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A.G. Novikov and O.I. Goriunova

*Institute of Archaeology and Ethnography, Siberian Branch, Russian Academy of Sciences,
Pr. Akademika Lavrentieva 17, Novosibirsk, 630090, Russia
Irkutsk State University,
Karla Marksa 1, Irkutsk, 664003, Russia
E-mail: as122@yandex.ru*

Portable Sculptures from Neolithic and Bronze Age Habitation Sites near Lake Baikal*

Portable sculpture provides important information on past worldviews, the ways various objects were perceived, and subsistence activities. This study addresses figurines from Neolithic and Bronze Age habitation sites on Lake Baikal, relying on a summary of published specimens, plus those from recent excavations: in total, 32 intact and fragmentary figurines from twelve sites. Chronology, assessed on the basis of stratigraphic observations and radiocarbon analysis, suggests that figurines had been manufactured on Lake Baikal since the Early Neolithic (over 7000 cal BP). Most of the early specimens represent fish, some depict Baikal seals. They conform to the Kitoy artistic tradition. Late Neolithic figurines (5590–4870 cal BP) evidence a different style, typical of the Serovo-Glazkovo tradition. Bronze Age depictions of fish are highly stylized. Overall, these differences make it possible to track chronological changes in the content and styles of portable sculpture in the region. Most representations of fish have hanging-holes and were probably used as bait. Larger ones without holes might have been used in rituals.

Keywords: *Baikal, Cis-Baikal, Neolithic, Bronze Age, portable sculpture, habitation sites.*

Introduction

Pieces of ancient art—in particular, portable art—have always attracted the special interest of researchers. These artifacts provide important information on the worldviews of ancient people and their perception of a particular image. Portable pieces of art reveal close relations with production activities. Small figurines usually represent images of animals, which played important roles in the life of ancient people. Portable sculptures reflect conditions of material life and social relations.

The first sculptures in Cis-Baikal region were discovered in the late 19th century. These were incidental

finds of stone representations of fish. M.P. Ovchinnikov and D.N. Anuchin were the first scholars who studied these artifacts. They interpreted them as cult objects providing for successful fishing (Okladnikov, 1950: 246). B.E. Petri (1916: 124–126) excavated a multilayered habitation site in the Ulan-Khada Bay of Lake Baikal in 1913 and found the first large collection, of 13 stone fish figurines (both intact and fragmentary). Regrettably, all intact figurines were found on the surface of the ground, beyond stratigraphic context. Only three figurine fragments were recovered from the Ulan-Khada Neolithic layers.

Subsequently, excavations at ancient burial grounds on the banks of the Angara and Lena rivers yielded abundant materials on the portable art of the Cis-Baikal Neolithic and Bronze periods (Okladnikov, 1936, 1941, 1950:

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242–244, 390–396). Sculptures recovered from these burial grounds were mostly representations of fish, or more rarely, elk heads and anthropomorphic figurines. Analysis of the obtained objects made it possible to classify figurines by their motifs, manufacturing techniques, and stylistic features (Okladnikov, 1936, 1950: 219, 246–250; Studzitskaya, 1970, 1976).

The array of data on Baikal portable sculptures was built up very slowly. The majority of figurines represented isolated finds (Svinin, 1976: 168, 170; Gryaznov, Komarova, 1992: 18–19; Kushnareva, Khlopin, 1992: 89; Goriunova, Novikov, 2012: 84–88). Starting in the 1970s, large-scale excavations have been carried out on Baikal shores, and a considerable number of portable sculptures have been collected (Okladnikov, 1975; Goriunova, 1997: 96; Aseev, 2003: 88, 132–133; Nomokonova, Goriunova, 2004: 121; Dolganov et al., 2011: 78; 2013: 127; Goriunova, Novikov, 2012; Goriunova, Novikov, Weber, 2014: 56). The present paper's objective is to summarize and analyze the available materials on portable art from Neolithic and Bronze Age habitation sites ($n = 12$) in the region, as well as to assess the age of the materials with the aid of modern natural science techniques.

