STILUS 7

ARHEOLOOGILISED VÄLITÖÖD EESTIS

ARCHAEOLOGICAL FIELD WORKS IN ESTONIA IN 1996

Koostanud ja toimetanud Ülle Tamla

EESTI ARHEOLOOGIASELTS

TALLINN 1997

Trükitud Eesti Teadusfondi toetusel

Rüütli 6, Tallinn, EE-0001, Eesti

Makett: Ivar Leimus

ISBN 9985-50-175-6

EXCAVATIONS OF THE STONE AGE SITE AT VIHASOO III

Aivar KRIISKA

Tartu Ülikool (University of Tartu), Lossi 3, EE-2400
Tartu, Eesti (Estonia)

In spring 1995, Valter Lang and Gurly Vedru discovered three Stone Age sites (I—III) in Vihasoo, North Estonia. During an expedition in May of the same year, one more site (IV) was discovered, and trial excavations were carried out on sites I (conducted by V. Lang) and III (conducted by A. Kriiska) (Lang, 1995). For site III, a trial pit of 2.5 sq.m. was dug. It appeared that the site had been almost destroyed by the collapse of a bank. Even in places where the cultural layer was

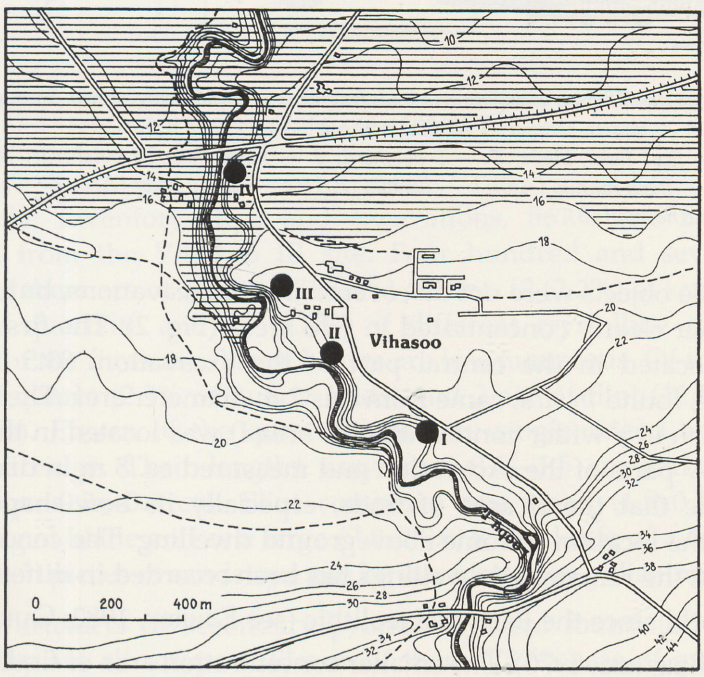

Fig. 1. Location plan of the sites of Vihasoo I—IV. Streaked area marks the presumable coastline of the period of the III site.

preserved, the bank was liable to collapse further. Considering this, rescue excavations were carried out, by the author, on an area of 42 sq.m., lasting from June 7th to July 5th, 1996. The work was financed by the Central Board of Antiquities.

Site III of Vihasoo is situated on the right bank of the Loobu River, on a high ridge, ca. 19 m above the present sea level. The preserved cultural layer lies in a narrow strip, on a relatively flat verge of a steep bank.

Stratigraphically, five layers could be determined (Fig. 2): a) fresh humus, up to 20 cm thick , b) humus up to 10 cm thick , c) light grey sandy layer, up to 30 cm thick, d) reddish-brown ortstein, 15 cm thick, and below that, e) yellowish layer of illuvic horizon. Finds were located in layers c—e, in the soil 45 cm thick.

