

# ИСТОРИЧЕСКОЕ ОРУЖИЕВЕДЕНИЕ

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**"Southern" and "Northern" bows in the "Hunting weapons" collection of The State Darwin Museum**

**Abstract**

The article describes two kinds of the bow of the "Hunting weapons" collection of The State Darwin Museum. The first one is the vogul bow. The Voguls is the old name of the numerically small national group of Russia – Mansi, which is the native population of the Khanty–Mansi Autonomous Okrug. The bow is a composite bow. Its long shaft (185 cm) consists of a back and an inner plate glued together and additionally fixed in six places by the winding made of tendons. The second one is a simple bow used by indigenous peoples of New Guinea. The bow is made of dark wood of a sago palm that is quite solid, firm and not prone to cracking. The length of the bow is 163 cm. The bow-string is made of a bamboo strip fixed on the bow by special knots. Both bows were used for hunting and, according to the author, to demonstrate two ways of changing the hunting bow: development in the North and stagnation in the South.

**Keywords**

**Composite bow, simple bow, arrows, arrowhead, The State Darwin Museum, peoples of the North, Papuans of New Guinea**

In this article we will focus on two bows from the funds of the Darwin Museum, figuratively called the "Northern" and the "Southern" ones. To define more precisely the subject of the article will be a Vogul bow and a bow of the Papuans from New Guinea.

First of all let's talk about bows in general and bows of people from the North.

A bow is a hunting and a military weapon to shoot arrows. The invention of a bow happened about 10 thousand years BC, and the subsequent evolution of its form led to gradual transfer of the hunting organization: from the collective battue hunting to other types. There is no definite opinion on when and where a bow appeared in the North. The approximate date would most probably be the Mesolithic period. The most ancient findings were discovered in the Shigir peatlands (4 000-2 000 BC) (1), their images are known by the Siberian and the White Sea petroglyphs (1000 AD) (2).

There were bows of a simple (self bows) and a composite structure in the Northern culture. The simple structure was the flexible staff of a coniferous or a deciduous tree bended by a string. A composite bow will be discussed in more detail. This bow is composed of a few parts. Each part has a name: a grip in the middle, the tips at the end are called nocks, and a pair of curved elastic limbs between a grip and nocks. The back is the side of a bow facing away from the archer when the bow is being drawn and the belly is the side of a bow with a string, there are also the joints that connect the parts of a bow.

A composite bow was often shorter than a self bow, but usually heavier. The back of a bow was often made of a durable resinous coniferous wood. The Nanai and Oroch people used a beech wood to make bows; the Nivkh people used a willow, a populus, and an ash wood, The Chukchi collected wood for their bows on the sea and river shores. The work pieces for the back of a bow were dried for 2-3 days and then were cut with an axe giving them the necessary shape of a wooden plank with rounded and flat sides, and then it was bended with a special arched tool (gibale). To maintain the shape of the back it was soaked with a cedar resin: it was warmed up over a fire, and then the chips of a wooden resin were rubbed into it until they were no longer absorbed. Then the bent back of a bow was untied, extra resin was removed, and the flat sides of the birch and the resinous parts were tied together with a cedar root or thin tendons. After that these parts were glued and narrow pieces of wood were pushed under this binding. These work pieces were getting dried for one day and then nocks were glued on the ends of limbs. The nocks of a composite bow were made of a bird cherry wood. The joints were firmly bonded with a tendons winding. A bow was dried, and then scraped with a knife.

Also to protect it from dampness it was often covered with pieces of a birch bark boiled in fish glue, and then a bow was getting dried again. A dried loose bow is bent in the direction opposite to when it's drawn.

E. A. Glinskiy allocates the local types of composite bows among the people of Siberia, for example, the East Siberian and the Arctic types (3). However even the composite bows of the northern nationalities were not very complicated. The steppe nationalities, Chinese and Russians used the composite bows of a nomadic type: the back was pasted with the lateral tendons that gave it a greater elasticity; nocks and a grip were entirely covered with bony plates of a complex profile, so a bow had a typical wavy shape.