Study materials

This paper addresses portable figurines from Baikal region that have been published in various papers, as well as newly discovered figurines from the sites that have been excavated in recent decades. The sample includes 32 portable art objects (both intact and fragmentary specimens), which have been found throughout the years of study.

Uzur II is the Neolithic-Bronze Age site located on the eastern shore of Olkhon Island (in the territory of the Uzur settlement), 265 km northeast of Irkutsk (Fig. 1). A stone fish figurine was found by local citizens in their vegetable garden in 1991. The figurine shows a realistic image resembling a burbot (Fig. 2, 6). The broad head of a fish merges into a narrow tail. The burbot's thick lips are accentuated. The eyes are shown by small dimples located in the same plane. The gills are marked on the ventral side by carved lines converging in the center. Two long fins (upper and lower) run along the tail part. Near the gills and on the back, holes are noted.

Tyshkine III is a multilayered site on the eastern shore of Olkhon Island, located 1.3 km southwest of Tyshkine Fall and 220 km northeast of Irkutsk (see Fig. 1) (Goriunova, Novikov, 2012: 84). A blank of a fish figurine of crystalline marble was found in cultural layer IX (Late Neolithic). It has a shape of a cisco (see Fig. 2, 1). The sculpture is flattened at the sides, its head is pointed; the tail ends with a straight cut. The dorsal fin is made as a protrusion; the proctal fin is marked by a small convexity.

Khuzhir-Nuge V is a Neolithic-Iron Age site located on the bank of the Khuzhir-Nugaisky Bay of the Maloe More (Little Sea) Strait of Lake Baikal, 200 km northeast of Irkutsk (see Fig. 1). A fish figurine was found by tourists in a coastal cliff. It is made of a white marble, and has a stylized cisco-like shape (see Fig. 2, 8; 3). The figurine shows the general fish outlines and proportions. The dorsal, proctal, and forked tailfins are sculpturally displayed. Neither eyes, nor gills are shown; also, the figurine has no holes.

Kulara III is a Mesolithic-Late Neolithic habitation site located in Kulara, on the northwestern bank of the Mukhor Bay in Maloe More, 193 km northeast of Irkutsk (see Fig. 1) (Ibid.: 85). A tail-fragment of a fish figurine made of chert, with a pointed tail-end and several small holes, was recovered from the Late Neolithic layer.

Ulan-Khada is a Mesolithic-Iron Age site located in the homonymous gulf in the southeastern part of the Mukhor Bay in Maloe More, 198 km northeast of Irkutsk (see Fig. 1). This site yielded the largest number of stone fish figurines (16 intact and fragmentary items): six specimens were recovered from the Neolithic and Bronze Age layers, and ten figurines were collected from the surface (Petri, 1916: 124–128, Okladnikov, 1950: 247; Gryaznov, Komarova, 1992: 18–19; Goriunova, Novikov, 2012: 85–86).

A stylized representation of a burbot-like fish, made of chert, was recovered from the Early Neolithic layer X (see Fig. 2, 7). The figurine displays the general outlines



Fig. 1. Map showing the locations of the sites mentioned in the article.

1 – Uzur II; 2 – Tyshkine III; 3 – Khuzhir-Nuge V, Kulara III, Ulan-Khada, Kurkut III, Vostochnyi Kurkut I, Itrykhey; 4 – Sagan-Zaba II; 5 – Smorodovaya Pad; 6 – Listvenichnoye; 7 – Katun I.

