Studies of Stone Age amber artifacts in Eastern Europe began with the discovery of remains of a neolithic site during excavations of a barrow near village Konchansko in the north-east of Novgorod region in 1902 by N.K. Rerich. In the southern part of the barrow, under the mound, a fireplace 210 cm in diameter and 16 cm thick was discovered. Above it in the layer of burnt red sand 267 intact and dozens of broken amber artifacts were found, accompanied by flint tools and ceramic with pit-and-comb, comb and frame ornamentation. Later A.Ya. Brushov related these finds to a cultural layer of a neolithic site of the first half of the II millennium BC (Brushov, 1951, p.27). It looks surprising that such concentration of amber ornaments was in the fireplace but not in a grave with a fireplace and ochre spot, large amount of such graves was found here later (Zimina, 1993).

Finds from a pile settlement Modlona, excavated during many years since 1938 by A.Ya Brushov, were the next significant discovery of amber. Remains of dwelling structures were found at the pile settlement at the Modlona river in the Vologda region, and almost all amber artifacts were found on the floors inside dwellings. They included two types of artifacts—small flat buttons with V-shaped perforation (11 items including fragments) and medium size trapezoidal pendants (8 items). Besides these, a fragment of a ring, an elongated bead and indeterminable fragments were found (Brushov, 1951, p.27). One pendant has delticulate base and sides, a bone pendant is made in the same manner, imitating amber ones (Oshibkina, 1978, t. 50, 8,9). Some seal objects also can be considered imitations of amber ornaments, for example, a ring, a disk and something like a key-shaped pendant.

Fig. 1. Sites with amber (mentioned in the text 1-12)
1 – Kargopoli; 2 – Modlona; 3 – Oppozite side of the Guslini river; 4 – Brevenyi Mys site; 5 – Stukkhe; 6 – Tudosovo VI; 7 – Zaliznyi; 8 – Podkudrinya II; 9 – Popiga; 10 – Chistyanye II site; 11 – Repinskie; 12 – Konchansko. 1 – sites with large amount of amber artifacts; 2 – with single items; 3 – groups of sites with amber (after A.M. Zhukov, M.P. Zimina, V.S. Starkov and others).
A.Ya. Brusov turned to systematization of materials from Morelia settlement and their correlation with a classic scheme, worked out by R. Klebs (Klebs, 1882), which singles out three zones of amber processing and ornaments manufacture near the Baltic shores. A.Ya. Brusov outlined main questions in the Stone Age amber ornaments studies – chronology of these antiquities and routes of their spread. At the same time he was the first to observe that one center of amber mining and treatment during the Neolithic was situated near the Latvian shore of the Baltic. It was later supported by new excavations of neolithic sites in Latvia (Vankina, 1970; Lote, 1969; 1975 and others). Probably special interest of A.Ya. Brusov is Neolithic – Aeneolithic amber ornaments is connected with his participation in the search of the famous amber room as part of his duties.

Nowadays amber ornaments were found at many sites in the forest zone and East European North, but they emerge not earlier than the Neolithic. Systems exist, reflecting chronological development of shapes of amber artifacts (Lote, 1975; 1979, c. 114-118).

Questions about the time of spread of amber ornaments, routes of their penetration including the North, about population, to which they belonged still remain. These problems are now also actual. Some scholars consider amber artifacts connected only with population of the aeneolithic Volosovo culture, the other suppose that the spread of amber at the Russian plains and in the North began in the middle Neolithic. Finds of amber in neolithic layers of stratified settlements support the latter conclusion. For example at the Repitsche site amber was found in well stratified context with middle neolithic pit-and-comb ceramics; the layer is dated to late IV – early III millennium BC (Zimina, 1993, c. 170). Amber artifacts from the cemetery Kikkarkoski in Finland have the same age, determined by 14-C as early III millennium BC (Zhalnukov, 1999, c.68). In the Eastern Onega lake region scarce amber artifacts were also met at neolithic sites with pit-and-comb ceramic.

34 sites with amber artifacts (192 items) are known in Karelia, almost half of them comes from destroyed burials (Zhalnukov, 1999, c.68). The most representative collection comes from Zakavruga II at lower Vyg river, where stone construction with two chambers, ochre spots were found with amber artifacts (68 items) under stones and near them together with flint arrowheads of two types – long narrow with rhomboidal cross-section worked by very careful bifacial retouch and short subtriangular. Amber artifacts consist of pendants and small buttons with V-shaped perforation and lens-like cross-section. Pendants are oval, rectangular and trapezoidal; small are with one perforation, larger ones with two. One has denticulate sides and straight base. A pendant with denticulate sides and perforation near the edge, made of round button derives special attention. (Savateev, 1977, pwc. 90, 4). Round pendant with denticulate edges was found at the Konchanskye cemetery (Zimina, 1992, pwc. 175, 1).

Such artifacts are evidently connected with solar symbolic.

Near the south-eastern shore of the Onega lake the cemetery Tudozero VI composed of 10 graves was recently discovered. All burials contained amber ornaments. Among them buttons with V-shaped perforation (117 items), pendants (81 item), long beads (177 items) and rings (15 items). Long trapezoidal pendants with concave base are characteristic, some with denticulate edges, one key-shaped. Buttons have lens-like and crescent-like cross-section, rings are with lens-like cross-section. All finds have analogies among the Baltic antiquities, which enables to date Tudozero VI to late III – early II millennium BC (Ivanitsch, 1996, c. 8).