There is an important difference between the bows of a Northern type and composite bows of the Eurasian steppes. The bows from Central Asia are divided by researches into types according to the presence and location of such bone plates. On the same principle are classified the medieval bows of the people from Western Siberia and the Far East. A characteristic feature of the Northern type bows is the absence of bone plates. They only have a bone or a wooden inserts in the ends of a bow that serve as amplifiers, and a sort of levers, giving additional force to the limbs of a bow (4).

A removable string was put on the finished bow. The Chukchi, Evenks, Yakuts and Mansi made a bow string of a rawhide straps. Khanty weaved it from two strands of a hemp or a nettle sliver, and then it was soaked and stretched by winding on the wooden blocks, dried, and soaked again in the hot glue, stretched, dried again, and finally pasted with the birch bark. The people of the Outer Manchuria bought silky threads as bow strings. There were several ways of attaching a bowstring: The Nanai people tied it through the holes of the limb's ends, the Mansi put it on the longitudinal or transverse cuts of the limbs. The Aleut people, Chukchi, Koryaks made a loop and hanged the string on the beveled ends of the shaft. The Nivkh, Yakuts, Khanty, Nenets, and Komi people fastened the string on the special cup like form on the shaft.

One of the bows kept in the Darwin museum has a number NVF-7926, and described as: "The Vogul bow from s... (illegible), Berezovskiy district of the Tobolsk region. It came to our museum along with other hunting weapons during the

dissolution of fur department collections in the Polytechnic Museum. The Voguls is the old name of the numerically small national group of Russia – Mansi, which is the native population of the Khanty–Mansi Autonomous Okrug. According to the signs mentioned in this article, the bow originally belonged to Mansi.



Fig. 1



Fig. 2



Fig. 3

Let's have a closer look at this bow (Fig. 1). By the way it looks it refers to composite bows. Its long shaft (185 cm) consists of a back and an inner plate glued together and additionally fixated in six places by the winding made of tendons (figure 2). It's obvious that the back of the bow and the inner plate are made of different kinds of wood (figure 2). At the ends of the shaft there are wooden nocks 20 cm long which are glued to the bow and also fixated by tendons. A typical for the Mansi bow string of a twisted rawhide strap is secured to the transverse cuts of the bow's nocks (figure 3). A grip of a bow is not decorated in any way which, as was said above, is typical for the people of the North.

Except for this bow there are also some arrows to it in our collection (Fig. 4). In general arrows consisted of a wooden shaft with an arrowhead and a fletching attached to it. They used to choose a wood of a special type for arrows, preferably a birch, a pine or a fir tree (5). A material for arrows was prepared in autumn; the wood for it was getting dried for a long time. Arrowheads were usually made of stone (or flint), pieces of bones and iron. There were also different ways of attaching arrowheads: a conical piece of wood could be glued to the sharpened tip of a shaft or a sharp (or flat) piece of wood lightly greased with glue was pushed into

the upper end of a shaft and additionally winded by tendons and sometimes by a piece of bark. In addition, the people of the North had special arrowheads for a fur animals hunting – blunt bone or wooden arrowheads to keep their fur safe (6) (Fig. 5). Arrows could be without a fletching (for example, the Nanai arrows were without an arrowhead, there was only a sharpened end of a shaft, the Chukotka arrows had arrowheads made of a bone, sometimes a fletching was imitated by a painting on the shaft), if there was a fletching it could be fixed or glued. A fletching was often strengthened by a spiral horsehair or a thread winding on the glue, and the end of a fletching (up to 2 cm) was secured by a solid winding. A fletching sometimes had 2, 3, 4 or 6 (which was less common) identical blades bent to the same side (Fig. 6). This kind of structure contributed to sustainability of an arrow and also gave it a spiral way of movement in a flight.



Fig. 4.

Fig. 5.



Fig. 6.



Fig. 7.

Long arrows from our museum's collection (91 and 93 cm) were designed especially for a fur animals hunting. Their fletching consisted of three blades and was fixed in cuts greased with glue. This fletching was additionally fixed with the tendons winding which was covered with pieces of bark soaked in glue to prevent this winding from dampness. Pieces of a birch bark also covered the special cuts in the ends of arrows where a bowstring was put during the drawing (Fig. 7). Arrowheads are slightly different from each other. One arrowhead is just a broadening of

an arrow's wooden tip. Another arrow's tip has a special insertion – a piece of a processed tubular bone (Fig. 4).

