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Main Results of the Study of Funeral Monuments of the Alakul Culture in Central Kazakhstan (Review of the Current State of the Problem)

This article examines the current state of research on the burial monuments of the Alakul culture of Central Kazakhstan and summarizes ideas about its formation and development from the mid-19th to the mid-16th centuries BC. The focus is on issues of cultural genesis, periodization, chronology, and the social organization of Alakul society. Changes in funerary architecture, rituals, and accompanying goods are traced, reflecting the transition from early complexes with pronounced chariot symbolism to monuments of the classical stage. The territorial distribution of necropolises and the place of Central Kazakhstan in the system of cultural processes of the Eurasian steppe during the Bronze Age are characterized. The authors analyze the sequence of three stages in the development of the Alakul culture: the Petrovka, Nurtai, and Classical stages. The formation of early Alakul complexes is associated with the settlement of the bearers of the Sintashta-Petrovsk traditions and their interaction with individual groups of the early Srubnaya population. Particular attention is given to the chariot complex, represented by paired horse burials, cheekpieces, and weaponry. In the early stages, such paraphernalia served as an important marker of the high status of charioteer warriors and indicated the military-aristocratic nature of social organization. The subsequent transformation of ground burial chambers into stone cists, the reduction of chariot symbols, and the disappearance of burials under kurgan burials are considered in connection with the changing social structure and the loss of the military aristocracy's former importance. In this context, a consistent shift in symbols of social prestige and associated perceptions of the status of various groups within Alakul society is demonstrated. The final stage demonstrates the growing influence of Nura-Fyodorovo cultural traditions. The authors conclude that the development of the Alakul culture of Central Kazakhstan was continuously evolutionary and lasted for approximately three centuries. Changes in funerary rituals and material culture reflected not sharp cultural discontinuities, but a consistent transformation of social institutions. The formation of the Alakul cultural complex was determined by migration and integration processes, while the end of its history was associated with the gradual assimilation of the Alakul population by the bearers of the Nurin-Fedorovo traditions.

Keywords: Central Kazakhstan, Alakul culture, cultural genesis, burial rites, military aristocracy, chariot paraphernalia, chronology.

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Орталық Қазақстандағы алакөл мәдениетінің жерлеу ескерткіштерін зерттеудің негізгі нәтижелері (келелі мәселелердің қазіргі жағдайына шолу)

Мақалада Орталық Қазақстанның алакөл мәдениетінің жерлеу ескерткіштерін зерттеудің қазіргі жағдайы қарастырылды және б.д.д. XIX ғ. ортасынан XVI ғ. ортасына дейін оның қалыптасуы мен дамуы туралы түсініктер жинақталған. Алакөл қоғамының мәдени генезі, кезеңденуі, хронологиясы және әлеуметтік ұйымдасу мәселелеріне басты назар аударылды. Айқын арбалы символикасы бар ерте кешендерден классикалық кезеңнің ескерткіштеріне қарай көшуін бейнелейтін жерлеу сәулетінің, әдет-ғұрыптың және ілеспе құрал-жабдықтың өзгеруі байқалады. Қорымдардың территориялық орналасуы және Орталық Қазақстанның қола дәуіріндегі далалық Еуразияның мәдени үдерістер жүйесіндегі орны сипатталады. Авторлар алакөл мәдениеті дамуының келесі үш кезеңінің реттілігін сараптайды, олар: петровтық, нұртайлық және классикалық. Ерте алакөл кешендерінің қалыптасуы сынтасты-петров дәстүрлерін иеленуші халқының қоныстануымен және олардың ерте сруб халқының жекелеген топтарымен өзара әрекеттесуімен байланысты. Жұптасқан жылқылардың жерлеуі, сулықтар және қару-жарақ заттарымен ұсынылған арбалы кешеніне баса назар аударылады. Ерте кезеңде мұндай атрибутика арбалы жауынгерлерінің жоғары мәртебесінің маңызды маркері болды және әлеуметтік ұйымдасудың әскери-ақсүйектік сипатын көрсетті. Топырақ асты жерлеу камераларын кейіннен тас жәшіктерге айналдыру, арбалы символикасының қысқаруы мен оба асты жерлеу орындарының жоғалуы қоғамдық құрылымның өзгеруіне және бұрынғы мәртебесі бар әскери ақсүйектердің жойылуына байланысты қарастырылады. Бұл тұрғыда алакөл қоғамындағы түрлі

