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THE TRANS-URAL “STONEHENGE” (THE STONE AGE SANCTUARY WITH ASTRONOMIC REFERENCE-POINTS)

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One of the earliest archaeoastronomical object researched in Russia the sanctuary of the third millennium BC is characterized in this publication. The calendar, rites and elements of the world outlook of the Aeneolithic epoch population are reconstructed based on exposed astronomic reference-points, archaeological finds and ethnological data.

KEY WORDS Sanctuary, astronomical reference-points, archaeological data, functions, calendar

From a very ancient time man gave a meaning to his place in nature, aspired to understand his role on the earth, to penetrate into the meaning of life. The problem of the structure of the universe and of man's place in the world has been one of the major questions of any society in any epoch. During the past two to three decades the so-called archaeoastronomical sites were investigated in many countries of Eurasia and Latin America. The best known and meaningful of these is the Stonehenge site in Great Britain (Hawkins, 1984). We can discuss the possibility of reconstructing with some certainty ideas of ancient people about the universe, based on the specific level of astronomical knowledge of that time.

The Savin sanctuary at the Tobol river which is 50 km to the north of the Kurgan city in the Trans-Ural region (in latitude 55.4° North) is the comparable site in Russia (the middle – the second part of the third millenium BC).

The sanctuary is placed on rising ground 350 m long and about 50–60 m wide, extending in the direction of west–east. The highest point is in the wide flood-land of the old swamped river-bed and has the dominant position. The most elevated (up to 4 m) west part of the site was excavated in an area of 1100 square metres. Two joining circles with inner diametres of 14 and 16 m and near “8” in plan, defined by ditches 0.8–1.8 m wide and 0.6–0.8 m deep were discovered there (Figure 1). Passages entrances were formed strictly on the east and west sides up to 4 m long and of 1.2–1.4 m wide in the first circle. Its walls were constructed entirely from planted logs. There was only one passage in the second circle on the north–east si-

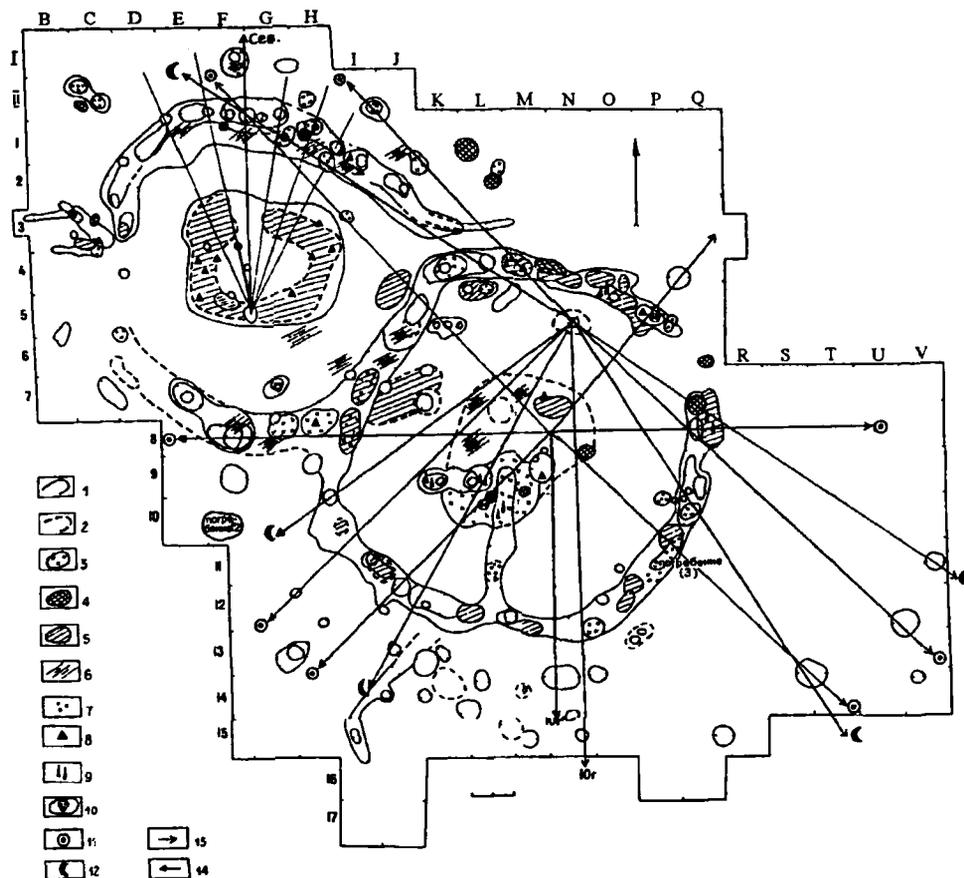


Figure 1 The Savin Sanctuary. Plan: (1) outlines of trenches and pits; (2) illegible outlines; (3) carbonized layer; (4) annealed layer; (5) pits filled with bones; (6) accumulations of bones in trenches end on the horizon of buried soil; (7) ochre spots; (8) broken pot's; (9) an accumulation of pottery; (10) a pit filled with mens skulls; (11) the Sun; (12) the Moon; (13) the direction of rising; (14) the direction of setting.

de. It was in the form of a gap about 3 m wide in the ditch and had the traces of a bonfire in the middle of it.

The first circle had a right-angled-shaped hollow (7.5 × 6 m) in the centre. It was defined by a trench 1-2 m wide, 0.3-0.4 m deep with a gap of about 2 m wide on the north side. Therefore the centre of the construction is found to be more elevated relative to the other parts of it. Two post-holes in the center of the hollow have the central position in the first circle.

The same nearly right-angled hollow (9 × 5-6 m) looking like a trampled down carbonized area is traced in the central part of the second circle. There were some post-holes there. The trench about 7 m long and 1 m wide, entirely filled with a carbonized base, extends from the centre of the area strictly to the south and joins the circular ditch.