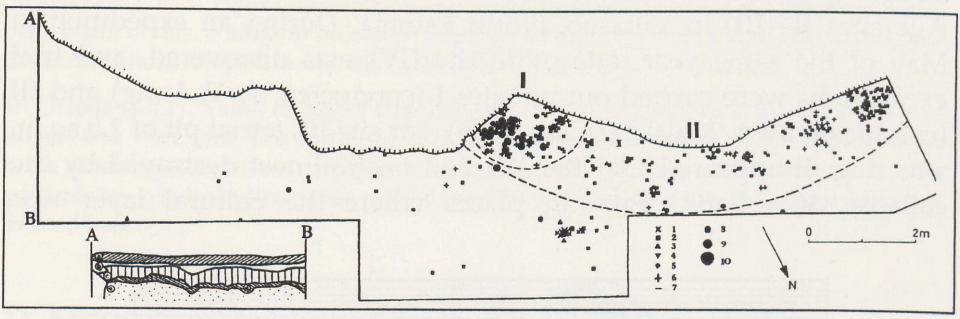

Fig. 2. Plan of the Vihasoo excavations. 1 — fragment of a polishing stone; 2 — quartz flake, blade, lump; 3 — quartz scraper; 4 — flint scraper; 5 — knife of a flint blade; 6 — stone flake, scraper; 7 — flint flake, blade; 8 — 1 potsherd; 9 — more than 10 potsherds; 10 — 2—10 potsherds; a — fresh humus (A/0); b — humus (A/1); c — sandy layer (A/2); d — ortstein (A/2 B); e — illuvic horizon (B).

Immovable objects were not discovered in the excavations, but the finds were rather clearly concentrated in two areas (Fig. 2). The first of them (I) was located in the central part of the excavation. 83.5 % of the potsherds, found *in situ*, came from this 2 m diameter area. The other (II) area (which in a wider context enfolds area I) was located in the central and WNW parts of the excavation and measured ca. 8 m in diameter. It is possible that the II area of finds, especially its bow-shaped form, refers to the location of some aboveground dwelling. The concentration of finds in the remains of dwellings has been recorded in different parts of the world since the Early Palaeolithic (see Елинек, 1982; Сапожников, 1994, 42; Ванкина, 1970). The smaller concentration area of finds (I) in its folds, could be interpreted as the surroundings of a fireplace. This opinion is supported by analogous finds from several other sites, e.g. the investigations at the Kõpu I and Riigiküla IV Early Neolithic sites,

established clear connection between pottery and fireplaces (Kriiska, 1995 a; Kriiska, 1996 a).

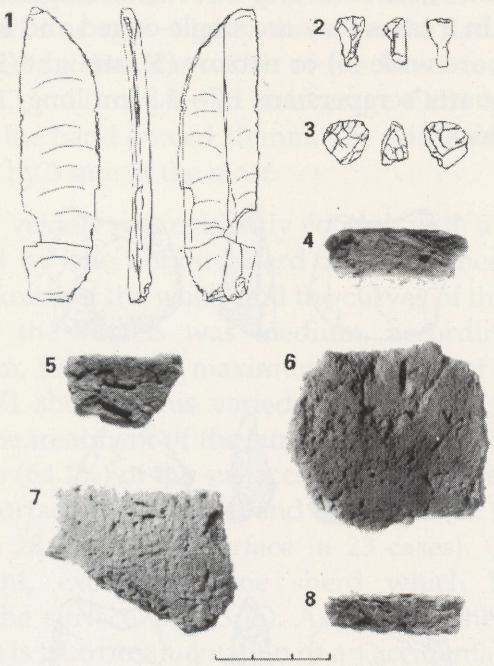

Fig. 3. The knife-shaped flint blade (1), flint scrapers (2—3) and potsherds (4—8) from the Vihasoo III site (AI 6038:50, 137, 49, 149, 84, 148, 155, 49).

During the inventory trips and excavations, 561 stone finds were obtained from the Vihasoo III site. Four hundred and seventy five (84.7%) of them are of quartz, 17 (3.0%) of flint, 12 (2.2%) of sandstone, 2 (0.4%) of quartzite and 55 (9.8%) of different crystalline rocks. The majority of the finds are flakes; blades are less numerous. Of the blades, 12 are of quartz (2.3% of quartz finds) and 2 are of flint (11.8% of the flint finds). Eleven of the quartz blades are single-ridged and one is without a ridge. Their lengths vary from 0.4—1.5 cm and thickness varies from 0.2—0.8 cm. Flint composes one small (1.5x0.7x0.3 cm) single-ridged blade and one large (7.8x2.0x0.6 cm) knife of a blade (Fig. 3, *1*). Eleven pieces of sandstone can be interpreted as polishing stones.

