

Categoria A

REVISTA ARHEOLOGICĂ

serie nouă _ vol. XVIII _ nr. 2

Indexată în bazele de date:

SCOPUS, ERIH PLUS, DOAJ, CEEOL, ROAD, ISIFI, CiteFactor

CHIȘINĂU 2022

ISSN 1857-016X
E-ISSN 2537-6144

INSTITUTUL PATRIMONIULUI CULTURAL
CENTRUL DE ARHEOLOGIE

REVISTA ARHEOLOGICĂ

Reesponsabil de volum/responsible for volume: dr. Ghenadie Sîrbu
Secretar de redacție/editorial secretary: Livia Sîrbu

Colegiul de redacție/Editorial Board

Dr. hab. **Igor Bruiako** (*Odesa*), dr. **Ludmila Bacumenco-Pîrnău** (*Chișinău*), dr. hab. **Dumitru Boghian** (*Târgu Frumos*), dr. **Roman Croitor** (*Aix-en-Provence*), dr. hab. **Valentin Dergaciov** (*Chișinău*), dr. **Alexandr Diachenko** (*Kiev*), dr. **Vasile Diaconu** (*Târgu Neamț*), dr. **Mariana Gugeanu** (*Iași*), prof. dr. hab. **Svend Hansen** (*Berlin*), prof. dr. hab. **Elke Kaiser** (*Berlin*), dr. **Maia Kașuba** (*Sankt Petersburg*), dr. **Sergiu Matveev** (*Chișinău*), prof. dr. hab. **Michael Meyer** (*Berlin*), dr. **Octavian Munteanu** (*Chișinău*), prof. dr. **Eugen Nicolae** (*București*), prof. dr. hab. **Gheorghe Postică** (*Chișinău*), dr. hab. **Eugen Sava** (*Chișinău*), dr. hab. **Sergei Skoryi** (*Kiev*), prof. dr. **Victor Spinei**, membru al Academiei Române (*București, Iași*), prof. dr. **Marzena Szmyt** (*Poznan*), dr. **Nicolai Telnov** (*Chișinău*), dr. hab. **Petr Tolochko**, membru al Academiei Naționale de Științe a Ucrainei (*Kiev*), dr. **Vlad Vornic** (*Chișinău*), dr. **Aurel Zanoci** (*Chișinău*).

Manuscrisele, cărțile și revistele pentru schimb, precum și orice alte materiale se vor trimite pe adresa: Colegiul de redacție al „Revistei Arheologice”, Centrul de Arheologie, Institutul Patrimoniului Cultural, bd. Ștefan cel Mare și Sfânt 1, MD-2001, Chișinău, Republica Moldova

Рукописи, книги и журналы для обмена, а также другие материалы необходимо посылать по адресу: редакция «Археологического Журнала», Центр археологии, Институт культурного наследия, бул. Штефан чел Маре ши Сфынт 1, MD-2001 Кишинэу, Республика Молдова

Manuscripts, books and reviews for exchange, as well as other papers are to be sent to the editorship of the “Archaeological Magazine”, Archaeology Centre, Institute of Cultural Heritage, 1 Ștefan cel Mare și Sfânt bd., MD-2001 Chisinau, Republic of Moldova

Toate lucrările publicate în revistă sunt recenzate de specialiști în domeniu după modelul *double blind peer-review*

Все опубликованные материалы рецензируются специалистами по модели *double blind peer-review*

All the papers to be published will be reviewed by experts according to the *double blind peer-review* model

© IPC, 2022

CUPRINS – СОДЕРЖАНИЕ – CONTENTS

STUDII – ИССЛЕДОВАНИЯ – RESEARCHES

Valery Manko (<i>Kiev</i>), Guram Chkhatarashvili (<i>Batumi</i>) Kvirike: The Early Holocene Site in Western Georgia	5
Kyrylo Gorbenko, Oleksandr Trygub (<i>Mykolaiv</i>) History of Exploration of Final Bronze Age Fortified Settlement (Hillfort) 'Dykyi Sad' (Mykolaiv, Ukraine)	17
Николай Николаев, Лилия Цыганенко (<i>Измаил</i>) Судебное магическое заклятие из Ольвии с «подписью автора»	35
Людмила Носова, Игорь Бруяко (<i>Одесса</i>) Римский период в истории археологического памятника у с. Орловка по данным нумизматики (монетные находки 2017-2018 гг.)	43
Сергей Скорый, Роман Зимовец (<i>Киев</i>), Алексей Орлик (<i>Кропивницкий</i>) Об «умерщвлении» предметов на тризне скифских курганов (по материалам Орликовой Могилы)	58