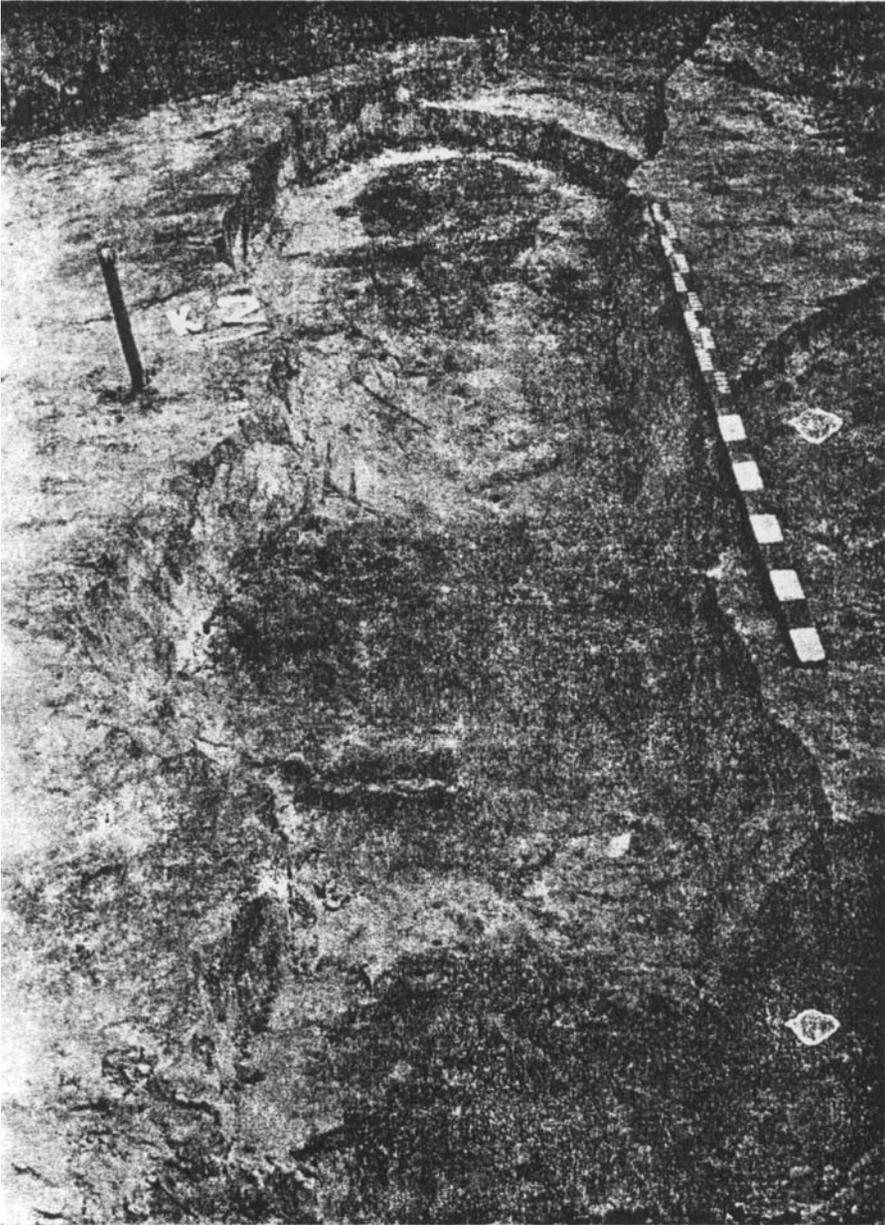


Figure 2 The Savin. The North part of the first circle ditch with the post-holes and discoveries at the bottom (section I, K/1, 2). In the fore is a section of one of the post-holes.

There are 117 pits (mainly post-holes) and about 20 pits with the traces of many bonfires at the bottom of the circular ditches and around them on the outside with 1.5-2.5 m intervals (Figures 1, 2, 3, 4).

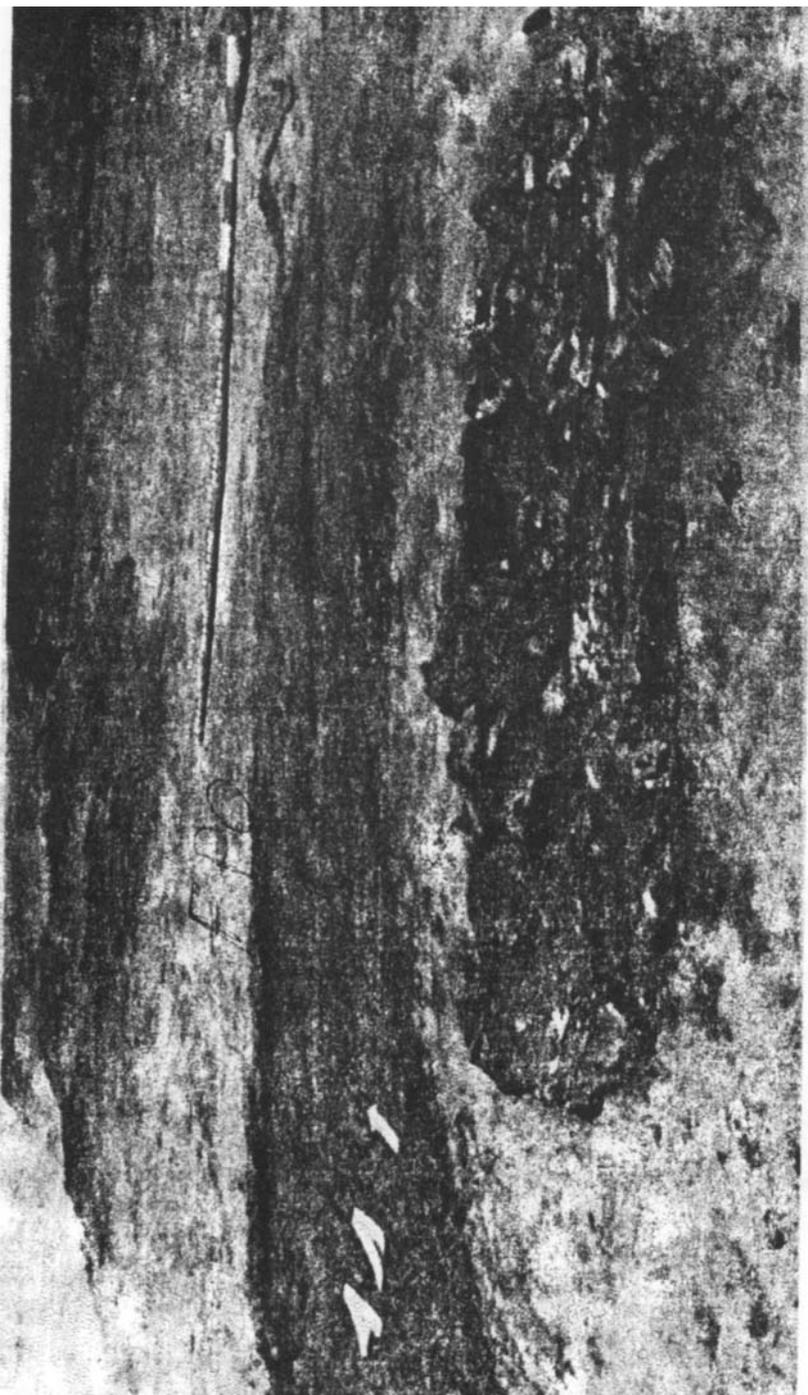


Figure 3 The Savin. The North part of the second circle ditch near the East entrance passage (section L, M, N/4, 5). In the fore is a pit filled with animal bones, pottery, tools.



