RAS collection (I 1475-95) shows a variant of flaps in the form of arches with vertical supports (Fig. 3).

The second item from the collection in MAE RAS (No. 6465-2) is a finished saddle with flaps (Fig. 4). The side-bars are covered with hand-curried winter reindeer hide with fur inside, and are additionally stuffed with reindeer hair (the covers may also be stuffed with elk hair or *khaikta* marsh grass (Sedlo, (s.a.); FMA, 2002)). The seam runs along the skin that wraps around the side-bar, and on the sides of the saddle. A blanket cover with fur outside, sewn from the curried skins of two deer heads, is attached on top. Along the edges of the cover, the saddle is decorated with bunches of white and red fur and trimmings. The cover is stretched over the sharp tops of the pommel and cantle, and covers the entire structure (Fig. 4).

Very interesting observations from Southern Yakutia and the Amur Region were mentioned by A. Lavrillier and S. Gabyshev: in these areas, packsaddles are covered and sheathed with the skin of a pregnant deer, turned with its fur inwards. Such products are sewn from wet skin in heavy rain, so that when it dries out it will stretch well on the wooden frame of the saddle (Lavrillier, Gabyshev, 2017: 213). Two points deserve attention here. First, the saddle is covered with the skin of a pregnant deer (this datum is the first, and so far the only one, in the scholarly literature). During that period of a female animal's

Fig. 3. Negative on glass. A Tokarikan collective farmer is making saddles for the deer of the collective farm. The Evenki (Tunguses). Yakutia (Sakha). 1947–1948. © MAE RAS.

Fig. 4. Saddle with flaps from the collection of MAE RAS, No. 6465-2 (front part of the saddle is on the right on the photograph). *Photograph by A.A. Sirina*.

life, its skin is probably the most capable of stretching, yet it retains its strength. Second, the saddle is covered with skin in a certain season—in the summer, with high humidity. Precisely in these conditions, skin can be properly stretched, avoiding tears. When it dries, such a cover wraps tightly around the saddle (Brandishauskas, 2017).

The design of a saddle has from one to three pairs of straps for tying the lariat, wild fowl caught on the way, or the rein of a pack deer. In the item from the collection of Vasilevich, two pairs of straps are attached to the pommel. The saddle stored in ARML (NV 6126/6), has three pairs of functional straps 30 and 19 cm, 15 and 22 cm, and 37 and 35 cm long, in the rear of the saddle.

Principles of mobility technologies

Structural lightness. As nomads, the Evenki have always followed the principle of investing less energy in life support and avoiding unnecessary labor costs. In everyday life, light-weight things are used. This is very important because things are often carried along or transported on reindeer: "…The Evenki do not like to carry heavy things", an old Evenki man explained to G. Fedoseev, "they always make a thin knife, a light-weight cauldron, and a short gun. When we looked carefully at the footprint of the boot, we saw that the edge of the sole on them was cut off around with a knife. Only an Evenki could have done this, so the boots would be lighter, but *you* would not cut them" (Fedoseev, 1958: 177).

Light-weight raw materials, such as wood, wild deer antlers, deer or elk hair, marsh grass, well-curried deer or elk skin, tendon threads, and deer suede, are used for manufacturing a saddle. Straps for fastening saddle elements together are made of elk or wild deer hide. The weight of the riding saddle is about 2.5 kg. The saddle is adapted to the weight and height of a particular riding deer *uchak* and an adult Evenki. According to anthropological data, the Evenki used to be small; their weight was usually 45–60 kg*. Today, unneeded things, for example, sleds or "Buran" snowmobiles, which are not used in summer, are left in storage platforms of piles. On the one hand, this makes it easier to migrate; on the other, it forces people to return to these places again.