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топтардың орны туралы қоғамдық бедел нышандарының және соған байланысты түсініктердің заңдылық алмасуы көрсетілген. Соңғы сатыда нұра-федоров мәдени дәстүрлері ықпалының күшеюі тіркеледі. Авторлар Орталық Қазақстандағы алакөл мәдениетінің дамуы үздіксіз эволюциялық сипатта болды және шамамен үш ғасырға созылды деген қорытындыға келеді. Жерлеу ғұрпы мен материалдық мәдениет қалпының өзгеруі күрт мәдени алшақтықты емес, әлеуметтік институттардың дәйекті трансформациясын көрсетті. Алакөл мәдени кешенінің қалыптасуы көші-қон және интеграциялық үдерістермен анықталды, ал оның тарихи аяғы алакөл халқының ішіндегі нұра-федоров дәстүрлерін иеленушілерінің біртіндеп ассимиляциясымен байланысты болды.

Кілт сөздер: Орталық Қазақстан, алакөл мәдениеті, мәденигенез, жерлеу ғұрпы, әскери аксүйектер, арбалы атрибутика, хронология.

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Основные итоги изучения погребальных памятников алакульской культуры Центрального Казахстана (обзор современного состояния проблематики)

В статье рассматривается современное состояние изучения погребальных памятников алакульской культуры Центрального Казахстана и обобщаются представления о её формировании и развитии с середины XIX до середины XVI в. до н. э. Основное внимание уделено вопросам культурогенеза, периодизации, хронологии и социальной организации алакульского общества. Прослеживаются изменения погребальной архитектуры, обрядности и сопроводительного инвентаря, отражающие переход от ранних комплексов с выраженной колесничной символикой к памятникам классического этапа. Характеризуются территориальное размещение некрополей и место Центрального Казахстана в системе культурных процессов степной Евразии эпохи бронзы. Авторы анализируют последовательность трёх этапов развития алакульской культуры — петровского, нуртайского и классического. Становление раннеалакульских комплексов связывается с расселением носителей синташтинско-петровских традиций и их взаимодействием с отдельными группами раннесрубного населения. Особое внимание уделяется колесничному комплексу, представленному парными захоронениями лошадей, псалями и предметами вооружения. На раннем этапе такая атрибутика выступала важным маркером высокого статуса воинов-колесничих и указывала на военно-аристократический характер социальной организации. Последующее преобразование грунтовых погребальных камер в каменные ящики, сокращение колесничной символики и исчезновение подкурганных захоронений рассматриваются в связи с изменением общественной структуры и утратой военной аристократией прежнего значения. В этом контексте показана закономерная смена символов общественного престижа и связанных с ними представлений о положении различных групп внутри алакульского общества. На завершающей стадии фиксируется усиление воздействия нуринско-федоровских культурных традиций. Авторы приходят к выводу, что развитие алакульской культуры Центрального Казахстана носило непрерывный эволюционный характер и продолжалось около трёх столетий. Смена форм погребальной обрядности и материальной культуры отражала не резкие культурные разрывы, а последовательную трансформацию социальных институтов. Формирование алакульского культурного комплекса определялось миграционными и интеграционными процессами, тогда как завершение его истории было связано с постепенной ассимиляцией алакульского населения носителями нуринско-федоровских традиций.

Ключевые слова: Центральный Казахстан, алакульская культура, культурогенез, погребальный обряд, военная аристократия, колесничная атрибутика, хронология.

Introduction

Central Kazakhstan is one of the largest regions of steppe Eurasia, where vivid and distinctive monuments of the Bronze Age have been preserved in large numbers. Due to the traditionally widespread use of stone in the construction of memorial and ritual structures, the funerary architecture of numerous kurgans, enclosures, and ritual constructions has survived to the present day virtually in its original form. The most illustrative are large necropolises, which may include hundreds of structures of different chronological attribution, demonstrating the dynamics of cultural and historical processes that took place throughout the entire 2nd millennium BC.