Figure 4 The Savin. The South part of the second circle ditch (section O, P, R/11, 12). To the right in the ditch is a triple burial. In the foreground are post-holes from the ditch outside.

On the parts of the elevation (140 square metres) which have been investigated between 60 and 150 m to the east of the circular constructions which were just described only the post-holes and the bonfire-pits were discovered. Doubtless they are related to these constructions. One of these pits is nearly "8"-shaped in form with a size of 2.6×2 m and 2.8×1.7 m, more than of 1 m deep and entirely filled with carbonized and annealed ground. In form it looks like the main constructions.

So one features of the construction of the Savin sanctuary is the presence of a large number of posts of different thickness. One can see only certain pits – traces of posts' parts, deep in the ground. It is possible to know the post thickness by the diameter, form and depth of the post-holes (Figures 1, 2). The presence of too many almost placed reference-points is one of the difficulties in astronomical analysis of this object. But complex analysis of the archaeological data shows that the majority of the posts were not astronomical reference-points. Some of them were the result of the introduction of clarity into giving directions and the reconstruction and replacement of old posts. As to the ethnographical data of the West Siberia aboriginals, many of the posts could only have had ritual meaning. Sacrificed animal skins with heads and leg bones were suspended on them. But doubtless, the majority of the posts pointed to the important astronomical directions.

Thus there was a thick post in the south part central ground of the first circle's of the sanctuary. The next post just like this was in the ditch strictly to the north of the first one. So there were two exactly defined astronomical directions in the first circle of the construction. The east-west direction was marked by two passages, the north-south one by two posts (Figure 1). Observing a sunrise and a sunset through the passages one could determine beforehand the days of the vernal and autumnal equinoxes. Also in the north part of the circle six posts were disposed more or less symmetrically relative to the middle mid-day one – four posts to its right, two ones to its left (Figure 2). It was possible that these posts in the ditch fixed the position of the shadow of the central post. During some time about mid-day it was like a gnomon (a kind of sun-dial). The ground of a real sun-dial should be inclined to the central post. On the level of the modern ground surface the central ground of the first circle is raised relative to the north and south borders by 0.9 and 0.6 m accordingly. We cannot tell about the difference in level of some parts of the sanctuary area in ancient times. All the territory of the height with the exception of the north edge was ploughed up repeatedly. Soil is constantly subject to wind erosion. Without a corresponding inclination the Savin sun-dial might divide time into different intervals in different days of a year. In equinoxial days the shadow is displaced from one post to another during 34 ± 3.5 minutes, in the summer solstice day during 25 ± 3 minutes.[†] In the south part and the edge of the ditch 5-6 posts form the semicircle. They are on a straight line with the central one and the other described posts of the north semicircle. Small deflections are normal. We must remember that such an ancient construction of 4000 years ago remained only in the form of spots and deepenings of different colour and

[†]All definitions and calculations of the astronomical reference-points were made by V. A. Yurevich, a candidate of the physical-mathematical sciences. The author is very grateful to him.

intensity of the ground colouring. This creates some mistakes in fixing the time of the remains.

By the archaeological data the second circle was constructed later than the first one. Its central ground falls down by 0.9–1.1 m relative to the north edge from the ditch outside.

During the excavation a point near the circle center was not marked, but was found out by the method of reverse directions (V. A. Yurevich). Seven holes of the thick posts were accurately fixed in the ditch and outside it. They placed six directions from that point. They mark the six sun azimuths: the sunrises and sunsets in the equinox and solstice days (Figure 1). Sunset in the summer solstice was marked by an already known middle post in the north part of the first circle. The azimuth is calculated according to the phenomena of the appearance of the upper edge of the sun at the skyline in the year 2000 BC. Each of the six sun directions is accompanied by many archaeological findings. It makes astronomical research more convincing. It is interesting that the ditch of the common part of the two circles is roughly directed toward the sunrise of the summer solstice day.

These astronomical reference-points illustrate the fact that the Trans-Ural Aeneolithic population knew the orientation of the Sun and used it in their cult centres. It may be possible that they had faraway land-marks (heights or saddles, separate big trees and so on) which marked directions of the Sun and allowed them to define sun phenomena dates with more accuracy. The posts in the excavated areas 60 and 150 m to the east from the circle construction might have been used for this purpose too.

Then there are moon reference-points at the sanctuary. The post-holes wide arc outlining the second circle from the south is especially interesting from this point of view. One can think of the post-hole in the north part of the circle between the center and the ditch as the relative center of the arc. At least the thickest posts of the arc are roughly at the same distance (about 20 m) from it. Directions from this relative center to the most visible posts in the south-east coincide with the three astronomical reference-points: high moonrise, sunrise and low moonrise in the winter solstice. The moon azimuths are calculated for the center of the moon disk.

The south-west directions are marked too: high moonset, sunset and low moonset in the winter solstice. One of these posts is in the ditch. As to the north-west direction we can mention for third time the midday post of the first circle. It is directed towards the low moonset in summer. The post outside the ditch is placed exactly to the south from the central post-hole. The last post is on the east-west line marked by the post-holes both inside the second circle, in the ditch of it, and in the ditch and outside of the first circle!