MATERIALE ȘI CERCETĂRI DE TEREN – МАТЕРИАЛЫ И ПОЛЕВЫЕ ИССЛЕДОВАНИЯ – PAPERS AND SURVEYS

Serghei Agulnikov (<i>Chișinău</i>) Complexe ale epocii bronzului târziu din situl Căplani I- <i>La Yurt</i> din nord-estul stepei Bugeacului	70
Natalia Mateevici (<i>Chișinău</i>), Nicolaie Alexandru, Robert Constantin, Mihai Ionescu (<i>Mangalia/Callatis</i>) Un lot nou de ștampile de amfore grecești descoperite la Callatis	90

CERCETĂRI INTERDISCIPLINARE – МЕЖДИСЦИПЛИНАРНЫЕ ИССЛЕДОВАНИЯ – INTERDISCIPLINARY SURVEYS

Roman Croitor (<i>Chișinău/Aix-en-Provence</i>) Determination of the Paleolithic reindeer sex applying the K-means algorithm to frontal bones with pedicles	101
Lavinia Maria Brândușan, Xenia Pop (<i>Satu Mare</i>) Studiu interdisciplinar efectuat asupra materialului ceramic și arheozoologic provenit din situl nr.6 de pe varianta de ocolire a municipiului Satu Mare	107
Nicoleta Vornicu (<i>Iași</i>), Gheorghe Postică, Ludmila Bacumenco-Pîrnău (<i>Chișinău</i>), Cristina Bibire (<i>Iași</i>) Cercetarea mortarelor descoperite în situl medieval de la Orheiul Vechi prin metode nedestructive	124

RECENZII ȘI PREZENTĂRI DE CARTE – РЕЦЕНЗИИ И КНИЖНОЕ ОБОЗРЕНИЕ – PAPER AND BOOK REVIEW

Gheorghe Postică , <i>Așezarea medievală timpurie de la Păhărnicești – „Petruca” din Codrii Orheiului</i> , Editura Pontos, Chișinău, 2021, 163 p. ISBN 978-9975-72-602-3 (Ludmila Bacumenco-Pîrnău, <i>Chișinău/Iași</i>)	140
---	-----

LISTA ABREVIERILOR – СПИСОК СОКРАЩЕНИЙ – LIST OF ABBREVIATION	142
INFORMAȚII ȘI CONDIȚIILE DE EDITARE A <i>REVISTEI ARHEOLOGICE</i>	143
ИНФОРМАЦИЯ И УСЛОВИЯ ИЗДАНИЯ <i>АРХЕОЛОГИЧЕСКОГО ЖУРНАЛА</i>	144
INFORMATION AND CONDITION OF PUBLICATION IN THE <i>ARCHAEOLOGICAL MAGAZINE</i>	145

Kyrylo Gorbenko, Oleksandr Trygub

History of Exploration of Final Bronze Age Fortified Settlement (Hillfort) 'Dykyi Sad' (Mykolaiv, Ukraine)

Keywords: fortified settlement, Final Bronze Age, 'Dykyi Sad', Mykolaiv, hillfort, material culture.

Cuvinte cheie: așezare fortificată, epoca târzie a bronzului, 'Dykyi Sad', Mykolaiv, așezare antică, cultură materială.

Ключевые слова: укрепленное поселение, эпоха поздней бронзы, Дикий Сад, Николаев, городище, материальная культура.

Kyrylo Gorbenko, Oleksandr Trygub

History of Exploration of Final Bronze Age Fortified Settlement (Hillfort) 'Dykyi Sad' (Mykolaiv, Ukraine)

The history of exploration of the fortified settlement (hillfort) of the Final Bronze, Age Dykyi Sad, located in the center of the modern city of Mykolaiv (Mykolaiv oblast, Ukraine) is presented in the paper. Results of 30 years of systematic excavations of the archaeological site are summed up. The authors show the changing dynamics of the site concept, uncover the peculiarities of the settlement planning and building, highlight the finds of material culture in various categories – ceramics, metal objects, lithic and bone produced items.