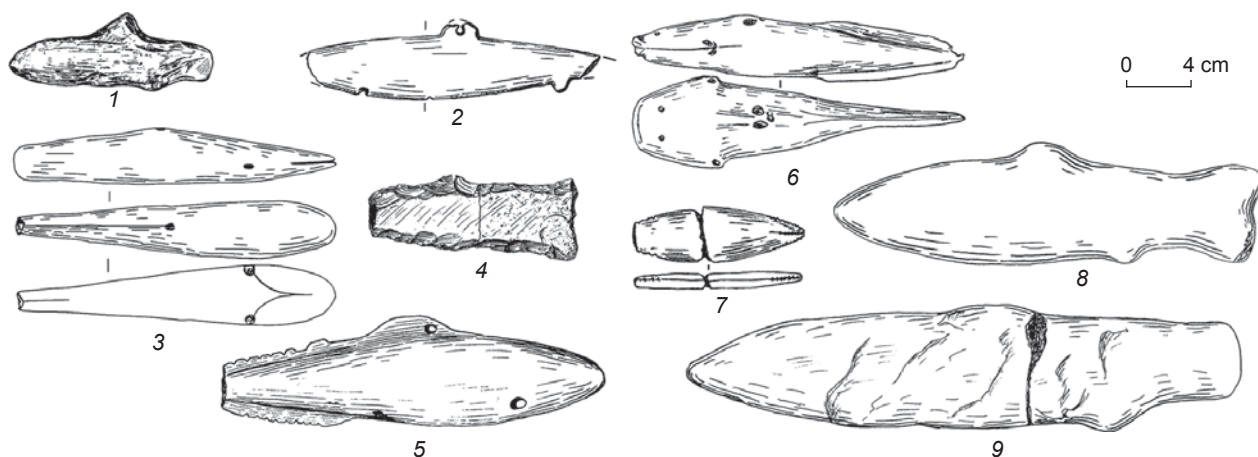


Fig. 2. Stone fish figurines.

1 – Tyshkine III; 2 – Kurkut III; 3 – Katun I; 4 – Sagan-Zaba II; 5, 7, 9 – Ulan-Khada; 6 – Uzur II; 8 – Khuzhir-Nuge V.

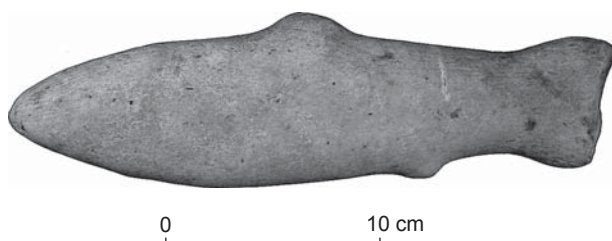


Fig. 3. Stone fish figurine from Khuzhir-Nuge V.

of a fish, without detail. The lateral sides of the figurine are flattened, the head is fashioned with a straight cut; the tail is pointed. In the areas of gills and tail, lateral notches are noted. The compressed layer of the Middle-Late Neolithic (layer IX) yielded an intact fish figurine and a tail-fragment. The intact sculpture was made of sandstone, and represented a schematic image of a burbot (see Fig. 2, 5). There is a marked dorsal fin, from which long upper and lower fins fashioned with incisions run along the tail. Near the gills and dorsal fin, holes were noted. Fragments of fish figurines made of marble were recovered from Early Bronze Age sediments: one fragment from layer VII, and two fragments from layer IV.

The surface collection includes six intact fish figurines and four fragments, all made of fine-grained marble. Some of these items possibly represent unpolished blanks. Four figurines were classified as cisco images. All of them show a dorsal fin; two specimens also show proctal fins. Tails are mostly forked (3 spec.). The largest figurine (35 cm long) has a tailfin fashioned with a straight cut (see Fig. 2, 9). One of the intact fish figurines has a hole in the dorsal fin.

In the Ulan-Khada Bay, two small stone sculptures (5.5 cm) representing stylized fish images with convex

backs (Fig. 4, 2, 5) were found. The figurines have holes in their backs. One of the figurines shows a mouth made with a carved line.