Mass archaeological finds at the sanctuary closely relate to the described sun and moon reference-points (Potyomkina, 1994). Pottery (more than six thousand pieces of 360 vessels, some of which are restored) (Figure 5); stone tools (axes, adzes, spear- and arrowheads, knives, end scrapers, drawing-knives and so on – 1670 in all) (Figure 6), clay artifacts (more than 100), animal bones (about four thousand) were found in the process of excavation. Judging by traceological analysis (G. F. Korob-

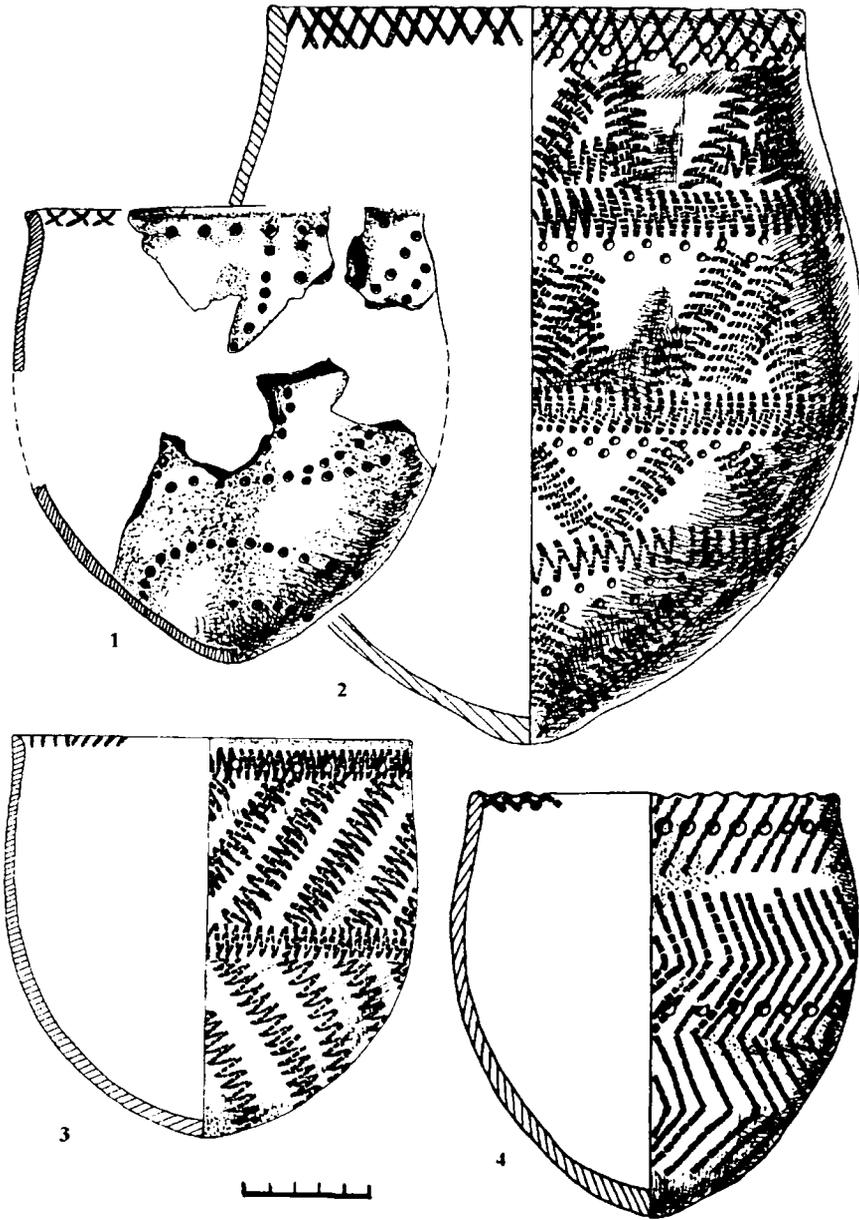


Figure 5 The Savin. Vessels.

kova, doctor of historical sciences, Institute of material culture history, the Russian Academy of Sciences) tools were used for processing skin, stone, wood, cut flesh, hunting etc. Animal bones recognised by V. P. Daniljchenko, candidate of the biological sciences, Institute of archaeology, the Russian Academy of Sciences)

belonging to 160 individual horses, 72 roes, 25 elks, 9 wild boars, 1 bear, 1 wolf were found.

The majority of the finds were found in the deep parts in the center of the circles and in separate pits or near their edges in the ditches. As a rule the artifacts were in the ground layer with traces of prolonged fire burning, spots of ochre. The majority of bones and different artifacts were placed in the accumulations both in the central grounds and in the ditches. As a rule accumulations found coincided with certain sun and moon directions (Figures 2, 3, 4). Many animal bones (about 40%) mainly of the skeletons of horses and roes, intact and crushed vessels and the most significant tools were found in the central construction of the first circle. They were placed mainly in the trench perimeter in area of the central post - gnomon (Figure 1).

The second significant place of the find accumulation (about 30% of bones, also mainly of horses and roes) was the part of the trench of the first and second circles along the east entrance passage directed to the sunrise in equinox days (90°), and the north-east sector of the second circle trench (between 30 and 55°) in the direction of sunrise in summer solstice days (Figure 3). The accumulation of bones and pottery near the post-hole in the second circle ditch was large enough. It fixes a sunrise in the days of the vernal and autumnal equinox (90°).

Less significant accumulations of the horses, roes and elks skull and the bones of extremities, small numbers of pottery fragments and stone tools placed near post-holes directed to a sunset in the equinox days, a sunrise and a sunset in the solstice period, and some moon positions were found.

Exclusively the skull and bones of extremities of individual horses were found near the edge of the many post-holes. According to our supposition they may be the remains of a horse skin with the skull and lower part of the legs attached to a post in ancient times. Half of such finds (9) were found near the post-holes of the north sector of the first circle trench. Some posts there as was described earlier fixed the shadow position of the central post during the time about midday and probably the position of the post itself too. At the same time they played a certain role in a system of clearly elaborated rites and rituals. A device for the division of time into parts was necessary for this purpose.

We can say about the significant predominance of horses bones in the accumulations of the north and east sectors and roes bones in the west and south ones with the presence of equal parts of an elks bones in both parts that on the whole it corresponds to the hunt seasons of different animals.

The evident predominance of individual horses (60%) indicates not only the main role of the hunting of this species of animals but includes some features of the beginning of the domestication of it in this region. This process was promoted by the horse's environments in the Ural-Kazakhstan steppes being one of the regions of the domestication of the horse five thousand years ago.