Within the system of geographical coordinates, Central Kazakhstan is located in Central Asia and, in administrative terms, corresponds to the Karaganda and Ulytau regions of the Republic of Kazakhstan. The total area amounts to 398,800 km². The territory of Central Kazakhstan is bounded by the Karkaraly, Kent,

Balkantau, and Kyzylarai mountain massifs in the east, by Lake Tengiz and the Ulytau mountains in the west, from the Ishim and Olenty rivers in the north to lake Balkhash and the Betpak-Dala desert in the south, occupying a plain and low-hill space known as Saryarka. The vast steppe expanses of the region, with rare inclusions of low mountains and forest vegetation, a branched hydrographic system, relatively short winters, and long hot summers, were ideally suited for the productive development of pastoralism, which has dominated these territories over the past four millennia [1; 527-539]; [2; 7-10].

The Alakul sites were identified by K.V. Salnikov [3] based on the eponymous burial ground Alakul and were initially considered as one of the stages of the Andronovo culture, the status of which was later elevated to that of the Andronovo cultural-historical community (ACHC), consisting of two related cultures: Alakul and Fyodorovo. The proposed names of the cultures have become firmly established in the scholarly community and are currently used universally in the study of antiquities of the Andronovo circle.

The purpose of this article is to summarize the results of research conducted on the burial sites of the Alakul culture in the first decades of the 21st century. The objectives of this study are, firstly, to characterize the three-stage periodization of the Alakul culture, including the Petrovka, Nurtai, and Classical stages; secondly, to study changes in burial rites, funerary architecture, and accompanying goods at different stages of cultural development; thirdly, to examine the origins of the Alakul cultural complex and determine the role of the Sintashta, Petrovka, and early Srubnaya components in its formation; and fourthly, to clarify the chronological framework of individual stages of the Alakul culture based on radiocarbon dating.

The scientific novelty of this study lies in the comprehensive generalization and statistical analysis of materials from funerary monuments of the Alakul culture in Central Kazakhstan, obtained primarily in the first two decades of the 21st century. Based on data on funerary architecture, rituals, grave goods, and radiocarbon dating, a three-stage periodization of the culture, including the Petrovka, Nurtai, and Classical stages, is substantiated. The nature and dynamics of chariot traditions are clarified, revealing their connection to the formation of a military-aristocratic class and subsequent changes in the social structure of society. It is proposed to consider the cultural genesis of the Alakul complexes as the result of migration and integration processes involving Sintashta-Petrovsky and early Srubnaya components, and the development of the culture as a consistent evolutionary process that took place from the mid-19th to the mid-16th centuries BC.

Materials and Methods

The source material for the study was a collection of published and unpublished materials on the funerary monuments of the Alakul culture of Central Kazakhstan. These included research articles, monographs, and conference proceedings. The primary focus was on the results of research conducted in the first two decades of the 21st century, when the study of early Alakul complexes in the region intensified significantly. To create a more comprehensive sample, research materials from the 1970s–1990s were also used. An important source for the study was the archival collection of the Saryarka Archaeological Institute. The work utilized field reports from the Karaganda Archaeological Team for 1978–1981 and 1984, containing information on archaeological research at Bronze Age monuments in Central Kazakhstan. These reports include descriptions of cemeteries and individual burial structures, data on their locations and structural features, field graphic documentation, and characteristics of the burial rite and accompanying grave goods. The inclusion of these materials allowed us to include information on complexes that had only been partially published or not covered in detail in the scientific literature.

Furthermore, reports on research conducted in 2019–2021 on the Kyzyltau burial ground, ethnocultural processes of the Bronze Age, and markers of social rank among the Saryarka population were used. The data contained in these reports were used to characterize early Alakul burial complexes, identify Sintashta-Petrovsky and early Srubnaya components, and analyze chariot paraphernalia and elite burials. Comparison of archival documentation with published materials allowed us to expand the factual basis of the study, clarify the features of funerary rituals, and trace changes in the social organization of Alakul society at different stages of its development. Comparative typological and comparative historical methods were used to compare the sites of Central Kazakhstan with the Sintashta, Petrovka, early Srubnaya, and other complexes of the Eurasian steppe. The comparison was based on features of funerary architecture, the orientation of the buried and horses, pottery forms, types of jewelry, weapons, and horse harness elements. The results allowed us to identify common and local features, trace cultural interactions, and assess the role of migration processes in the formation of the early Alakul cultural complex.