Kurkut III is a Neolithic-Iron Age site located at the end of the Kurkut Bay in Maloe More, 195 km northeast of Irkutsk (see Fig. 1) (Goriunova, Novikov, 2012: 86). A marble fish figurine resembling a cisco was found in the Late Neolithic layer IV. Its head and (broken-off) tail are pointed (see Fig. 2, 2; 5). The protruding dorsal and proctal fins are shown. Holes were noted in the gills and dorsal fin area.

Vostochnyi Kurkut I is a Neolithic-Iron Age site located in the eponymous gulf in the southeastern part of the Kurkut Bay, 196 km northeast of Irkutsk (see Fig. 1) (Aseev, 2003: 132). A stylized burbot-like fish figurine was found at the site. The figurine has a broad and flat head merging into a long narrow tail. Holes were noted in the gills, dorsal fin, and tail-end areas.

Ityrkhey is a Mesolithic-Iron Age site located in the eponymous gulf in the southeastern part of the Kurkut Bay, 197 km northeast of Irkutsk (see Fig. 1) (Goriunova, Novikov, 2012: 86). A small figurine was recovered from the Middle Neolithic layer IV. It represents a curved bone-stem topped with a head with clear zoomorphic (anthropomorphic?) features (see Fig. 4, 7). Side-notches separate the upper (broader) end from the pointed stem, and mark out the head. In the center of this end, there is a notch forming two protruding parts (ears?). The frontal face of the stem is decorated with a geometric pattern of alternating, long (double) and short lines running transversally.

Sagan-Zaba II is a Mesolithic-Iron Age site located in the eponymous gulf in the western shore of Lake Baikal, 155 km east-north-east of Irkutsk (see Fig. 1). The Neolithic layers of the site have yielded five small figurines over the history of the site-studies (Okladnikov,

1975; Goriunova, Novikov, 2012: 86). Among these, a broken-off stone fish figurine and a bone spoon with a sculptured handle were found in Early Neolithic layer III (excavations by A.P. Okladnikov in 1974). A small fish figurine (not exceeding 4 cm) is a stylized representation of a fish with a convex back (see Fig. 4, 1). The head and tail are missing. Deep notches are noted along the back. The spoon-handle is shaped in the form of a stretched neck and a marked head of a Baikal seal (see Fig. 4, 8). The handle is separated from the scoop by two small symmetrical projections, possibly representing the animal's legs. The stylized image shows the Baikal seal's main characteristic features. The rather oblong shape of the image imparts a rushing-forward movement (the posture of a swimming Baikal seal).

Three other fish sculptures were found in 2008. One of them was recovered from the lower Early Neolithic layer V. It was a small (not exceeding 3 cm) marble stylized fish figurine with a convex back (see Fig. 4, 3; 6, 1). The tail is broken off. The figurine shows modeling on both sides: a carved line designates the mouth; the gills are shown with paired straight lines. Carved lines are also noted close to the dorsal and ventral fins. The second fish figurine was recovered from the upper Middle Neolithic layer V. It shows a small (4 cm) stylized marble fish-representation with a convex back. The third figurine was found in Late Neolithic layer IV. This chert sculpture represents a cisco-like image fashioned with large detachments (see Fig. 2, 4; 6, 2). It shows the dorsal, ventral, and forked tailfins.

Smorodovaya Pad is a Neolithic-Bronze Age site located on the western coast of Lake Baikal, 65 km south-east of Irkutsk (see Fig. 1). A figurine of a Baikal seal was found in the mixed layer (Kushnareva, Khlopin, 1992: 89). It is a stylized and 4.6 cm long figurine, made of black stone (see Fig. 4, 4). Its lateral sides and ventral surface show notches, inclined with respect to the main axis. The general outlines of the body and position of the eyes suggest that the animal is shown from the back (top view) in an extended posture, as if the seal is swimming in water, so that only its head and back are visible.