Modularity and reusability. A saddle is a real work of Evenki technical art; it is filled with design solutions. Its frame can be assembled and disassembled, yet it constitutes an integral system of fasteners—strong and flexible at the same time, which is necessary for the objects experiencing constant loads and deformations. It also provides the opportunity for repair. This modular structure is made in such a way that a saddle cannot break completely. If any part fails, it can be fixed with the help of materials at hand, and riding can be continued.

The modern world is focused on single use of a mass-consumption product; therefore, it is of low quality and cannot be repaired. Traditional possessions of hunters and reindeer breeders manifest a different attitude towards their creation: "Craftswomen never used to hurry before, just to get the thing finished somehow; they sewed things in such a way so they would not be thrown away after that" (Odezhda…, 2018: 39). The amount of labor invested increases the quality and value of the thing. After the end of the service life, the thing, if it has a modular design, is disassembled into its constituent parts, which can be used in a new product. When making saddles, the Evenki, saving themselves unnecessary and laborious work, use old, durable and beautiful pommels and cantles made from the butt-ends of birch, larch, or a fragment of antler with ornaments that indicate family clan or other type of affiliation. Such design solutions also testify to the continuity in traditions of nomadic life in specific territories. The Evens transfer beaded decorative bands from old festive fur clothes to new clothes (FMA, 2002). Thus, they not only save labor costs, but also pass on the codes of their culture to their descendants. Transferring

*The optimal weight of cargo for transporting by pack is 40 kg. Modern innovations in riding have also been caused by anthropological changes.

the elements of old to new things is typical of nomadic cultures. V.N. Davydov even suggested viewing things in the culture of nomads "not as a formed result of technological operations, but as a constantly created and updated material object" (2019: 104).

S.M. Shirokogorov emphasized the love of the Evenki for beautiful and well-made old things: "I know hundreds of cases when the Tunguses refused things of low quality… According to many of them, good and expensive things are more durable and therefore turn out to be less expensive than cheap things" (2017: 507–508). In nomadic lifestyle, a minimum of things are used, but these things are of the highest quality; they are designed to be used for the longest possible time.

In traditional culture, a thing bears not only the functional load, but is intimately connected with the person who created it and who owned it; it seems as if a part of the person is contained therein. This explains various bans on using things that belonged to deceased people and were left, for example, in barns in the taiga (Sirina, 2002). The deceased was "accompanied" by his saddled reindeer *uchak*. In this case, the Evens put a saddle on it backwards and made a short bridle, "so it could only reach the saddle" (FMA, 2002). When the status of the thing changed, the attitude towards it also changed (Kopytoff, 2006: 137). Previously, sacred and personal belongings of the deceased were left in the taiga; in recent decades, they have often been handed to museums.

Individuality and variability. The principle of individual production of things is based on the principle of variability, because people differ from each other. In nomadic culture, a thing is made for specific person, taking into account his physical features and preferences. In this sense, the attitude of the Evenki to things and their quality is essentially the same as that of people living in cities who have a lot of money or are aristocratic in origin—for whom things such as, for example, customized clothing, are produced to order by professional tailors. However, for hunters and reindeer herders, the quality of a thing is primarily its compliance with all traditional standards of safety and preservation of human life in the harsh conditions of nomadic life in the taiga. In addition, it should bring positive emotions, for example satisfaction from riding mounted on a well-made saddle, which the neighbors will definitely notice.

The principle of variability works as a mechanism for culture translation (Shchepanskaya, 2011) and manifests itself in technological solutions. For instance, riding- and pack-saddles corresponding to the Tungus (Siberian) type of reindeer herding (Istoriko-etnograficheskiy atlas…, 1961), despite the manufacturing canon, reveal significant variability, which results from the features of the raw materials used and the ability to access them, the goals and skills of the manufacturer, etc.