Archers often used a special flat wooden container wrapped in a skin or a solid fabric to protect it from any mechanical damage or dampness. This container was carried on the left side. The quiver was cylindrical, flat or semicircular and it was made of wood, bark or skin. The quiver in length was 10-20 cm shorter than arrows. Sometimes it was closed with a wooden lid. Usually a quiver contained 15-20 arrows which were painted in different colors depending on purpose, and placed in the internal compartments with their fletchings up. A quiver was worn on the right side or behind. Unfortunately a quiver and a bow container are not included in the museum's collections.

When shooting an archer took an arrow from a quiver with his right hand with its tip forward holding the shaft with the fingers of his left hand, checked the quality of an arrow (the absence of wood shavings or roughness, the fletching condition); he put an arrow on a string with a rapid movement reaching the nock of an arrow. The string was pulled until the tip of an arrow reached the left hand's thumb. The most rational way of drawing was considered "the Arabic" one that is drawing until full bending of the right arm, so that the forearm was on the shoulder's level or a little above. For the more accurate aiming the arrow had to be at the eyes level. Among the northern nations the Mediterranean way of drawing a string was common: a string was drawn by a forefinger and a middle finger with the ring finger's help and the thumb and little finger remaining free (7). Leather gloves were used to protect fingers, and special rings with shields to protect wrists. Archers used to shoot standing or kneeling on the ground or on the boat; the flight range of an arrow wasn't very significant.

With the increase usage of firearms among the people of the North in late XIXth - early XXth centuries bows became less and less common. They were replaced by guns, flintlocks, then piston guns, later rifles and shotguns. However in 40-50-ies of the XXth century in the birds hunting and some other kinds of hunting for a wild reindeer, people used bows, because firearms and bullets were too expensive.

The bows of the Southern seas, including the Papuans of New Guinea often used simple self bows. Such bows are generally most prevalent among the so-called "primitive" tribes of Africa, South America, and the islands of Melanesia. Aborigines of New Guinea who still live in the Stone Age make primitive bows. Despite this most of these bows are a powerful weapon. Some of them reach 183 cm and some are even longer (8). A typical Papuan bow is made of a sago palm wood. The side facing the bowstring (a bow's belly) is flat; the outer side (a bow's back) is rounded. A bowstring is made of bamboo. The bow has not changed over the last 100 years, and it is easily seen by looking at the exhibits of the collections in the Asia and Pacific Museum in Warsaw related to the end of the 19th century and represented in the catalogue of the exhibition "The magic weapon of heavens" (9) and bows described by ethnographers in the late 19th - early 20th century. Sterling writes in his book "The Aborigines of New Guinea": "For inhabitants of New Guinea a bow is a typical weapon, made of a black palm tree (Saga palm) with a bamboo bowstring" (10). A bow from our funds has a number KP NVF 13059 and it is exactly the same as the one described above (Fig.8). A dark wood of a sago palm is quite dense and not prone to cracking. The length of a bow is 163 cm. A bow string is made of a bamboo strip fixed on a bow by special knots (Fig. 8A).



**Fig. 8.**



**Fig. 8a.**

There are also two arrows in the funds under the numbers № KP NVF 13061 and 13062 which came with that bow (Fig. 9). The Papuan arrows are made artfully with a bamboo or bone arrowheads (11). Shafts are made of the bamboo



stems (12) and have wooden insertions. The length of these arrows is significant: 111 and 131 cm, it's a standard length for such arrows (13). The wooden insertions are 35-40 cm and give the additional weight to the arrow; arrowheads are made of bones (tubular bones of birds). The wooden part is fixed on the reed on one arrow by using the rattan braiding (the traditional way), and the other by using a copper wire. Unlike the bows which are not decorated in any way, arrows (their wooden part) are richly ornamented with carvings typical for the Papuans of New Guinea (14, 15, and 16). These various geometric patterns (17) are painted in white and red colors. There's no fletching. But it's not necessary because there is no need to shoot at a long distance in jungles.



**Fig. 9.**

Arrowheads (one of which is 8.5cm and another is 13 cm) are fixed with some resin (18) (figure 10). The absence of notches says they were meant for hunting.