Also the traces of men's burial places were discovered at the sanctuary. Adult and child skulls in a small pit in the south half of the first circle and a communal grave of the skeletal remains two adult men and one young girl were excavated in the south-east sector of the second circle ditch in the direction of the sunset in the

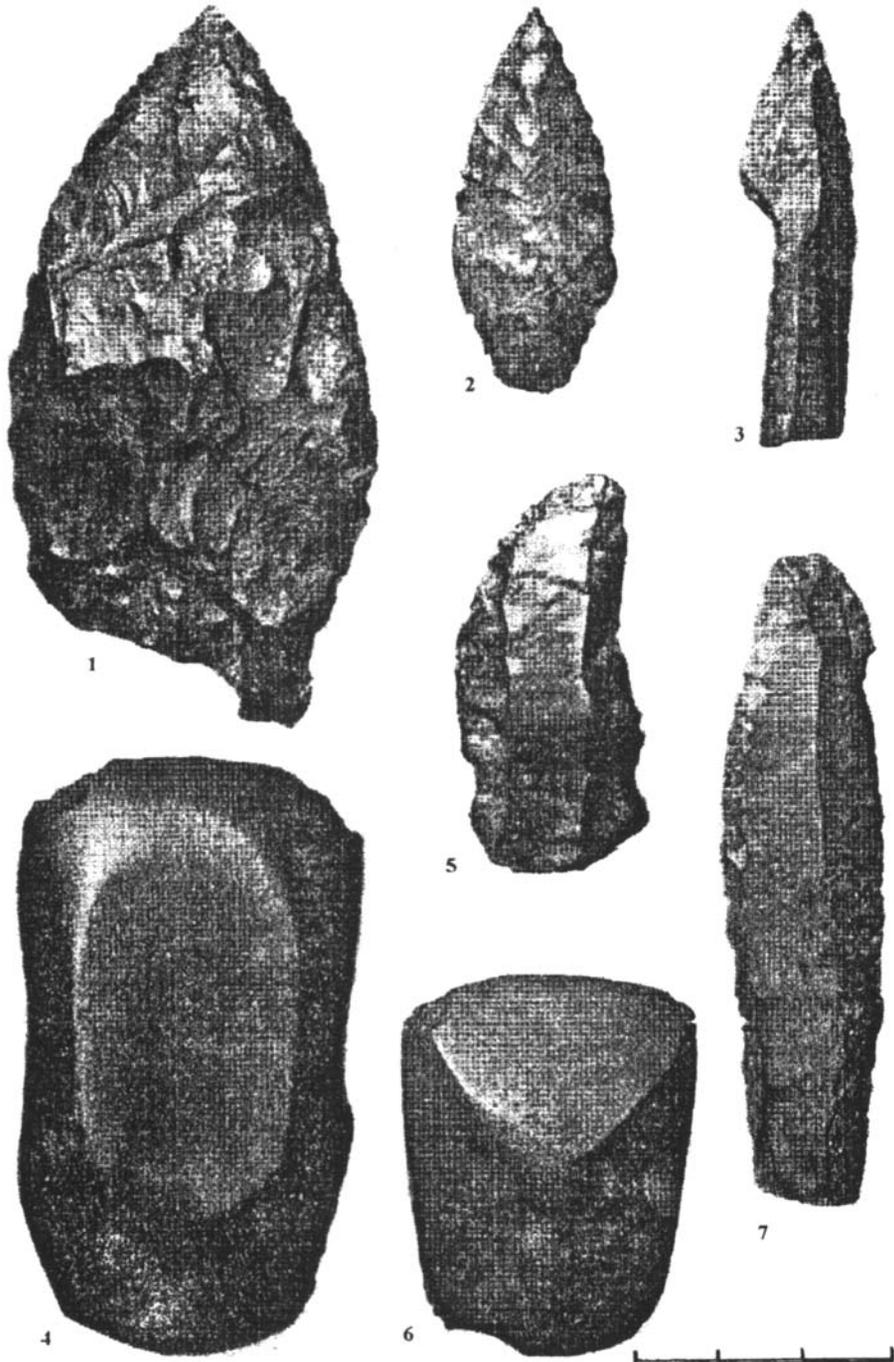


Figure 6 The Savin. Stone tools: (1) Spearhead; (2,3) arrowheads; (4) an axe; (5) a triple function tool (end scraper, knife, drawing-knife); (6) adze; (7) a drawing-knife.

winter solstice (Figure 4). In the ditch three deceased were in unnatural poses, not traditional for burials. They were found in a thick carbonized layer with traces of ochre near the skulls. There were remains of sacrifices – bones of the main hunting animals (three horses, three elks and two roes) near them. All these features as well as the separate burial of the skulls indicate the ritual character of these graves.

So the results of archaeological investigations lead to the following conclusion. The place for the Savin sanctuary was chosen with consideration for the "astronomical" interests (suitable for observations of heavenly bodies' observations) and the main economic occupations (close to the hunting lands).

The main ceremonies' connection with the sun- and the moonrise in the most significant days for the cycles of nature's year gives support for the view that these heavenly bodies were regarded as divinity beings. Posts marked the most important sun- and moonrises in the life and ideas of the population and their symbols were set. These posts might be put into the shape of primitive anthropomorphous images (idols). Some kind of masks (schematic images of people's faces), different kinds of marks and symbols might be drawn on them.

Wooden idols, posts with masks etc. were found out at the cult place of the Gorbunovsky peatbog in the Ural as long ago as 1930. All finds were well preserved due to the preserving characteristics of peat (Eding, 1967; 1940). As to cultural belonging and chronology this cult complex is similar to the Savin site. But it was not researched as regards the solar-lunar reference-points.

At the Savin site the central construction of the first circle was most probably the place of especially sacred idols. The thrice-repeated use of the midday post can be regarded as a corroboration of it. It seems not to have been used for a long time to save efforts for the erection of posts. It was the place of the main idol symbolizing the supreme deity. The most significant accumulation of animal bones (more than 30%), the presence of the main part of intact vessels and the most important artifacts here point to this fact as well (Figures 5(1), (2); 6(1), (2), (4), (6); 7(1)).

The Savin sanctuary with its circular architecture and clearly astronomical reference-points is not the only site in West Siberia. At 1 km to the east of the Savin on the riverside terrace the similar Slobodchiki I site was discovered. Excavations on it were started recently by M. P. Vokhmentsev. Quite possibly there is a complex of similar sites in this area, especially convenient for constructions with solar-lunar reference-points. To the north of the Tyumenj city the sanctuary of the third millennium BC at Velizhany II was excavated too. In its main features it repeats the Savin system. It has post-holes directing to the points of sunrises and sunsets on solstice days. Numerous vessels filled with ochre were the main kind of offerings there. Most of them were turned upside-down (Kaurov and Potyomkina, 1994).

