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Dwelling and life of nomads

A tent (chum) is the main sign of life in the tundra. The Nenets riddle «In the middle of the tundra, a pointed heap covered with skins» (the answer is chum) describes this sign of habitable space. Pointedness is one of the aesthetic canons expressed in the Nenets ornament, as well as in descriptions of the robes and dwellings of gods and heroes. In the plain tundra the chum is visible from afar and always “looks like a chum,” since both its entire silhouette and one crown of its head look like a triangle. As the traveler come closer, he sees that the top of the triangle has begun to smoke, which means that the hosts have noticed the guest, and now they are boiling tea by his arrival. Despite its temporary nature, the chum serves as a reliable shelter not only for its owners, but also for the wanderer. According to the old custom, a guest could stay and live in the chum as long as he wanted without explanation, apology or payment. Nowadays, due to the rapid development of ethnotourism, this is remembered as a golden age.

Different peoples or residents of modern megacities have different ideas about home comfort. For the Nenets nomads, the chum is considered as a standard



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of comfort. It is mobile and can be taken with you everywhere. Everything is at hand here, there is no luxury stuff. Chum can be considered a «simple variant» of a design project of minimalist aesthetics. Life in this type of tent also has special advantages that are available only to a person who lives in the dialogue with nature. The chum remains a part of the tundra: stars look out into the upper smoke window, it is raining, the force of a blizzard is felt by the flapping skins, the crackling of hooves outside notifies about the arrival of deer. Once V. Islavin, the author of the book «Samoyeds in Home and Public Life», published in 1847, had a chance to spend the night in Russian houses with his Samoyed guides and watch them in the middle of the night, «one after another leaving the hut, remained outside and spent the night, some huddled on a sled, and some just lounging in the snow. « The dislike of the nomad for the «deaf and blind» house sometimes is similar to claustrophobia.

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The geometric shape of the chum is a cone, the most stable of all figures; in the tundra nature, mountains and hills are endowed with this form. The conical shape gives the dwelling exceptional stability: the air flows, bending around the cone, press it to the ground along the perimeter. Therefore, during strong winds, the chum never topples, but pressed to the ground. The chum-cone resists all sorts of external influences like wind, snow or attempts to move it or turn it over. There was no case that a correctly placed chum (the angle more than 50°) turned over or crumbled in a strong wind, although individual poles of the chum broke (usually due to flaws in wood or incorrect installation). Another value of the conical shape of the chum is that it is never covered with snow. Snow easily rolls off the steep and smooth surface of the cone-shaped chum, and it can be cleared without removing the tires by tapping on the skins with a special “yangach” beater.



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Ethnographers show great interest in the dwellings of the indigenous peoples of the North. Each of the 47 nationalities has its own variants of names and design features: chum, yaranga, vezha, kot, kuwaxa and others. In reports on ethnographic research one can find many drawings and sketches of the dwellings and lifestyle of the Arctic peoples. Nowadays, architects, engineers, ecologists and designers have begun to show interest in traditional dwellings due to the need to develop environmentally friendly technologies. Any of the dwellings of nomadic reindeer breeders can become the subject of visual research – scientific illustration.



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Valery Chkalov

Valery Pavlovich Chkalov was born on February 2, 1904 in the village of Vasilevo (now Chkalovsk), Nizhny Novgorod province in the family of a craftsman and a housewife. The boy's mother died when he was 6 years old. Having successfully graduated from school, he continued his education at the Cherepovets Technical School. Due to the lack of funds, it was soon closed. Valery returned home and got a job in a river shipping company.

At the age of 15 Chkalov volunteered for the Red Army and began working as an apprentice airplane assembly fitter.

In 1921-1922, Chkalov studied at the military theoretical school of the Air Force, and then at the Borisoglebsk Aviation School, where he made his first independent flight in his life on the British biplane Avro 504.

Until 1924 Valery Pavlovich studied at various aviation schools, including the Moscow and Serpukhov ones, mastering various types of aircraft - from Junkers to

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Martinside. Finally, after graduating from all existed kinds of training courses and schools, he received a referral to the Leningrad Red Banner Squadron named after the first famous Russian pilot P. Nesterov.

In 1930 Chkalov was sent to the Moscow Research Institute of the Red Army Air Force, where he was truly able to show his potential as a pilot. For 2 years of work as a tester he made over 800 flights for the research institute.

In 1935 Chkalov's friends, pilots G. Baidukov and A. Belyakov, offered him a risky adventure: to fly from the USSR to the USA.

However, the route was corrected: the end point became in Petropavlovsk-Kamchatsky, and the route itself was named «Stalin's route». The pilots managed to cope with this task successfully, having made this flight in 1936.

Soon, Chkalov obtained permission to fly to the USA (Moscow - North Pole - Vancouver), which started on June 18, 1937.

By plane ANT-25, the crew reached the American

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city of Vancouver (Washington state) through the North Pole and successfully returned. The entire crew was awarded the title of Hero of the Soviet Union.

In 1938 Valery Chkalov was urgently recalled from a well-deserved vacation and was appointed to the test of the latest I-180 fighter. Designer N. wrote reports desperately with demands to postpone flight tests, but on December 15, 1938, the brave test engineer Valery Chkalov made up his mind and took the newest I 180 into the air.

During the flight the airplane engine failed. Unfortunately, while planning, Valery Pavlovich caught power lines and hit his head during a hard landing. Two hours later, he died without regaining consciousness in the Botkin hospital in Moscow ...