Listvenichnoye: a find was made in the eponymous village situated on the right bank of the Angara River taking off from Lake Baikal (see Fig. 1). The sculpture of a fish with the shape of a burbot is shown in realistic manner (Okladnikov, 1950: 245). The broad head displays the eyes, located in the same plane. The body merges into a long narrow tail. The ventral surface shows the gills, marked with carved lines. The figurine has holes on the back and near the gills.

Katun I is a Neolithic-Iron Age site located on the eponymous cape at the western shore of the Chivyrkuisky Bay, in the eastern part of Lake Baikal, 329 km northeast of Irkutsk (see Fig. 1). Two fish figurines were found here.

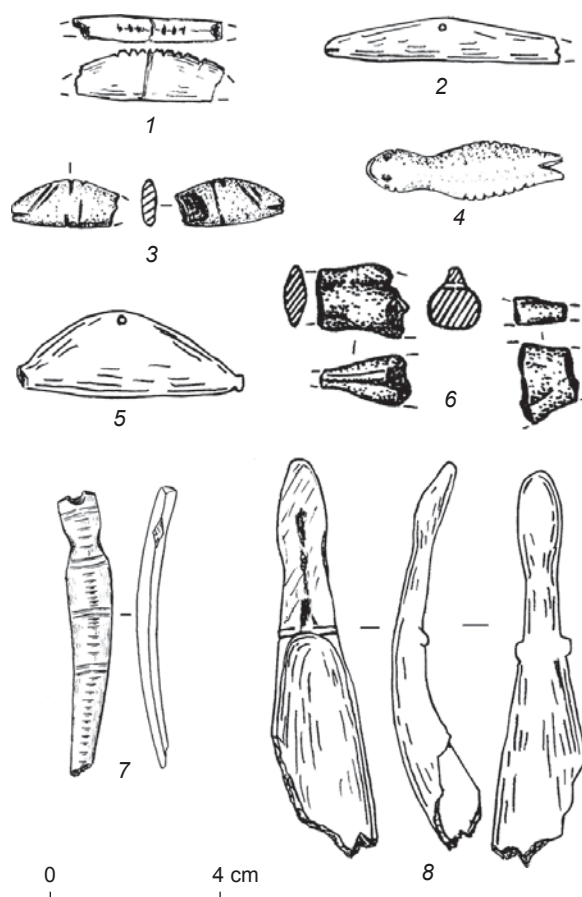


Fig. 4. Portable sculptures.

1, 3, 8 – Sagan-Zaba II; 2, 5 – Ulan-Khada; 4 – Smorodovaya Pad; 6 – Katun I; 7 – Ityrkhey.
1–5 – stone; 6 – clay; 7, 8 – bone.

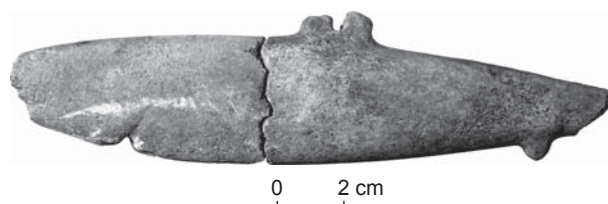


Fig. 5. Stone fish figurine from layer IV at Kurkut III.

One of them, made of gray chert, was found in a coastal cliff in association with Bronze Age ceramics (Svinin, 1976: 172). It represents a stylized image of a burbot (see Fig. 2, 3). The broad head of the fish merges into a narrow tail. Mouth and gills are marked, as well as holes on the back and near the gills. The second figurine (fragmentary) was recovered from Middle Neolithic cultural layer VI (Nomokonova, Goriunova, 2004: 121). It is made of clay, and has a burbot-like shape (see Fig. 4, 6). Its body is broad; the tail is flattened on the sides. The dorsal and proctal fins are sculptured. In the dorsal fin, the hanging-hole is made.