Based on the whole complex of artifacts found at the fortified settlement (architectural structures, material and votive items), it can be argued that the Dykyi Sad arose because of the need to control the trade routes that connected the north-south, east-west of the ecumene. Thus, from the end 13th till the 10th century BCE the settlement fulfilled the function of the economic, cultural, religious, and political center of South-Eastern Europe, remaining the only Black Sea port settlement of the times of the legendary Troy and the Trojan War in the region of the steppe area of the Northern Black Sea region, and which population maintained a close relationship with the surrounding territories.

At the time of the fortified settlement flourishing, a clear system of unified settlement planning and development was formed within its territory: a citadel surrounded by a moat, suburbs in the hemisphere of the outer moat, and posad. Thus, we are dealing with a structure that corresponds to the classical concept of 'urbs' – 'city'.

The historical phenomenon of the Dykyi Sad goes far beyond the traditional perception of both Bilozerka culture itself and the entire era of the Final Bronze Age in the south of modern Ukraine. In many respects (material culture, economy, crafts, architecture), the Dykyi Sad differs from the concepts that have been developed in science so far.

It should also be noted that no traces of the combat assaults on the fortifications and any destruction of its structures as a result of hostilities have been found at the settlement. This fact indicates the military-fortification innovations of the inhabitants of the fortified settlement and the strong fortifications of the Dykyi Sad.

Given all the above facts, the fortified settlement of Dykyi Sad can be described as the most striking phenomenon among the archaeological sites of the Final Bronze Age in the south of Ukraine. Undoubtedly, the Dykyi Sad was an important strategic center of the Final Bronze Age in the steppe zone between the Prut and Don rivers.

Kyrylo Gorbenko, Oleksandr Trygub

Istoria studiului așezării fortificate (fortificație) din epoca târzie a bronzului 'Dykyi Sad' (Mykolaiv, Ucraina)

Articolul publică istoria studierii așezării fortificate (fortificației) din epoca târzie a bronzului „Dykyi Sad” („Grădina sălbatică”), situată în centrul orașului modern Mykolaiv (regiunea Mykolaiv, Ucraina). Sunt rezumate rezultatele a 30 de ani de săpături sistematice ale sitului arheologic. Autorii arată dinamica schimbării ideii de monument, dezvăluie trăsăturile planificării și construcției așezării, evidențiază descoperirile culturii materiale în diverse categorii – ceramică, produse din piatră, obiecte metalice, produse din os.

Pe baza întregului complex de artefacte ale așezării fortificate (structuri arhitecturale, lucruri materiale și votive), se poate susține că „Dykyi Sad” a apărut ca urmare a necesității de a controla rutele comerciale care legau nord cu sud, estul cu vestul de oicumենă. În perioada de la sfârșitul secolelor al XIII-lea – al X-lea î.Chr. așezarea a servit drept centru economic, cultural, religios și politic al Europei de Sud-Est, rămânând singurul oraș-port al Mării Negre din vremurile legendarei Troia și Războiului Troian în regiunea fâșiei de stepă de pe coasta nordică a Mării Negre, a cărei populație a menținut legături strânse cu teritoriile din jur.

În perioada de glorie a unei așezări fortificate, pe teritoriul său s-a format un sistem clar de planificare și dezvoltare unificată: o cetate înconjurată de un șanț, o suburbie în emisfera șanțului exterior și o suburbie. Astfel, avem de a face cu o structură care corespunde conceptului clasic de „urbs” – „oraș”.

Fenomenul istoric al „Dykyi Sad” depășește ideile tradiționale atât despre cultura Bilozerska în sine, cât și despre întreaga epocă a ultimei epoci a bronzului din sudul Ucrainei moderne. În multe privințe (cultură materială, economie, meșteșuguri, arhitectură), „Dykyi Sad” diferă de ideile care s-au dezvoltat în știință.