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Drifting station «North Pole-1»

The idea of landing people on drifting ice was first suggested in 1925 by the famous Norwegian Fridtjof Nansen. He intended to deliver a team of scientists to the North Pole region by airship. For many reasons this project was not implemented, but a lot of people found this idea worthwhile. In Soviet Russia it was warmly shared by O. Schmidt and V. Vize. By that time serious experience had been accumulated: number of Arctic sea trips were held, and a large group of people even wintered on an ice floe – the team of the heroic Chelyuskin, buried in ice.

In 1937 on the ice of the Arctic Ocean, 20 kilometers from the North Pole, the world's first drifting scientific station «North Pole-1» appeared. Drifting means moving with the movement (drift) of the ice.

People and equipment were delivered to the ice floe by aviation. 4 people worked at the station. They went down in history under the name “Papanin’s people”, derived from the name of the station chief

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Ivan Papanin. 4 employees of the station lived on a floating ice floe for 9 months. This is how they described their station at the beginning of the drift:

“Our camp has got an imposing appearance: five tents have grown, two radio station masts risen, an antenna is stretched between them. A meteorological cabin and a theodolite have been installed to observe the height of the sun, to determine the location of our drifting station. We must constantly be aware of where the drift is taking our ice floe. «

“The type of housing was established after long debate and experimentation. And here we proceeded from the basic rule that the equipment should be as light as possible. The tent together with the beds weighed only 53 kilograms and had the following dimensions: width - 2.5 meters, length - 3.7 meters, height - 2 meters. We made the tent very warm, with four layers: between two layers of thick tarpaulin, two layers of eider down were laid. A vestibule was attached to the tent, since without it, when the door was opened, the wind could blow out heat. The floor was inflatable, the thickness

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of the air cushion, which separated it from the ice, was 15 centimeters; covered with plywood sheets and reindeer skins. The beds were in two tiers, like in a compartment of a railway carriage. Tent frame was made of duralumin pipes. «

On February 19, 1938 the icebreaking steamers “Murman” and “Taimyr” picked up polar explorers from the ice floe and everything valuable, including the results of the scientific work. For 274 days «NP-1» covered 1134 miles (2100 km).

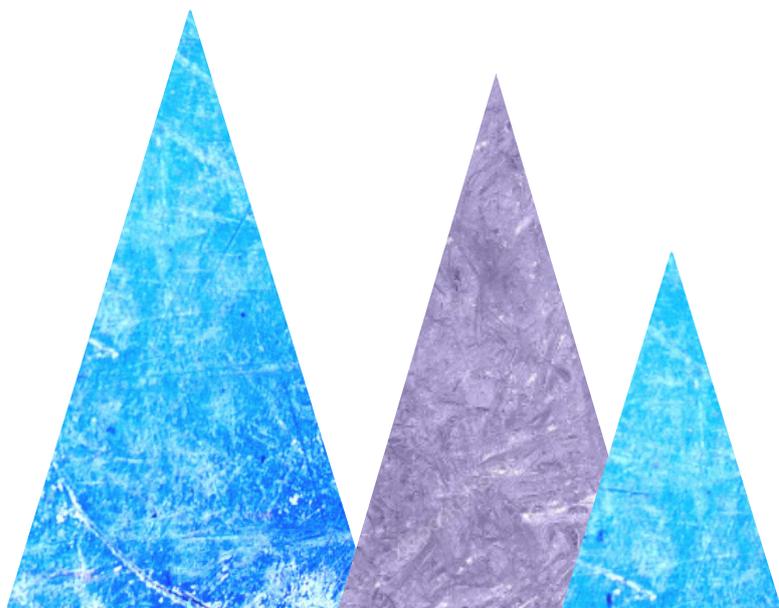
Oceanographic observations carried out at the station showed that warm Atlantic waters reached the pole and formed there a layer about 500 meters thick. F. Nansen’s hypothesis about the existence of an underwater ridge between Greenland and Spitsbergen was confirmed and its western slope was discovered.

Polar explorers received a set of scientific results on the study of the Arctic Ocean, collected a comprehensive material on the study of the drift of the «Papanin» ice floe. Ten years later, assessing the

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contribution of SP-1 to Arctic science, V. Vize wrote: «The observations of the first Soviet drifting station made a major contribution to the treasury of world science. They opened to the scientist's gaze a part of the Earth that had remained previously unexplored».

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Musk-ox

The musk ox is one of the few mammals perfectly adapted to the harsh conditions of the North. The indigenous population of this species has survived in North America, as well as in Greenland. In Russia, the musk ox lives on the Taimyr Peninsula and Wrangel Island. Scientists believe that the ancestors of musk oxen lived on our planet more than a million years ago. The musk ox is a typical inhabitant of the hilly arctic tundra and polar deserts.

The musk ox is common in Greenland and the islands of the Canadian Arctic Archipelago; in recent years, the musk ox has been delivered to some Arctic islands such as Svalbard, Nunivak, Nelson, and also to Alaska. Also found in North America. In the 1970s it was brought to Taimyr and Wrangel Island, where it successfully took root.

The musk ox combines the features of bulls and sheep. An exceptionally long fur is another characteristic feature. The height at the withers of these animals is about 1.1 meters, and the weight reaches 300

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kilograms. The musk ox feeds on moss, lichens, grass, cereals.

Pregnancy of female musk ox lasts 8.5 months. In late May or early June a female musk ox gives birth to one cub. Calves are not afraid of the cold, but they are very sensitive to dampness. It drinks milk for over a year.

Musk oxen are the only large herbivores that spend the Arctic winter in their habitats without migrating. They live in regions where precipitation is negligible and therefore there is no high snow cover.

The lifestyle of this animal resembles the sheep one. From September to May, the musk ox wanders, living in herds of 20-30 heads, very dexterously climbs the rocks. Musk oxen are strong enough animals to fight with predators and protect their offspring. Nowadays, the number of musk oxen in the world is only about 25,000 heads, so the animals are under strict protection.