Fourteen artefacts of secondary processing were found (2.5% of the total). They are all scrapers. Eleven of them (78.6%) are of quartz, two (14.3%) of flint and one (7.1%) of stone. Both flint ones are microscrapers made of flake. One of them, segmental in form, is an end scraper (Fig. 3, *2*), the other, triangular shaped, is a side-scraper (Fig. 3, *3*). The stone

scraper is made of flake and has a wide and wavy edge. The quartz scrapers (Fig. 4) are made of flakes (6) or blade-shaped flakes (5) and are quadrangular (4), triangular (2), segmental (1), square (1) or irregular (2) in form. Eight of them are side- and three end-scrapers, one of the latter is a high scraper. In 9 cases they are single-edged and in 2 cases double-edged. The edges are wide (6) or narrow (5), straight (5), concave (5) or convex (3). The quartz scrapers are 1.7—4.8 cm long, 1.0—3.5 cm wide and 0.4—1.3 cm thick.

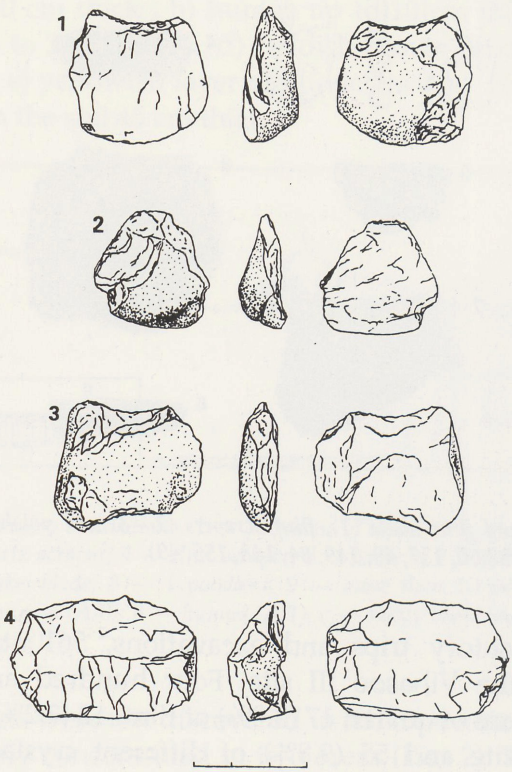

Fig. 4. Quartz scrapers from the Vihasoo III site (AI 6038:20, 16, 67, 56).

One hundred and thirteen potsherds were found altogether (Fig. 3, *4—8*). The number of vessels cannot be exactly determined; however, by the visual estimation there appear to be only a few. Mostly they are made of clay with organic, presumably plant admixture (101, i.e. 89.4%). Only in a few sherds can sand (2, i.e. 1.8%), stone rubble (2, i.e. 1.8%) or mineral and organic admixture (8, i.e. 7.1 %) be traced in the composition of the clay. The last group does not differ from the rest by other parameters (i.e. the moulding technique, the shape of connecting surfaces, thickness of walls and the treatment of surfaces).

The vessels were moulded by band technique. In 97 cases, the type of the band was distinguishable. Ninety-six of these (99%) belonged to the so-called U-type (convex-concave) and one to the H-type (straight-straight) connecting surfaces. The greatest number of distinguishable bands in one sherd was 6. Eighty-three bands had both connecting surfaces preserved so that the width of the band could be measured. This varied from 3 to 11 mm, 7 mm on average. Only in 10 cases (12.0%) did the width of the band exceed 10 mm. The width of the bands in any one sherd varied by 3 mm at the most.

The shape of the vessels was evidently conical, with a tapering bottom. This is indicated by one bottom sherd and one sherd from near the bottom. The thickness of the walls, and the curves of the sherds, indicate that the size of the vessels was medium, according to Stone Age standards (Kriiska, 1995b). The maximum thickness of the wall could be determined for 71 sherds. This varied from 4 to 11 mm, the average being 7.5 mm. The treatment of the surfaces could be determined in 142 cases. Ninety-one (64.1%) of the surfaces were smoothed (outer surfaces in 48 and inner surfaces in 43 cases) and 51 sherds (35.9%) were striated (inner surface in 28 and outer surface in 23 cases). Ornamentation is completely absent, except for one sherd which has two oblong impressions on the surface (Fig. 3, *5*). As for this sherd we cannot be sure whether this is true ornamentation or an accidental pore, which has emerged from burning-out of the organic admixture.