The cemetery Kargalino was discovered in 1947 or an ancient dune far from modern shoreline near the southern shore of the White sea. During a road construction sand was mined at the dune, as a result amber and flint objects were found in the mine and on the road. Archaeologists and amateurs collected them. 70 amber ornaments and 2 arrowheads were transported to the State History Museum. 74 amber artifacts are some arrowheads to Cherniavev museum and 10 am ber artifacts to Volotga museum. As a result about 160 amber artifacts are in museum collections, among them buttons with lens-like cross-section from 12 to 27 mm in diameter, large oval, rectangular and trapezoidal pendants, some long, all with straight base without cuts at sides (Oshibina, 1978, p.130). Long flint arrowheads with rhomboidal cross-section worked with careful bifacial retouch, absolutely similar to arrowheads from Zakavruga II are characteristic.

Composition of finds and other observations indicate that a cemetery, probably a large one was in Kargalino, because the number of finds was substantially larger and a part of them came to private collections. Besides this, one burial was found there. In 1947 a regional researcher and painter from Cherniavev museum A.A. Alezeva with a group of schoolchildren was surveying dunes near the White Sea. A spot or bright red sand was discovered at the dune elevation, a neck-
lace of 8 large pendants was found in situ in this spot. The find was drawn in color, illustrated in the present article (fig. 2) after the original drawing. Flint arrowheads were found with the necklace. Other ochre spots were visible at the same time at destroyed parts of the dune. In 1969 I made some excavations at the remaining lower parts of the dune, where characteristic porous ceramic, friable, pale, ornamented with imprints of thin comb, retreating punch, vertical rows of small pits was found (Oshibikina, 1978, fig. 20). Ceramic enables correlation with sites, following traditions of the pile settlement Modlona. The pile settlement Modlona is dated to the first half of the III millennium BC, which is confirmed by two 14-C dates, and late sites of this cultural group or culture are related to the second half or the end of the III millennium BC (Oshibikina, 1978, p. 127).

Amber artifacts, usually broken, are rarely met at late sites of the Kargopol culture, belonging to the cultural circle with pit-and-comb ceramic. A large flat button, a small button with lens-like cross-section and an oval pendant, all of reddish amber, were found at the site Opposite side of the Gostinyi-bank, situated at the Modlona river opposite pile settlement. A fragment of amber ornament was found at Sukhove settlement at the Kovzha river in the Lacha lake basin. Near the western shore of the Voshle lake, at the Brevennyi Mys site two successive Neolithic layers and 8 burials were found. The latter are sunkten into lower layer and virgin soil, indicating their belonging to the late Neolithic. All burials are oriented to the south, which makes possible thinking that an amber bead in burial 6, where the skeleton was not preserved, could be placed at the breast of the buried person or near the head (Oshibikina, 1996, fig.73).

Amber artifacts emerged in the late Neolithic in the most distant places of Eastern Europe. A flat subtriangular perforated pendant was found in filling of dwelling 13 at Choinomyri II site at upper flow of Mezen river. Flint tools and shards with plant admixture to clay and comb ornamentation accompanied it. Special research showed that amber was of the Baltic origin. The site is dated to the end of the III millennium BC on the basis of analogies with ceramic of neighboring territories (Stokolos, 1986, p. 151, 175). One more amber pendant from Mezen basin comes from dwelling 9 of the Papiuga site. It is oval with perforation near the edge. Separate amber ornaments of larger types were met in Kama and Vyatka river basins at aenoeolithic – early Bronze Age sites.

Wide spread of amber ornaments does not let their linking with definite groups of population, for example, of the Volgograd culture. Expansion of exchange links at late Neolithic – Aenoeolithic seems more probable, though not excluding migrations of some groups of ancient population.

It was observed that amber ornaments are more often met in burials. They served as details of clothing and caps, and probably together with necklaces composed a special burial suit. Even single amber bead or pendant could have had symbolic meaning in funeral rite.

In the Neolithic human attention to cosmic symbols is developed for the first time. This is indicated by amber images (Zalavryty II, Konchanskoie), solar and lunar figurative images from various neolithic sites of the forest zone (Zamarnivin, 1948), solar and lunar pictures among petroglyphs of the Onega lake (Lauchkin, 1959). Attention to such symbolic is especially marked in the middle Neolithic and Aenoeolithic among populations with porous ceramic. Thus a sculpture of elk head with bifacial solar sign on the throat was found at the pile settlement Modlona (Oshibikina, 1999, p. 56-60). Specific role of amber artifacts in burial rite, their use as chthonic symbols is especially clear when amber circles were placed upon eyes of the dead. This rite is traced in Zvenigorodsky cemetery in middle Neolithic burials related to the comb ceramic culture (Loze, 1990, p. 148-169). It is also probable in Tudorovo VI, where skeletons were not preserved, but amber circles were met in pairs where the head should had been and could had covered the eyes (Oshibikina, 1996, fig. 5, 12-16). Such similarity in details of funeral rites indicates probably generic closeness of population, which I. Lose links with the comb ceramic culture, spread in the III millennium BC from the Baltic shores to Ladoga lake region and further to the east to the Kostroma river. Population of this culture could have brought amber artifacts which during late Neolithic and especially in the Aenoeolithic preserved significance of chthonic symbols, solar astrum among cultures with porous ceramic. At the same time they were used in exchange links, which explains emergence of amber at the extreme North-East and western Urals region. Later the flow of amber raw material and artifacts several times changed its direction (Kozlevskaja, 1998, 28-32).

References