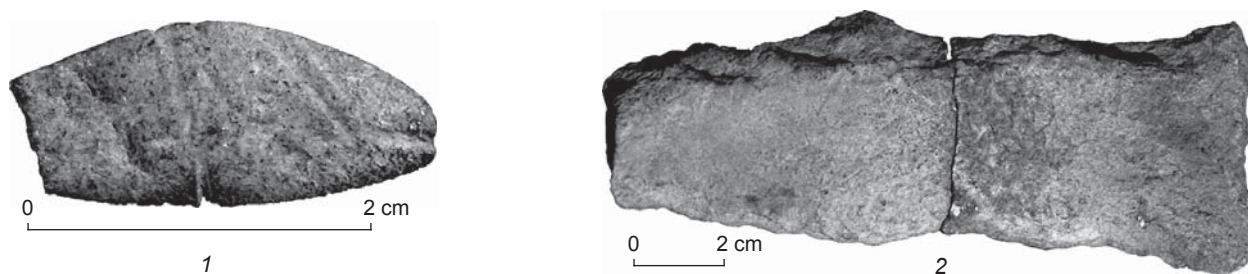


Fig. 6. Stone fish figurines from lower layer V (1) and layer IV (2) at Sagan-Zaba II.

Discussion

Currently, 32 portable sculptures (intact and fragmentary) made of stone, clay, and bone have been found in the Neolithic and Bronze Age habitation sites on Lake Baikal shores. The majority of these sculptures represent fish (29 spec.). They are mostly made of white crystalline marble (21 spec.); or more rarely, of chert (4 spec.), sandstone (3 spec.), or clay (1 spec.). The collection of stone fish figurines includes three unpolished, unfinished specimens (Tyshkine III and Ulan-Khada) (see Fig. 2, 1, 9). The majority of fish figurines have cisco-like shapes (eight intact and nine fragments). Among them, a subgroup is distinguished showing a straight tailfin (without a notch). These figurines possibly represent taimen fish. All the cisco-like figurines are stylized. The main features of the fish's body, which are sculpturally marked, are dorsal, proctal, and tailfins. The fish-images are shown schematically, without modeling the eyes, gills, or other details. Two figurines show notches near the dorsal fin and on the ventral surface (see Fig. 2, 2). The majority of cisco figurines represent surface-finds collected at the Neolithic and Bronze Age sites (Ulan-Khada and Khuzhir-Nuge V). In the stratified context, they were associated with the Late Neolithic layers (layer IV at Sagan-Zaba II, layer I at Kulara III, layer IV at Kurkut III, and layer IX at Tyshkine III). For these layers, a series of calibrated radiocarbon dates* has been obtained (from the bones of ungulates), which falls within the interval of 5590–4870 BP (Nomokonova et al., 2013; Goriunova et al., 2014: 239). The cisco-like figurines have analogs in the Serovo Late Neolithic burial sites in Cis-Baikal (Okladnikov, 1950: 242–250; Goriunova, 1997: 96). Three such fragmentary figurines were found in the Bronze Age layers at the multilayered site of Ulan-Khada. The calibrated radiocarbon date of 4150–3840 BP (3660 ± 60 BP (LE-883)) has been obtained for layer VII from charcoal.

*All the dates provided herein have been calibrated by 2σ (95.4 % probability) using Calib 7.0.1 software against the IntCal13 database (Reimer et al., 2013).

The group of burbot-like figurines includes seven specimens, one of which is made of clay. Two of these figurines are realistic representations from Uzur II (see Fig. 2, 6) and Listvenichnoye. Other sculptures are stylized: the representations show general outlines of fish-bodies without particular details. Almost all stone figurines of this group have holes near their area of dorsal fins and gills (see Fig. 2, 3, 5, 6). The only exception is a sculpture from the Early Neolithic layer X at Ulan-Khada, which is highly stylized as compared to other figurines. Another burbot-like figurine from Ulan-Khada was found in layer IX. The calibrated radiocarbon date of 5570–4880 BP (4560 ± 100 BP (LE-1282)) obtained from charcoal suggests its attribution to the Late Neolithic. The stone figurine from the habitation site of Katun I has been dated to the Bronze Age (on the basis of associated ceramics). Other burbot figurines were collected from the surface at various Neolithic-Bronze Age sites.