Gradualness of manufacturing and traditional knowledge. Making a saddle is a work extended in time and space. It is possible and needed only in the context of a hunting and reindeer herding lifestyle, with the aim of sustaining it. Saddle-making, like sewing clothes, is planned in advance and is correlated with the rhythms of nature and the life of a particular community. The principle of gradual production of a thing is associated with access to resources and the functioning of natural objects in different seasons of the year. Nature does a significant part of the work for people. Depending on the season, a deer's hair coat changes, and accordingly changes the quality (fluff thickness and strength) of the skin; there are also seasonal changes in the landscape, which open up new opportunities for humans. Knowledge of natural laws (traditional ecological knowledge), obtained from experience and from older generations, is indispensable for the nomads in manufacturing things (Davydov, 2019; Strakach, 1962; Lavrillier, Gabyshev, 2017).

In the process of seasonal movement in the taiga, the Evenki, possessing the necessary knowledge, find the raw materials they need. For example, deer antlers that are suitable for making a pommel (cantle) in their shape. The butt-end of larch or birch, required for making a pommel (cantle) of a packsaddle, is sought in places with fallen trees, such as steep bank of a river with a promontory—*emker* (Lavrillier, Gabyshev, 2017: 124; Brandishauskas, 2017). Making saddle parts requires knowledge of the properties of different tree species. The Evenki make side-bars out of birch, and the edges of flaps out of willow. The skin from the head of a deer or elk, distinguished by its high strength and beauty, is used for manufacturing covers for riding saddles and *kumalan* rugs. It is customary to cover the saddle side-bars with winter deer skin with long fur. Threads are traditionally made of reindeer- or elk-tendons from the back of the animal; after drying, they are softened, disassembled into fibers, then twisted on the knee with the help of the palm of the hand and the fingers, which produces a strong thread withstanding moisture well. Owing to its tubular structure, deer hair is a good heat insulator. As compared to other fillers for a saddle cushion, it has better shock-absorbing properties (Kotschwar, Baltacis, Peham, 2010) (the Pazyryk people already used it as filler for horse saddle cushions (Mylnikov, 2015: 338)). Suede was made by hand from the skin of a wild deer or elk in the traditional way, and was smoked for moisture resistance (Brandishauskas, 2017: 49–51); it is used for making saddle straps, which fasten pommel and cantle to the side-bars. In old packsaddles, the function of fastening was performed by the roots of bird cherry or Siberian pine. Materials, technologies, and the very idea of the saddle correspond to the modern fashionable and expensive environmentally friendly and energy-efficient trend of urban "green architecture", which, among other

things, is distinguished by the use of natural raw materials found in places close to the inhabitant and manufacturer/builder. In the recent past, the use of available natural materials for the Evenki was the only condition that allowed them to adapt to nomadic life. For manufacturing some parts of riding saddles, the Evenki purposefully selected raw materials obtained from hunting, and not from reindeer breeding.

In the 20th century, in a situation of expanding economic and cultural contacts in manufacturing and repairing saddles, the Evenki more and more often have started to use used nails, metal plates, and insulating tape; plus tarpaulin, woolen cloth, and nylon thread for saddle sheathing, and mouliné threads for embroidery. Deerskin was replaced with rope made from natural or artificial materials. Soldier's uniform belts, parachute lines, etc. were used for saddle girths along with traditional bands. The use of modern materials in manufacturing saddles in new conditions of mobility reduces the energy consumption of reindeer breeders, facilitates their work, and testifies to their creative adoption of borrowings.

Fig. 5. Saddle with flaps from the collection of ARML, No. NV 6126/6. *Photograph by A.A. Sirina*.

Aesthetic value. In the Evenki culture, this is closely related to the convenience of using the object; by the appearance of a thing, people judge the skills and capacities of the artisan. As an attribute of a nomad, the saddle is always in sight. Judging by the ornamentation on the wooden pommel (cantle) of a packsaddle, the Evenki can identify the representative of which clan or territorial group is carrying the cargo.