Statistical methods were used to process a significant body of data on cemeteries, structures, and burials. Absolute and relative indicators of the prevalence of individual structure types, age and gender

groups, and elements of the funerary rite were calculated. In particular, the frequency of chariot-related assemblages and their proportion among the male burials studied were determined. A statistical comparison allowed us to establish the dynamics of the spread of chariot traditions and trace the changes in their social role at different stages of cultural development.

Paleoanthropological determinations were used to establish the sex and age of the buried individuals. In cases where the state of preservation of the skeletal remains precluded reliable anthropological characterization, the composition and arrangement of the grave goods were taken into account. The results of sex determination based on anthropological data were compared with archaeological features of male and female burials. The authors estimated the margin of error for such determinations to be between 5 % and 10 %, which did not significantly affect the overall results of the statistical analysis.

To refine the chronology, radiocarbon dating results were used, including series of dates obtained using accelerator mass spectrometry. Radiocarbon determinations were compared with the typological features of the burial structures and grave goods. The integrated use of absolute and relative dating allowed us to identify three successive stages in the development of the Alakul culture of Central Kazakhstan: Petrovka, Nurtai, and Classical, and also to determine the general time boundaries of its existence from the mid-19th to mid-16th centuries BC.

Results

The main conceptual idea of this work is to review the current state of research on the Alakul culture, which developed on the territory of Central Kazakhstan in the Bronze Age. For the first time, certain results of research related to the study of tafocomplexes of the Alakul culture carried out in the region over the past 20 years have been summarized, as well as part of the materials of the preceding period available in open access and archival collections. Based on the obtained data, the results of research concerning the specifics of the burial rite, material culture, and social organization of Alakul society have been generalized. The range of issues under consideration also includes problems of cultural genesis and chronology, which ultimately made it possible to obtain a more holistic and objective understanding of the studied ethnocultural formation.

It has been established that in the formation of early Alakul complexes of Central Kazakhstan, along with the Petrovka component, a certain role was also played by groups of early Srubnaya population. This statement is based on cultural differences in the details of burial ritual and the specifics of chariot traditions of each ethnocultural formation [4; 109-130].

Topical and highly debated issues of cultural genesis and social structure of Alakul society are considered. It is assumed that migration processes underlay its formation. The stratification of society is noted, the formation of which had a military-aristocratic character.

No less important was the wide application of modern methods of radiocarbon dating associated with accelerator mass spectrometry, which allows more precise results to be obtained due to the narrowing of the confidence interval. A significant series of obtained radiocarbon dates made it possible to construct a fairly accurate chronological scale for the monuments of the Alakul culture that developed in Central Kazakhstan during the Bronze Age [5; 19-20].

Visually, Alakul funerary structures represent circular, much less often quadrangular enclosures made of granite slabs set on edge. Earthen kurgans surrounded by ring enclosures are often noted. Large, medium, and small burial grounds are known. In some cases, entire burial fields consisting of separately grouped structures have been recorded, which may stretch along the shoreline for several kilometers.

As a rule, Alakul burial grounds are located on flat areas of wide river valleys framed by hills or low mountains, mainly associated with the basins of such rivers as Taldy, Nura-Taldy, Atasu, Nura, Sherubai-Nura, Ashchisu, and Tundyk. One of the mandatory conditions was the presence nearby of bedded stone formations, mainly granite outcrops, which were widely used in funerary and ritual practice. Burial monuments are usually localized along small steppe rivers with a stable water flow, occupying bedrock and first above-floodplain terraces. In deeper, more arid regions, they are generally not found. In some cases, Alakul elite burials in the form of kurgan mounds are noted on elevations of small hills, apparently emphasizing the non-ordinary status of the deceased (Satan, Tundyk).