Small fish figurines (5 spec.), from 3.0 to 5.5 cm in size, from Sagan-Zaba II and Ulan-Khada, form another group. They display stylized fish-images. Fish-body outlines are shown as elongated images with convex backs. Two figurines have holes in the dorsal fin areas (see Fig. 4, 2, 5). The sculpture from the lower layer V (Early Neolithic) of the Sagan-Zaba II shows a two-sided modeling of the mouth and gills (see Fig. 4, 3). The figurine from layer III of the same site (excavations of 1974, Early Neolithic) shows incisions along the back (see Fig. 4, 1). The style of these figurines is well correlated with the second group of Kitoy fish representations that was identified by S.V. Studzitskaya (1976: 80) in the Cis-Baikal Neolithic. Certain distinctions likely represent local specificity. A series of calibrated radiocarbon dates in the interval of 7090–6310 BP has been obtained from ungulate bones associated with the Sagan-Zaba II layers yielding small stone figurines (Nomokonova et al., 2013; Goriunova et al., 2014: 239).

Isolated sculptures representing Baikal seal have been found in the Baikal sites belonging to the Neolithic period. The image of this animal is represented by the stone figurine from Smorodovaya Pad, and by the bone

spoon with a handle in the form of a Baikal seal's head from layer III (excavation of 1974, Early Neolithic) of Sagan-Zaba II. The spoon was attributed to the group of the Kitoy Early Neolithic spoons with sculptured handles (depicting elk-head and fish-tail). This was a special category of portable art objects that was possibly used for cult purposes. The image of Baikal seal in the Cis-Baikal region and, in particular, on Baikal shores, is represented by isolated objects (Nomokonova et al., 2014: 22–24). Apparently, hunting of Baikal seal led to worship of it as a totem-animal.

Among the portable sculptures in the Baikal region, the zoomorphic (anthropomorphic?) image on a stem recovered from Middle Neolithic layer IV at the site of Ityrkhey is noteworthy. The figurine shows similarity to the Early Neolithic Kitoy stems with stylized anthropomorphic facial images on their ends (Okladnikov, 1950: 392, 394; Studzitskaya, 1970). One of the common features is the decorative pattern of repeated geometrical motifs covering the entire surface.

Conclusions

Available data on the stratified habitation sites and radiocarbon age estimations suggest that portable sculptures were made on the shores of Lake Baikal beginning in the Early Neolithic (over 7000 cal BP). Most typical were small stone fish figurines, while images of Baikal seal were rare. The stylized zoomorphic (anthropomorphic?) image on the stem is unique. The Early Neolithic figurines belong to the Kitoy art tradition, which has been recognized in the Cis-Baikal region (Studzitskaya, 1970; Goriunova, Novikov, 2012: 88). Fish figurines associated with the Late Neolithic period (5590–4870 cal BP) were made in a different style, i.e. the Serovo-Glazkovo tradition. Bronze Age depictions of fish are highly stylized. All figurines can be subdivided into the cisco- and burbot-like types. Stone fish-sculptures do not represent artifacts specific only to Lake Baikal shores: they are wide-spread in the entire Cis-Baikal region, including the middle Yenisei River.

On the basis of the abundant ethnological data, Okladnikov classified fish figurines as production implements (baits used for harpoon fishing). However, he also did not exclude their use for ritual purposes (1941, 1950: 332). Studzitskaya (1976) came to the same conclusions. The majority of fish figurines from Baikal shores, which had hanging-holes, could have been used as bait. Apart from this, some sculptures (large specimens without holes) were likely associated with religious practices. Fish figurines might have represented spirit-masters of the land, spirit-ancestors, and spirit-shaman assistants.

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