The most significant features of the Trans-Ural sites are planning and common architecture preliminarily marked on the land, the presence of the main solar-lunar reference-points, traces of cult-ritual practice etc. In their main features these sites are similar to the European circle sanctuaries of the Neolithic-Aeneolithic period, especially to the early henges and rondels which are dated at the third millennium

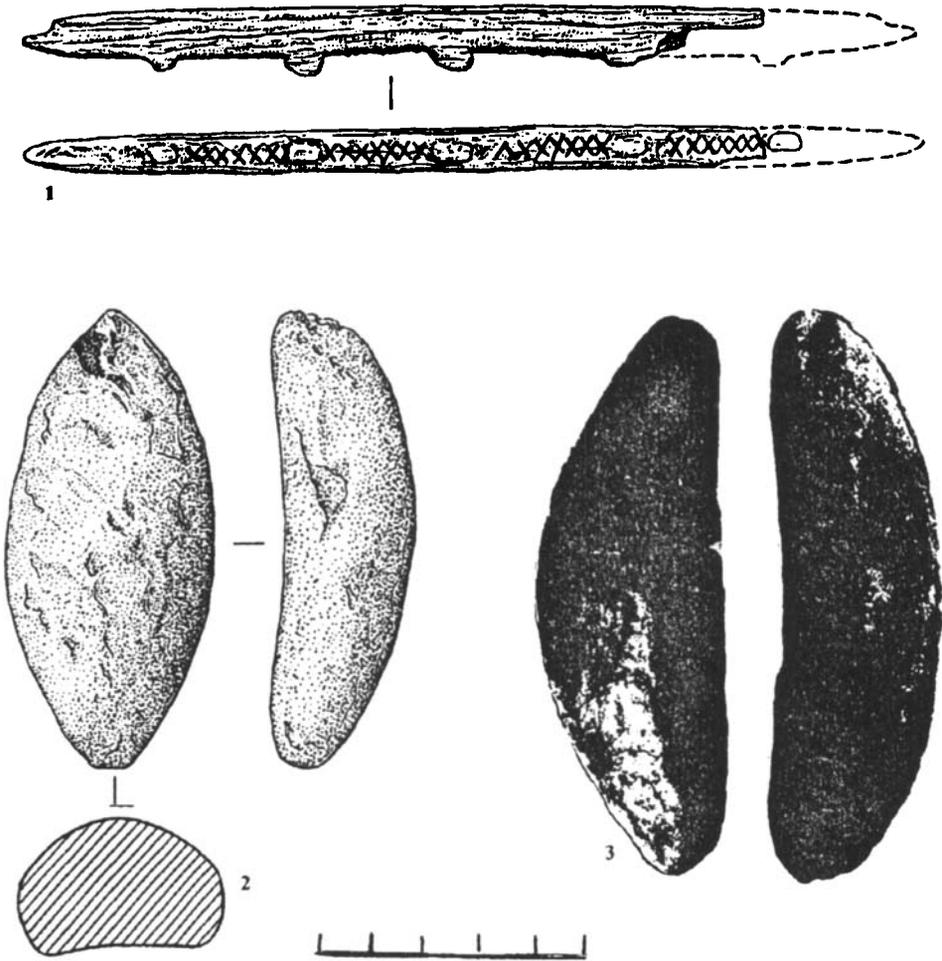


Figure 7 Artifacts with lunar symbols: (1) bone; (2,3) clay.

BC (Hawkins, 1984; Podborsky, 1988). It shows that these constructions realized similar functions in the system of ideological conceptions of primitive society. They presented different cultural formations far from one another in space but close to each other at the spiritual culture level.

We can see the heightened interest in the registration of the main calendar dates at the end of the Neolithic Epoch – Bronze Age (fourth to second millennia BC) on a wide territory from Europe to West Siberia. This was realized from the special constructions for the observation of heavenly bodies (“observatories”). This period coincided with the time of the formation of productive economy – agriculture, cattle-breeding, and probably was stimulated by its needs. The appearance of circle sanctuaries allowed man to understand the initial causes of the appropriate natural

phenomena. It caused the first models of the system of the universe system in the history of mankind and at the same time the cult of natural forces.

The main sun and moon reference-points at the Savin sanctuary, its archaeological discoveries including the artifacts with solar-lunar symbols, the possibility of using the data of ethnology, the study of folklore, mythology so numerous in the history of the aboriginal population of Siberia allow us to try to reconstruct the calendar and ritual practices of the Trans-Ural inhabitations of more than four thousand years ago.

It was noted already that the most significant tracks of offerings were found in the east directions of the circle constructions near 90 degrees, directed to sunrises in the days of the vernal and autumnal equinoxes. Evidently the second parts of March and September were the most significant dates in the life of the people who saw the sanctuary. But which equinox, vernal or autumnal, had more importance probably depended on the beginning of counting time? You remember that sunrises and sunsets exactly coincide being directed exactly to the east and to the west in these days. We try to think about the main economic occupation of the Aeneolithic Trans-Ural population in the area of the Savin sanctuary. It was hunting. Based on this fact it appears that the autumnal equinox was the more important for people. It is the time of the beginning of mass hunting for big animals. The task of this was to provide hunting groups with flesh for the long cold winter.

The traditions of the most important offerings at this period of the year during later epochs corroborate our opinion. The Arzhan royal barrow in Tuva (ninth to eighth century BC) is a striking example. It had more than half of the 165 sacrificial horses in the east sector of the burial mound. The author of the excavation determined the month of erection of the burial mound - September (Gryaznov, 1980).

Ethnohistoric researches, especially in sphere of the calendar system of the Siberian population, have convincing examples too. You know about the Ugr peoples of the Obj-Irtysh region - the Khanty and the Mansi. They live in the neighbouring territory of the Savin area. In antiquity their material culture was close to the same one as the Aeneolithic population. In the calendar of the Khanty and the Mansi a year in most cases begins in autumn - from August to September. The month names are notable. They reflect the life situations of people getting closely mixed up. "Autumn hunting" - September, October (the Khanty); "hunting elk-month" - October (the vasyugan Khanty); "to trade in hunting maral-month" - September (the Altaians); "low sun-month" - December (the vasyugan Khanty); "elk and deer rounding-up on the thin crust of ice over snow-month" - December (the Mansi); "roe-month" - December (the Shortsy) etc. (Simchenko *et al.*, 1993). Most of these names are from the very distant past. It is one more corroboration of the fact that ancient elements of culture correspond to the reality of the conditions of life.

We know that the sunrise points of the 21st of March and the 23d of September coincide. The traces of offerings at the Savin site may date both dates. So we can think about the possibility of dividing year into two periods - warm or summer (spring-summer) and cold or winter (autumn-winter). According to ethnographical

data such a system was known by some peoples of West Siberia. The east Khanty, the Sosjva Mansi, the Altaians marked the beginning of the year twice a year – in spring and in autumn. In all probability the initial division of a year into two parts and accounting one year as two parts was an ancient tradition of the Siberian peoples. The presence of identical month names in their calendars (“thin crust of ice over snow”, “hunting elk, deer”, “short day” etc.) is explained not only by the similarity of natural conditions and economic cycles, but by a similar development, belonging to some more archaic system of cognition of the universe. Materials of the Savin and Velizhany II sites are evidence of the existence of complete ideas concerning the universe in the Ural-Siberian region in very distant antiquity. They were kept in their base in the taiga areas practically until very recent times (Potyomkina, 1995).