Within the territory of Central Kazakhstan, all investigated monuments of the Alakul culture gravitate mainly toward the central, northern, eastern, and southwestern regions and are concentrated in three districts: Karkaraly (Kopa, Kopa I, Nurken I, Ashchi-Ozek, Satan, Nurtai, Bozengen, Kyzylkol, Tundyk, Zhilandy IV) [6; 31-41; 23-25; 42-44]; [7; 3-35]; [8; 19-25]; [9; 6-12]; [10; 148-158; 66-83]; [11; 392-402]; [12; 136-143];

[13; 70-84], Bukharzhyrau (Zhanaidar, Maitan, Ayapbergen, Tanabay, Aschisu, Tashik, Tegizzhol) [14; 151-154]; [15; 111-116]; [16; 65-84]; [17; 115-119]; [18; 50-69]; [19; 670-681] [20; 28-40]; [21; 40-64]; [22; 86-91]; [23; 71-75]; [24; 103-109]; [25; 6-38] and Shet (Ak-Mustafa, Shet I–III, Atasu I, Aishrak, Bylkyldyk I–III, Sherubay-Nura, Aksu-Ayuly I, Elshibek, Belasar, Zhambay-Karasu, Besbaldyk, Koyshtok I–IV, Nurataldy I, Senkibay II, Tabyldy, Kyzyltau I, II, Kotyrtas, Taldinsky I,) [14; 91-116; 118-151]; [26; 81-102]; [27; 209–218]; [28; 84-98]; [29; 43-52]; [30; 120-131]; [31; 84-92]; [32; 3-41]; [33; 5-63]; [34; 5-47]; [4; 109-130]; [35; 224-231]. Individual burial grounds have also been studied in the Nura (Ikpen I, Aktobe I, II, Shapat) [36; 99-128, 148-287], Aktogay (Karasai, Temir-Astau, Karabie) [14; 116-118] and Zhanaarka (Zhaman-Uzen II) [37; 109-112] districts. This natural-ecological zone includes mountain-forest massifs and forest-steppe areas, although steppe landscapes predominate over most of the territory. However, a certain degree of forest cover in antiquity is indicated by characteristic toponyms, which may be reflected in the names of archaeological sites. In general, this suggests that, among other necessary conditions for stable development, the forest-steppe ecosystem apparently much more extensive during the Bronze Age was the most favorable environment for the Alakul population.

All investigated Alakul burial grounds can be divided into four groups according to the number of visually recorded funerary structures. The first group includes small necropolises, where the number of burial constructions does not exceed 25 features. The second category comprises medium-sized burial grounds, including up to 50 structures. The third category consists of large tafocomplexes numbering up to 100 above-ground constructions. The fourth group is represented by very large burial grounds, where the number of identified structures exceeds 100.

The group representation of necropolises is as follows: the first group includes 19 burial grounds, the second — 12, the third — 13, and the fourth comprises 3 necropolises. In general, the first group is the most numerous; the second and third are comparable, while the fourth is represented by only a few burial grounds characterized by the highest concentration of funerary structures.

At present, approximately 50 Alakul burial complexes are known to have been studied archaeologically. On average, the number of excavated structures within necropolises does not exceed 10-30 % of the total identified. Relatively large burial grounds, where this figure exceeds 50 %, are quite rare, and completely excavated sites are exceptional, for example, the Maitan burial ground [38].

In total, 1,912 burial structures have been recorded in necropolises, of which 412 have been investigated, revealing 1,015 burial chambers. The total number of buried individuals amounts to 1,118, of which 449 are children and 672 adults, forming the general sample. Based on paleoanthropological determinations, as well as characteristic grave goods, 284 burials were attributed to males and 388 to females. Cross-verification generally demonstrated consistency between paleoanthropological determinations and grave goods with respect to sex and age characteristics, clearly distinguishing male and female burials, which was taken into account in the absence of cranial data. The estimated margin of error does not exceed 5-10 % and does not affect the overall conclusions, despite uneven levels of investigation.

Over the past two decades, research has been conducted at 15 Alakul burial grounds in Central Kazakhstan. In total, 63 burial constructions have been studied, of which 40 were kurgan structures. A total of 165 burials were identified. Chariot-related attributes, taking into account previously studied complexes, have been recorded in 26 cases across 14 necropolises (Satan, Nurtai, Maitan, Ashchisu, Ayapbergen, Tanabai, Nurataldy-I, Senkibai-2, Tabyldy, Kyzyltau I and II, Kotyrtas, Taldinsky-1, and Zhylandy-IV), most of which correspond to early Alakul features associated with sub-kurgan burial traditions.