**Fig. 10.**

Despite the fact that the arrows seem quite light, the Papuans of New Guinea use them to hunt for a fairly large prey, for example, cassowaries and wild boars (19).

These two bows of different nations that live equally far from civilization clearly demonstrate the changes in a hunting bow development: an improvement in the North and stagnation in the South.

**Reference**

1. Archaeology of the USSR, the Mesolithic of the USSR/ Under edition of B.A. Rybakov — M.: Science, 1989. — P. 140.
2. Savateev Y. I. Petroglyphs of Karelia. P.: Karelia, 1976. — P. 2-3.
3. Glinskiy E. A. A bow and arrows of the people of Extreme North-East of Siberia as a historical and cultural phenomenon:// abstract of dissertation / — L.: Academy of Sciences of the USSR. Institute of Anthropology and Ethnography, 1986.
4. Shokarev Y. B. Bows and crossbows. — M.: Astrel, 2001. — P. 23.
5. Ibind — P. 27.
6. Matiushin G. N. Archaeological dictionary. — M.: Prosveshenie, 1996. — P.23
7. Stone Д. К. The weapons and armor of all times and nations. – M.: Astrel, 2008. – P.377-378.
8. Stone Д. К. The weapons and armor of all times and nations. – M.: Astrel, 2008. – P.373-374.
9. K. Morawski. Magikal Weapons from the Sky. From the Indonesian collection of the Asia and Pacific Museum in Warsaw. Warsaw/Moscow 2013.— P. 244
10. M. W. Stirling. The native peoples of New Guinea, Published by the Smithsonian institution, 1943. — P. 20.
11. Ibind. — P. 20.
12. T. Bush. Form and Decoration of Arrows from the Highlands of Papua New Guinea.// Records of the Australian Museum, 1985. —P. 266.
13. K. Morawski. Magikal Weapons from the Sky. From the Indonesian collection of the Asia and Pacific Museum in Warsaw. Warsaw/Moscow 2013. —P. 244.
14. M. W. Stirling. The native peoples of New Guinea, Published by the Smithsonian institution, 1943. —P. 20.
15. Lewis. Field Museum of Natural History Decoration and ornament -- New Guinea; Decoration and ornament. Chicago, Field Museum of Natural History. Chicago, 1925. —P 2, P 21

16. T. Bush. Form and Decoration of Arrows from the Highlands of Papua New Guinea.// Records of the Australian Museum, 1985.— P. 258.
17. B. A. L. Cranstone. Melanesia: A Short Ethnography. London: Trustees of the British Museum, 1961.— P. 62-64
18. T. Bush. Form and Decoration of Arrows from the Highlands of Papua New Guinea.// Records of the Australian Museum, 1985. — P. 265
19. M. W. Stirling. The native peoples of New Guinea, Published by the Smithsonian institution, 1943. — P. 215.

### Bibliography

1. Archaeology of the USSR, the Mesolithic of the USSR./ Under edition of B.A. Rybakov. M.: Science, 1989
2. Glinskiy E. A. A bow and arrows of the people of Extreme North-East of Siberia as a historical and cultural phenomenon / L.: Academy of Sciences of the USSR. Institute of Anthropology and Ethnography, 1986.
3. Матюшин Г. Н. Археологический словарь.— М.: Prosveshenie, 1996
4. Savateev Y. I. Petroglyphs of Karelia. P.: Karelia, 1976.
5. Stone Д. К. The weapons and armor of all times and nations. – М.: Astrel, 2008.
6. Shokarev Y. B. Bows and crossbows. — М.: Astrel, 2001. — P. 23.
7. T. Bush. Form and Decoration of Arrows from the Highlands of Papua New Guinea. Records of the Australian Museum, 1985.
8. L. Cranstone. Melanesia: A Short Ethnography. London: Trustees of the British Museum, 1961.
9. B. Lewis. Field Museum of Natural History Decoration and ornament — New Guinea; Decoration and ornament. Chicago, Field Museum of Natural History. Chicago. 1925.
10. K. Morawski. Magikal Weapons from the Sky. From the Indonesian collection of the Asia and Pacific Museum in Warsaw. Warsaw/Moscow 2013.
11. M. W. Stirling. The native peoples of New Guinea, Published by the Smithsonian institution, 1943.