The cultural relations of the find complex can be determined, first of all, on the basis of pottery. The dominating organic admixture in the clay dough of the vessels, the narrow bands with U-shaped connecting surfaces used for moulding, the conical shape, the tapering bottoms and medium thickness of the walls of the vessels, the treatment of surfaces, and the absence/scarceness of ornamentation all allow us to connect this pottery with the pottery of the narva type and thus, the whole complex with the Narva culture (compare Jaanits et al., 1982, 63—66; Kriiska 1995 b, 65—75). Similar to most coastal settlements of the Kunda—Narva culture in Estonia (Kriiska, 1996 b; Suuroja, 1996, 32), the material used for stone implements in the Vihasoo III settlement was mostly quartz. Typologically, their most obvious common trait appears to be the occurrence of concave-edged quartz scrapers.

A rare find, in the context of Estonian Narva culture, was a knife of a long flint blade with a curved end (Fig. 3, *1*). A few longer flint blades and knives have been found from the Kääpa site of the Narva culture (Jaanits, 1968, 10, fig. 6), but these are not similar to the Vihasoo knife, neither by shape nor by flint material. The rest of the flint finds of the Vihasoo III site are whitish or dark grey calcedony of relatively low

quality, which by visual determination originate from limestone deposits and are evidently of local origin. However,the knife-shaped blade is made of black translucent calcedony from chalk deposits (cretaceous system). The origin of the rock cannot be exactly determined. Similar calcedony occurs naturally in South Lithuania and Byelorussia, from where the flint of Pulli is deemed to originate (Jaanits & Jaanits, 1978, 61—62), but also in the South of Scandinavia. The nearest areas where large flint blades and knives occur, in great numbers, in Early Neolithic material, are the areas of the Neman culture in South Lithuania (Римантене, 1973, 219) and the monuments, with pottery of the so-called cottchishchenski type, on the upper reaches of the Volga River (Верещагина et al., 1995). To some extent the knives of flint blades have also been found from the sites of the Early Comb Ware of Karelia (Pesonen, 1991, 71). Late Mesolithic and Early Neolithic periods have been considered, reasonably, to be the periods founded upon local raw materials, unlike the Early Mesolithic or Middle Neolithic which provide an abundance of imported flint (Янитс, 1990, 31; Галибин & Тимофеев, 1993, 13). However, Neolithic people did not live in isolation either. Contacts beyond the limits of the cultural area are indicated, evidently, by the Vihasoo flint find, but also by the unique potsherd, discrepant in the context of pottery of the Narva culture, from the Riigiküla IV settlement (Kriiska, 1996 a, 415).

In the period of its existence, the Vihasoo III settlement was evidently located at the mouth of the Loobu River (Fig. 1). Since the other settlements have not yet been identified, neither archaeologically-culturally, nor temporally, nothing can be predicted about the regional changes in settlement. As a working hypothesis, it can be presumed that the settlement moved after the transgressing sea and that the settlement sites mark the estuaries of the ancient river.

The absolute age of the III settlement of Vihasoo can only be determined indirectly since the radiocarbon dates obtained from charcoal samples, gathered from the layer of finds, were clearly wrong. Evidently the samples contained, accidentally, some charcoal fragments of later origin (the results obtained are supplemented to the excavation reports in the archives of the Institute of History). At the moment the only starting points are the comparison of the Vihasoo find complex with the finds from the geographically dated monuments, and the coastal transfer chronology. As already stated, Vihasoo was a settlement from the Narva culture. The appearance of this culture on the coast can be presumed to be ca. 5000 BC (cal) on the basis of the ^{14}C datings from Riigiküla (Kriiska, 1996 a). The latest datings from coastal settlements of the Narva culture are about 1000 years younger (Kriiska, 1995 b). Assuming

the population of Vihasoo to have been water-bound, and considering the maximal possible rise in water level by storm waves to be 2—3 m (Järvekülg & Veldre, 1963, 66), we may suppose that the sea level in the period of existence of the III settlement was about 16—17 m higher than nowadays. At present, the land rise is estimated to be ca. 2.5 mm per year (Мийдел & Янтунен 1992, fig. 38). On this basis the coastline of the period of the III settlement can be dated to ca. 4800—4600 BC. Since the land rise could have been somewhat faster in the past, the calculated age may be a little older than the actual one.

At the present stage of investigation, it is difficult to comment upon the economic background of the population of Vihasoo. A wide-ranged hunting-gathering economy, favoured by the location in the estuary, was evidently an important part. Of the five animal bone fragments found, only one is determinable. The osteologist, Lembi Lõugas, asserts that it belongs to a seal. A gathering economy is indicated by some nutshells found in the cultural layer.