If one looks at a saddle with flaps from the side and from above, it resembles a bird's nest or a waterfowl (Fig. 4, 5). A bird's figure is rendered by the outlines of the pommel of the Kyrgyz and Uzbek saddles (Kurylëv, Pavlinskaya, Simakov, 1989: 142). It is curious that the connection between migratory birds and deer is reflected in the traditional beliefs of the Evenki and Evens (Sirina, 2012: 491–493). Beauty is an important criterion for evaluating a thing among the Evenki. "Two skins from a deer's head are put on pommel and cantle, then they are sewn around, and it looks so great, it looks very nice. The greatest masters make it" (Sedlo, (s.a.)). In Southern Yakutia and Amur Region of today, riding saddles with flaps and antler pommel and cantle are not always covered with a blanket, which changes their appearance.

The aesthetical value of a saddle is expressed in its quality and the quality of leather or fur currying, sewing, and decoration (alternation of pieces of fur of different colors; bright, often red fabric or embroidery on the lower edge of the saddle's cover, red inserts in the places of sewn-in slots from reindeers' eyes and ears on the cover). Traditionally, saddles are sewn around and repaired by women, but today "almost all men know how to make saddles and sew on their own" (Sedlo, (s.a.)).

In principle, any thing in a mobile culture is multifunctional. For example, an Evenki may use a reindeer saddle for transporting small loads, and as headrest during an unforeseen overnight stay in the taiga (Fedoseev, 1958).

Conclusions

Using the example of the northern nomadic peoples living in the tundra (the Saami, Nenets, and Chukchi), A.V. Golovnev and his co-authors identified the following principles of northern nomadism: fused space-time, nomadic transformer, techno-animation, effect of movement, minimalism of possessions, mobile module, and northern aesthetics (Golovnev, Kukanov, Perevalova, 2018: 343). These principles are also typical of the taiga nomads. As opposed to migrations of tundra inhabitants associated with the needs of large-herd reindeer breeding, the movements of the Evenki have always been distinguished by greater variability in their choice of routes, which were determined by several goals simultaneously (Mertents, 2016), as well as the composition of the nomadic collective, which could change depending on the objectives of life support (Sirina, 2012). The principles of polyfunctionality, sufficiency (minimalism), and seasonality in the use of materials, which have been identified using the Evenki evidence (Davydov, 2018; 2019: 101; Simonova, 2016; Sirina, 2002: 259), are confirmed and supplemented by

the analysis of the technological features of saddles. The principles of nomadic technologies included variability, lightness and durability, modularity (capacity to be assembled and disassembled, and interchangeability), the staged/gradual nature of manufacturing things, coupled with natural and economic rhythms, and aesthetic value.

Mobility entails synergy of activities: joint labor efforts, knowledge, and skills of family and/or community members and representatives of different sexes become embodied in a new quality of a created thing. Saddle-making presupposes initial agreement on joint movement, a nomadic lifestyle. A saddle results from the labor of a man and woman. The man, using a minimal set of tools (axe, knife, drill), works on wood and antler; he makes the frame of the saddle. The woman makes skins, cuts, sews, and wraps around the frame of the saddle. The saddle is a symbol of their joint labor: man cannot make a good saddle without a woman, and vice versa.

Reindeer transport was used during the existence of collective farms. Reindeer drivers served exploratory expeditions; riding and packsaddles were in demand. This might have caused the emergence of new versions of saddle structures, their simplification and interchangeability of materials. Saddles made in the second half and in the late 20th century, when there were fewer women in the nomadic camps and men partially took over their duties, look less aesthetically perfect than those created by joint labor.

The Evenki (hunters and reindeer breeders) still use traditional things and master the technologies of making the objects that ensure their mobility and autonomy. As contemporary Evenki admit, making a horse saddle is "laborious work; it cannot be done by everyone, but only by great experts, of whom only a few remain" (Sedlo, (s.a.)). Under these conditions, museum collections acquire a new role, and studies of material culture and technologies become particularly important, since they can be used not only by scholars, but also by the Evenki themselves.

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