Evidence of chariot traditions in the steppe and forest-steppe zones of Eurasia during the Bronze Age has been preserved through the distribution of characteristic attributes in burial rites, collectively referred to as the «chariot complex». Historically, this includes a horse-drawn chariot and the weaponry of a chariot warrior. Archaeologically, it is represented by remains of chariots, skeletons of draft horses, psalia, and weapons for both ranged and close combat [39; 58].

Regional Eurasian sites with chariot-related attributes have been identified as independent archaeological formations possessing their own distinctive features. Thus, in the Middle Volga region these are the Potapovka and Pokrovka cultures; in the Southern Urals and Northern and Western Kazakhstan, primarily Sintashta and Petrovka complexes; while in Central Kazakhstan a Petrovka (early Alakul) chariot culture was formed.

Discussion

It is assumed that early Alakul complexes appeared with a certain chronological delay relative to the early phase of the Sintashta chariot culture and became its logical continuation. The Sintashta culture effectively served as the core and driving force that initiated ethnocultural processes of the Bronze Age both in Saryarka and across Kazakhstan as a whole. Only through the prism of the Sintashta phenomenon can the logic and mechanisms of the cultural genesis of steppe pastoral cultures of the Alakul circle formed in the first half of the 2nd millennium BC be fully understood.

The origin of early Alakul complexes is associated with the gradual disintegration of the relatively homogeneous Sintashta culture, expressed through the outflow of part of its population into surrounding groups and subsequent processes of cultural mixing. The Sintashta culture formed the basis for the development of post-Sintashta cultural horizons, as reflected in numerous similarities in burial practices and material culture, generally characterized by a militarized context, albeit in a less aggressive form. Their formation is linked to the dispersal of Sintashta populations from the Southern Trans-Urals westward (toward the Volga-Ural region) and eastward (into the Tobol-Ishim region). This is evidenced by a reduction in fortified settlements and the spread of smaller, non-fortified habitation sites [40; 54-55] [41; 120-121]. Due to their organization and military superiority, chariot warriors assumed leadership positions within local tribal structures, generating a new form of social organization characterized by an emerging elite stratum of clan-based military aristocracy. These groups became the core of new cultural formations: in the west incorporating Late Abashevo, Babino, Late Catacomb, and Poltavka elements; in the east, primarily local post-Eneolithic or early Bronze Age populations.

The inclusion of various tribal components into dominant Sintashta-derived formations influenced the material culture of subsequent periods, particularly in the formation of related early Srubnaya (Pokrovka) and early Alakul (Petrovka) cultures. These retained stable traditions of sub-kurgan burials with pronounced chariot-related features. Interaction between these cultures is suggested by mixed traits observed in burial practices at several sites. Based on the presence of close analogies with Sintashta complexes characterized by chariot burials, interments of harnessed horses, and accompanied by weapons for both close and ranged combat, it is assumed that the formation of the Alakul culture was likewise grounded in processes of military politogenesis, many features of which were inherited from the preceding period [5; 20].

In Central Kazakhstan, the monuments of the Alakul culture are objectively considered the most numerous and best studied. The culture passed through two phases: an early phase (including the Petrovka and Nurtai stages) and a final classical phase. These phases are distinguished based on features of burial practices and material culture. Cultural development appears evolutionary, without abrupt transitions; significant differences are observed only between early and late stages.

Until recently, Central Kazakhstan was considered a peripheral region, distant from major migration processes associated with the spread of chariot cultures. However, intensified archaeological research in the early 21st century has significantly revised this view.

The Petrovka (early Alakul) phase (mid-19th–18th centuries BCE) is characterized by large earthen kurgans with substantial burial chambers, paired horse burials, psalia, and weaponry forming the core of the chariot complex. The funerary assemblage includes spearheads with solid-cast sockets, a bronze hook with a forged socket, Petrovka-type knife-daggers, a knife with an integrally cast handle, as well as typical flint arrowheads characteristic of the Sintashta–Petrovka cultural sphere. In this respect, the material record clearly demonstrates a combination of products of the traditional Eneolithic industry and advanced bronze-casting technologies, as reflected in the burial monuments of chariot cultures within the military sphere. In female burials, simple and composite hair ornaments, bracelets, one-and-a-half-turn pendants, and beads are recorded.