References

Jaanits, L. 1968. Die frühneolitische Kultur in Estland. — Congressus Secundus Internationalis Fenno-Ugristarum Helsingiae habitus 23.—28. 07. 1965. Pars 2. Helsinki, 12—25.

Jaanits, L. & Jaanits, K. 1978. Ausgrabungender frühmesolithischen Siedlung von Pulli. — ENSV TA Toim. Ühisk., 27,1, 56 — 63.

Jaanits, L., Laul, S., Lõugas, V., Tõnisson, E. 1982. Eesti esiajalugu. Tallinn.

Järvekülg, A. & Veldre, I. 1963. Elu Läänemeres. Tallinn.

Kriiska, A. 1995 a. Archaeologische Ausgrabungen auf dem Standort der ehemaligen Steinzeitsiedlung Kõpu I (Ristipõllu). — Proc. Estonian Acad. Sci. Humanities and Social Sciences, 44, 4, 410—416.

Kriiska, A. 1995 b. Narva jõe alamjooksu ala neoliitiline keraamika. — Muinasaja teadus, 3. Eesti arheoloogia historiograafilisi, teoreetilisi ja kultuuriajaloolisi aspekte. Tallinn, 54—115.

Kriiska, A. 1996 a. Archaeological excavations in Neolithic site of Riigiküla IV. Proc. Estonian Acad. Sci. Humanities and Social Sciences, 45, 4, 410—419.

Kriiska, A. 1996 b. Arheoloogilised välitööd Riigiküla kiviaja asulakohtadel (Vaivara khk.) 12. 06.—7. 07. 1995. Manuscript in the Institute of History, Tallinn.

Kriiska, A. 1996 c. Viron rannikkoaluen asutus ja pyyntikulttuurin erikoistuminen kivikaudella. — Muinaistutkija. Nr. 4, 1—6.

Lang, V. 1995. Aruanne inspektsioonist Vihasoo — Ilumäe piirkonda ning proovikaevamistest Vihasoo I kiviaja asulakohal. Manuscript in the Institute of History, Tallinn.

Suuroja, T. 1996. Eesti põhjaranniku mesoliitiliste ja neoliitiliste asulakohtade kiviaines. — Stilus, 6. Reports of the Estonian Archaeological Society, Tallinn, 30—36.

Ванкина Л. В. 1970. Торфяниковая стоянка Сарнате. Рига.

Верещагина И. В. et al. 1995 = Верещагина И. В., Синицына Г. В., Тимофеев В. И., Тихомирова О. М., Шаяхметова Л. Г., Шумкин В. Я. Каменный век Верхневолжского региона (по материалам исследований Верхневолжской экспедиции ЛОИА АН СССР ИИМК РАН, проведенных под руководством Н. Н. Гуриной). Санкт-Петербург.

Галибин В. А., Тимофеев В. И. 1993. Новый подход к разработке проблемы выявления источников кремневого сырья для культур каменного века Восточной Прибалтики. — Археологические Вести, 2. Санкт-Петербург, 13—19.

Елинек Я. 1982. Большой иллюстрированный атлас первобытного человека. Прага.

Мийдель А., Янтунен Т. 1993. Неотектоника и современные движения. — Геология Финского залива. Таллин, 87—98.

Песонен Р. Э. 1991. Хронология и периодизация культуры Сперрингс. — Хронология и периодизация археологических памятников Карелии. Петрозаводск, 65—85.

Римантене Р. К. 1973. Неолит Литвы и Калининградской области. — Этнокультурные общности лесной и лесостепной зоны европейской части СССР, 172. Ленинград, 218—225.

Сапожников И. В. 1994. Локальный хозяйственно-бытовой комплекс на позднепалеолитической стоянке Большая Аккаржа. — Археологические Вести, 3. Санкт-Петербург, 38—47.

Янитс, К. Л. 1990. Кремневый инвентарь стоянок кундаской культуры. Автореферат диссертации на соискание ученой степени кандидата исторических наук. Москва.