The moon reference-points and the trace of offerings there were also mentioned. Although the latest ones were of less significance than the offerings in the directions of sunrises. There are some articles among the finds which can have the effect of fixing the moon phases and moon symbolism.

The most interesting is the item with elements of the calendar drawing (Figure 7(1)). It is an elongated blade 14 cm long, broken off at one end. It is divided into three sections by the oval ledges. There is an ornament of seven crosses on a ground surface of each section. We have reason to suppose the existence of a fourth section on the broken end. On the third section the ornament begins with the mark of another form like two lines closing up. The blade may be interpreted as the picture of days of the moon month, which begins with the appearance of a crescent moon. Marked out the 15th sign denotes a full moon.

It is very probable that numerical and pictorial symbolism based on astronomical knowledge concerning the calendar system is reflected by the rich ornamentation of vessels – holes, triangles, rhombi, crosses, zig-zags, cuts etc. (Figure 5). Researchers consider them to be solar-lunar symbols. In this aspect one vessel is interesting. In our view its ornament symbolized a model of a sanctuary (the universe?) and at the same time served as a calendar. There are two lines of 28 holes in each one in an ornamental scheme on the vessel surface (Figure 8(2)). The vessel was discovered on the edge of the pit in the passage of the west entrance of the first circle in a carbonized layer near the accumulation of the animal bones (two individual horses, two roes and one elk).

Here on the other edge of the pit in the ochre spot two clay articles joined together were found. They may be connected with lunar symbolism (Figure 7(2)). They were found in two cases *in situ* and were joined in pairs by salient sides outside (Figure 7(3)). It is most probable to consider them to be the models of the halves of a moon disk symbolizing the phases of the moon. It may be the case that these articles were the symbol of the full moon in the new moon and full moon periods.

All described data show that the rites devoted to the Sun and Moon were performed in the same days (equinoxes and solstices), but at different times of day and night. Probably the Sun and Moon were perceived by the Aeneolithic population as the most significant deities, but they had different roles. The Sun and Moon were as if always side by side and followed one another like the Heaven and the Earth,

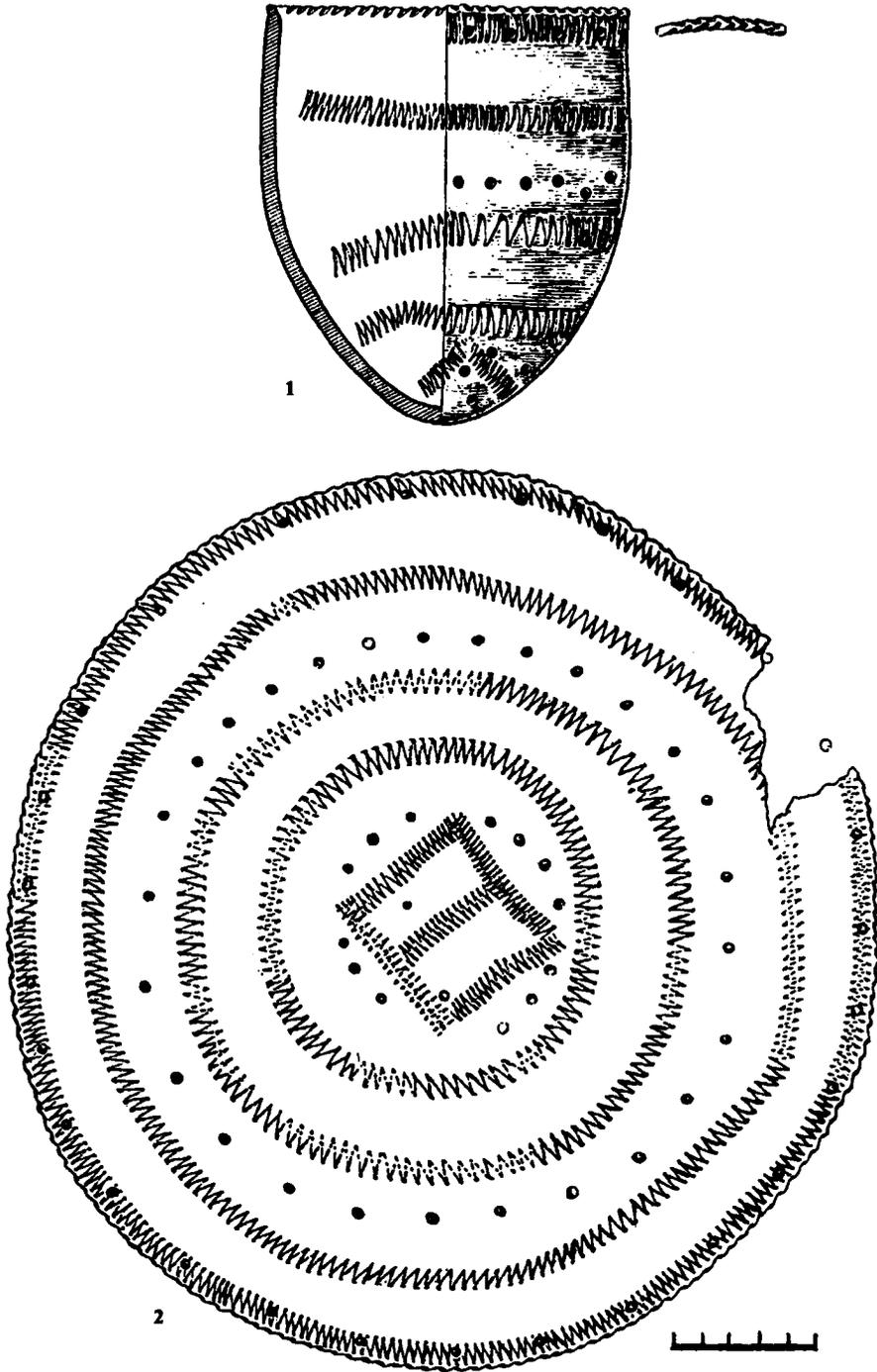


Figure 8 The Savin. (1) A vessel from the West entrance passage of the first circle; (2) its ornament development.

day and night, life and death. In the myths of all the peoples of the world the Sun and the Moon are always the main heroes being in different relationships and frequently personifying all the principles of man and woman. In the myths of the Siberian peoples as of many others they Sun embodied the Upper World and the basis of man. The moon was the symbol of the entrails of the earth and the basis of a woman. It was considered that the Moon gave necessary elements to every living thing as for example the "Moon-mother" of the Taimyr Nganasan.