During the Nurtai stage, developing within the 18th–17th centuries BC, alongside ground graves often lined with small stone slabs or wood, stone cists became widely distributed. It is possible that monuments combining, under a single kurgan, both ground burial chambers and stone cists may be regarded as transitional forms, which subsequently evolved into the dominant type of burial construction. Kurgan mounds are typically associated with circular enclosures made of vertically set stone slabs, although sub-rectangular structures are also encountered.

Secondary annexes are recorded in limited numbers. Ring ditches are preserved around the kurgans. Within the burial field, surrounding the necropolis-forming features with kurgan architecture, numerous non-

mounded enclosures of ordinary community members were constructed, in which burials in stone cists numerically predominate.

It is noteworthy that during the Nurtai period there is a clear inconsistency in the orientation of horses and, accordingly, of the burials forming a unified complex, which can be divided into two groups with a predominance of either western or eastern orientation. It is suggested that the eastern and north-eastern sectors are associated with an influx of new, apparently elite, groups of Srubnaya-related population with established chariot traditions, for whom these features represented ritual norms superimposed upon the Alakul substrate.

The number of paired mixed-sex burials increases, in which the deceased were placed in a flexed position facing one another: the male on the left side, the female on the right. More rarely, both individuals were placed on the left side, with the male skeleton positioned behind the female. This practice also extended to paired burials of children and adolescents. Due to the underdeveloped sex and age characteristics, attribution was primarily determined by the presence of diagnostic grave goods, particularly female ornaments found in the burials.

In adult burials, knives-daggers of the Srubnaya–Alakul type with a characteristic constriction, an incipient cross-guard, and a distinct straight tang are encountered quite regularly; these were sometimes placed in wooden sheaths. Their location in the grave is usually confined to the waist area of the deceased or to the head end. Tanged arrowheads made of bone and antler become widely distributed.

In general, complexes with chariot-related attributes have been recorded in 26 structures at 14 burial grounds, or in 6.5 % of cases of all investigated male burials. At the early stages, earthen kurgans with large ground graves become widespread. Burials could be single, paired same-sex male, or mixed-sex. A distinctive feature is the presence of paired horses on the sub-kurgan platform, symbolizing a chariot team. Burials of warrior-charioteers, who occupied the highest level in the social hierarchy of early Alakul society, could be grouped into separate, including elite, necropolises, which is characteristic of the early phase of the culture. At the final stage of the early Alakul period, ground burial chambers are transformed into stone cists, where horses were usually placed on the sub-kurgan platform at the end side of the stone cist, with preference given to western or eastern orientation. The dynamics of chariot traditions are clearly reflected not only in changes in the structural details of funerary architecture, but also indicate a narrowing of this symbolism within the framework of burial ritual practice.

During this period, chariot-related attributes pass into the category of markers of individual social prestige and begin to symbolize only the burials of chiefs, leaders of society associated with military-administrative functions, for whom large kurgans continued to be constructed, demonstratively distinguishing them from the main mass of burials in necropolises. This is documented by the singularity of such constructions recorded at a number of Alakul burial grounds.

At the end of the early Alakul period, the «heroic age» of large-scale migrations and military cataclysms comes to an end, and with it the risks of a real external threat — the steppe world enters a stage of stable development. Favorable natural and climatic factors contributed to rapid economic growth, the result of which was a significant increase in population size, as evidenced by the widespread distribution of numerous Alakul burial grounds. Large clans with established chariot traditions began to fragment into smaller subdivisions, headed by already distant descendants of noble representatives of the warrior estate, who gradually lost their power and military significance for society. With the transition to the classical Alakul phase, kurgans with chariot-related attributes disappear, which indicates the decline of the era of «war chariots» and the establishment of long-term peaceful relations in the steppe. In the late phase of the early Alakul period, the warrior-charioteer finally lost his significance, which clearly implies the formation of other social institutions demanded by society and a change in the markers of social stratification to less explicit ones.