ARHEOLOOGILISED KAEVAMISED VIHASOO III KIVIAJA ASULAKOHAL

Aivar KRIISKA

1995. aasta kevadel leidsid Gurly Vedru, Valter Lang ja Aivar Kriiska Põhja-Eestis Vihasoos neli kiviaja asulakohta (joon. 1). Samal aastal tehti proovikaevamisi I (V.Lang) ja III (A.Kriiska) asulakohal. III asula proovikaevand näitas, et kaldavaringuga oli asulakoht peaaegu hävinud. Seal, kus kultuurkihti oli veel säilinud, oli kallas varisemisohtlik. Sealsamas toimusidki 1996. aastal päästekaevamised. Töid finantseeris Riigi Muinsuskaitseamet.

Vihasoo III asulakoht asub Loobu jõe paremkaldal, tänapäevasest merepinnast u. 19 m kõrgusel seljakul. Säilinud kultuurkiht paiknes kitsa ribana kaldajärsakul. Kokku uuriti 45,5 m^2 suurust ala. Stratigraafiliselt eristus viis kihti. Leide saadi kuni 45 cm paksusest pinnasest.

Leiud kontsentreerusid võrdlemisi selgelt kahel alal (joon. 2). Neist esimene (I) paiknes kaevandi keskosas. Sealt, u. 2 m läbimõõduga alalt leiti 83.5% in situ paiknenud savinõukildudest. Teine (II), mis laiemalt vaadatuna hõlmas ka esimest, oli u. 8 m läbimõõduga. Pole võimatu, et II leiuala ja selle kaarjas kuju osutab maapealse elamu asukohale. Leidude väiksemat kontsentratsiooni selle sees võib tõlgendada koldekoha lähiümbrusena.

Vihasoo III asulakohalt on inspektsioonide ja väljakaevamistega leitud ühtekokku 561 kivileidu. Neist 475 on kvartsist, 17 tulekivist, 12 liivakivist, 2 kvartsiidist ja 55 mitmesugustest kristalliinsetest kivimitest. Suurema osa moodustavad killud, vähem on laaste. Laastudest on 12 kvartsist ja 2 tulekivist. Kvartslaastudest 11 on üheharjalised ja 1 harjata. Tulekivist on üks väike üheharjaline laast ja üks suur laastust nuga (joon.3, *1*). Erinevalt teistest Vihasoo II asula tulekivileidudest on see valmistatud läbikumavast mustast kriidilademe kaltsedonist. Looduslikult esineb sellist tulekivi näiteks Lõuna-Leedus, Valgevenes, aga ka Lõuna-Skandinaavias.

Teisase töötlusega 14 eset on kõik kõõvitsad. Neist 11 on kvartsist, 2 tulekivist ja 1 kivist. Mõlemad tulekivist eksemplarid on killust valmistatud mikrokõõvitsad. Üks, segmendilise kujuga, on ots- (joon.3, 2) ja teine, kolmnurkne, on külgteraga (joon.3, *3*). Kivikillust kõõvits on laia lainelise teraga. Kvartsist eksemplarid (joon. 4) on valmistatud killust või laastutaolisest killust ning on ristküliku, kolmnurga, segmendi, ruudu või ebakorrapärase kujuga. Kaheksa neist on külg- ja 3 otskõõvitsad; viimastest on üks kõrgkõõvits.

Savinõukilde leiti kokku 113 (joon.3, *4—8*). Nõude arvu ei ole võimalik nende järgi täpselt määrata, kuid arvatavalt on tegemist vaid mõne nõuga. Keraamika on tehtud peamiselt orgaanika lisandiga, arvatavalt taimse massiga segatud savist; üksikjuhtudel on koostises liiva, kivipurdu või mineraalset ja orgaanilist lisandit.

Nõud on vormitud linttehnikas kitsaste 3—11 mm laiuste, peamiselt (99%) U-tüüpi ühenduspindadega lintidena. Seinapaksus varieerub 4—11 mm. Savinõukillud on silutud (65%) või riibitud pindadega. Riipeid esineb nii sise- kui välispinnal. Keraamika on ornamenteerimata, välja arvatud üks ebaselge kild (joon.3, *5*).

Vihasoo II asula kuulub Narva kultuuri ja rannasiirde järgi võib selle oletamisi dateerida päikesekalendri süsteemis 5. aastatuhande esimesse poolde e.Kr. Eksisteerimise perioodil paiknes inimasustus tõenäoliselt merre suubuva Loobu jõe suudmes. Vihasoo asustuse majanduslikust tagamaast saadi vaid vähest informatsiooni. Leitud viiest luukillust kuulub üks Lembi Lõugase määrangul hülgele. Kultuurkihist saadi ka mõned sarapuupähkli koored.