The tradition of synchronous Sun and Moon worship of many Siberian peoples existed before the present time. For example in the sixteenth century they had the following rite. During offerings two silver dishes were hung out on a tree by the salient sides, symbolizing the Sun and Moon (Chernetsov, 1947). Probably in this case we see an adaptation of the rites of offerings to the Sun and Moon usually observed from an open place, to the forest conditions where such observations are difficult. In conditions of bad visibility of the skyline the population of the taiga region began to use the symbols replacing the main heavenly bodies. In this case directions to the parts of the world were not taken into consideration.

Exact knowledge of the direction of the sunrise in solstice and equinox days and of the phase of the moon in the sky was very important for ancient people. It explains the cause of construction of sanctuaries like the Savin site. The alternation of the seasons of the year was the determining factor in everyday life of ancient people. Its exact accounting was a matter of exceptional importance for them. At that time astronomic observations were a kind of religious ritual, a form of worship to deities.

The religious ideas and folklore of the peoples of West Siberia keep in a surviving form many features of the rituals and ideas from past epochs. Using of ethnographical data allows to reconstruct some rituals. We remember that real cult practices were much more varied.

As in antiquity bloody animal sacrifices, mainly of deers and horses with the hanging out the skins with heads and extremities; lighting a fire, giving the presents to a sacrificial meal etc. were the most important parts of the rituals performed at the Mansi, Khanty and the others sanctuaries (Novitsky, 1884. etc.). Directing the sacrificial animal heads and hanging out the skins to the side the prayers were performed, i.e. to the sunrise, is the most interesting detail for us of these rites (Miller, 1791; Kostikov, 1930; Potapov, 1935). A sacrifice of a man was considered to be the most powerful especially in extreme conditions connected with the survival of a group. The most significant of all deities was the supreme deity – the patron of the Heaven and the Upper World, usually associated with the Sun.

Archaeological data show very similar rites at the Savin sanctuary. It may be explained only by a close world outlook of ideas based on solar-lunar cults, a three-part model of the world etc., following from the level and character of an economic activity. An animals were the main object of a hunt, source of meals and life they were sacrificed most of all. Many of these animals such as the elk, deer, horse etc. having been the main source of existence were worshipped and associated with Sun. They became cosmic animals. Images of deity – the Sun on a war-vehicle harnessed by horses, "heaven horses", "winged horses" take a special place in the mythology of Indo-European peoples. In the religious beliefs of the Uralo-Siberian peoples the

image of an elk-sun and a deer-sun plays an important role as well. By the written sources and investigation of numerous sanctuaries of different epochs we can suppose the sacrifices at the Savin site to have been accompanied by magic rites. Different artifacts – vessels, tools and weapons, discovered together with animal bones near the post-holes, traces of bonfires in the ditch, especially in the places of maximum accumulation were connected with these rites. The sacrifice complex of the half-finished arrowheads and knives (about 30 of them) in a small pit near the central post of the second circle confirms this supposition as well.

Some opinion about the character of the rituals performed at the sanctuary can be obtained from ethnohistoric materials. For example the reindeer Koryaki had the "feast of heads" or the "feast of a young-deer". It was in September–October and associated with the beginning of a year. The main ritual of it was the worship of deer heads put on spears. There was also the "feast of the sun returning" carried out from the 22nd of December to the 13th of January in the winter solstice period, when they told fortunes using animals which had been sacrificed (Simchenko *et al.*, 1993). Both the separate clan or group of clans, if they had a common divine ancestor, usually a beast, and the separate families performed the sacrifice rites (Chernetsov, 1947). We can say something about some individual sacrifices too.

We know the Mansi rites connected with their cosmogonical ideas (cult of the world tree, sun, moon) based on the concept of the three-part model of the universe. These rites are very similar to the reconstructed Savin rituals. During the sacrifices to the Supreme Deity (Heaven, Sun) they felled a birch, cleaned out the branches, drew images of spirits on a bark and placed it in the direction of the sunrise. Then by bows and words they call the god of heaven to come flying down to the top of a placed tree. The Mansi performed sacrifices to the Sun and Moon twice a year – in December and in the beginning of July. These coincide with the days of winter and summer solstices (Chernetsov, 1947).

These examples indicate the continuity and conservatism of the ideas of the Ural and West Siberia peoples' world outlook at least during the past four to five millenia from the start of the formation of a productive economy in the steppe and forrest-steppe regions, especially concerning the cosmological ideas connected with such definitions as "world", "sacred" tree, "tree of spirits", joining the "middle" world with the "upper" one (the earth with sky, Sun, Moon). People force and power were connected by them.

So the Savin sanctuary had its functions mainly associated with the hunting rites reflected in the year by cycle of the alternation of the season in a hunting calendar. The main stages, rythm and the way of life of hunting groups were based on such a calendar. Hunting each of the animal species represented at the site was connected with the determined season of a year, sometimes even by a month and directly depended on its biological rythms, known by good ancient hunters. A calendar was of especial significance in connection with hunting a horse and the domestication of it. The performance of some other rituals which concerned other aspects of the life of society also took place. The main forms of a cult performance were collective sacrifices. They were a part of the rites of the cycle of a calendar.

We have reason to suppose that the people who visited the Savin site had already used a calendar in the form of the Moon and Sun. A month was the main natural space of the numeration of time. It was divided by weeks. Seasons, half-years or a year were made up of months. The year by circle of the full circulation of the Sun, season, moon circulation period were marked. Probably each of them had their special name and symbol.

In this situation it should be supposed that all ritual acts were strictly regulated by people who determined the time and the process of its performance by paying attention to heavenly bodies. Both the clan chiefs or the eldest members of the community and special people such as priests might be among them. They were keepers of all the accumulated knowledge about nature and biological cycles, ideas world, hunting experience. These persons knew all concerning the solar-lunar directions marked at the sanctuary and could foretell astronomical phenomena in these directions, i.e. calculate a calendar and plan rituals.

Sanctuaries like the Savin one were in their way a kind of centre which organized society life according to the natural environment and a level of socio-economic development. They directly served a practical aspect of the life of a society and performed definite administrative, religious, economic and unifying functions.

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