The Alakul period, covering the range from the 17th to the mid-16th centuries BC, is characterized by the rarity of sub-kurgan burials. Non-mounded enclosures, predominantly of circular form, become widespread, often accompanied by numerous annexes. Burials of the deceased in stone cists become the norm. Chariot-related attributes disappear. Against the background of poorly furnished male burials, the female funerary costume appears especially striking, including numerous ornaments in the form of hair ornaments, neck rings, maxillofacial pendants, bracelets, rings, beads, and other items. Ceramic vessels demonstrate stepped forms; the earlier Alakul ribbed profiling of pots becomes a thing of the past and is no longer reproduced. New administrative structures are formed, based on different principles, in which, apparently, leading positions within the community began to be occupied by wealthy pastoral families and

representatives of the priestly community, with women beginning to play a significant role in the ritual sphere.

In general, it can be stated that the study of the funerary complexes of the Alakul culture has made it possible to expand our knowledge of this cultural formation of the region. At the same time, the Bronze Age of Central Kazakhstan continues to remain a traditional field for new discoveries and substantive discussions. The most problematic areas are associated with the construction of the chronological framework of the Bronze Age, conflicting hypotheses of the autochthonous or migratory origin of the culture, the status of ethnocultural formations, and issues of social organization.

According to the data of the chronological framework, the Alakul culture developed continuously over a period of 300 years, as evidenced by the evolutionary transformation of burial practices and the material culture of the entire formation. The vivid chariot traditions of the clan-based military aristocracy, which became widespread at the early stage, were replaced by a classical egalitarian period that does not reflect the internal structuring of society, indicating the gradual degradation of social institutions that led to the decline and disappearance of the culture.

It is assumed that at the Nurtai stage of the Alakul culture, the population was significantly influenced by bearers of the Nurinsko-Fyodorovo cultural complex, who began to penetrate into the territory of Central Kazakhstan. These assimilation processes were expressed in the appearance of syncretic monuments, which subsequently led to the complete absorption of the «Alakul people» by more powerful, numerous and organized Nurin-Fedorovsk groups [42; 127], whose origins are apparently connected with the territory of Southern Kazakhstan.

Conclusions

The Alakul burial sites of Central Kazakhstan are concentrated primarily in the Karkaraly, Bukharzhyrau, and Shet districts; isolated studied complexes are also known in the Nurin, Aktogay, and Zhanaarka districts. The majority of the burial grounds are located in the broad valleys of the Taldy, Nura-Taldy, Atasu, Nura, Sherubay-Nura, Ashchisu, and Tundyk rivers, where they occupy the primary and first floodplain terraces near stable water sources and stone outcrops. Funerary architecture is represented primarily by rounded, less commonly quadrangular, enclosures made of granite slabs set on edge, as well as earthen mounds surrounded by circular enclosures. Internal burial structures include ground graves and stone cists, the proportions of which varied at different stages of cultural development. The recorded population includes 19 small, 12 medium, 13 large and 3 very large necropolises, which indicates the different duration of their use and the uneven concentration of the population in certain areas of Central Kazakhstan.

Studies of large Alakul burial mounds revealed markers of chariot paraphernalia, which were present in 26 identifiable cases. Burials of paired horses, symbolizing chariot teams, bone cheekpieces as a key control element, and weapons for both long-range and close combat were noted.

Thanks to a comprehensive analysis of the material obtained during the study of the Alakul culture, it was possible to divide the entire array of funerary monuments into several successive stages: Petrovka, Nurtai, and Classical. Moreover, given the evolutionary nature of the development of the Alakul culture, changes occurred gradually, and significant differences are observed only in the early and final stages. It is believed that the Alakul culture developed from Sintashta antiquities and that its cultural genesis was migratory in nature, involving some Srubnaya populations, as reflected in the burial complexes. The earliest sites likely developed in the southern Trans-Urals and northern and western Kazakhstan. This population subsequently colonized Saryarka, and the processes of cultural formation were apparently short-lived.

The first Alakul cultural sites in Central Kazakhstan date back to the mid-19th century BC and correspond to the early Alakul period. The final stage is limited to the mid-16th century BC. Thus, the Alakul ethnocultural complex developed continuously for 300 years until it was absorbed by the Nurin-Fyodorovo population.

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