De asemenea, trebuie menționat că pe această suprafață nu au fost înregistrate urme ale atacului asupra fortificațiilor și ale distrugerii structurilor acesteia ca urmare a ostilităților. Acest fapt indică inovațiile militar-defensive ale locuitorilor așezării fortificate și puterea fortificațiilor „Dykyi Sad”.

Având în vedere toate faptele de mai sus, așezarea fortificată „Dykyi Sad” poate fi descrisă ca fiind cel mai izbitor fenomen dintre siturile arheologice ale ultimei epoci a bronzului din sudul Ucrainei. Fără îndoială, „Dykyi Sad” a fost un important centru strategic al epocii târzii a bronzului în zona de stepă dintre râurile Prut și Don.

Кирилл Горбенко, Александр Тригуб

История исследования укрепленного поселения (городища) эпохи поздней бронзы «Дикий Сад» (Николаев, Украина)

В статье публикуется история исследования укрепленного поселения (городища) эпохи поздней бронзы «Дикий Сад», расположенного в центре современного города Николаев (Николаевская область, Украина). Подводятся итоги 30 лет систематического раскопок археологического памятника. Авторы показывают динамику изменения представления о памятнике, раскрываются особенности планировки и строительства поселения, освещаются находки материальной культуры по различным категориям – керамика, изделия из камня, предметы из металла, костяные изделия.

Опираясь на весь комплекс артефактов укрепленного поселения (архитектурные сооружения, материальные и votивные вещи) можно утверждать, что Дикий Сад возник вследствие необходимости контроля за торговыми путями, которые соединяли север-юг, восток-запад ойкумены. То есть, в течение конца 13 – 10 веков до н.э. поселение выполняло роль экономического, культурного, религиозного и политического центра Юго-Восточной Европы, оставаясь единственным черноморским городом-портом времен легендарной Трои и Троянской войны в регионе степной полосы Северного Причерноморья, население которого поддерживало тесные контакты с окрестными территориями.

В период расцвета укрепленного поселения в пределах его территории формируется четкая система единой планировки и застройки: цитадель, охваченная рвом, пригород в полушарии внешнего рва, посад. Таким образом, мы имеем дело со структурой, которая соответствует классическому понятию «urbs» – «город».

Исторический феномен Дикого Сада выходит за пределы традиционных представлений как о самой белозерской культуре, так и о всей эпохе финальной бронзы на юге современной Украины. По многим показателям (материальная культура, хозяйство, ремесла, архитектура) Дикий Сад отличается от сложившихся в науке представлений.

Следует также отметить, что на поселении не зафиксированы следы штурма укреплений и разрушения его сооружений в результате военных действий. Данный факт указывает на военно-фортификационные новации жителей укрепленного поселения и мощь оборонительных сооружений Дикого Сада.

Учитывая все вышеизложенные факты, укрепленное поселение Дикий Сад можно охарактеризовать как наиболее яркое явление среди археологических памятников эпохи финальной бронзы южной Украины. Несомненно, Дикий Сад был важным стратегическим центром поздней бронзы в степной полосе междуречья Прута и Дона.

Introduction

In 2021, 30 years have passed since the beginning of systematic excavations of the Dykyi Sad, currently the most famous Final Bronze Age archaeological site of the Northern Black Sea region. The fortified settlement (hillfort)¹ is located on a flat plateau upon the confluence of the Pivdennyi Bug and the Ingul rivers, in the very historical center of the city of Mykolaiv (Ukraine). According to the settlement plan, the Dykyi Sad is built in the form of an oval, elongated along the South-East to North-West axis (Fig. 1).

The total area of the preserved territory is over 4 ha (Fig. 2). From the south, the settlement is

protected by Naberezhna street and a modern embankment that covered the drainage ditch, which was formed in the first half of the 20th century in the place of an ancient gully; from the north, it is protected by modern structures that partially destroyed the ancient cultural layer and the remains of an ancient ravine adapted by the inhabitants of the fortified settlement for defense needs (outer moat); from the west, the Dykyi Sad is protected by modern residential buildings, which obviously destroyed the cultural layer in its western part; from the east, a terraced slope steeping to the Ingul river forms the natural boundary (Fig. 2).

During its existence (according to the results of dating C14, the range is 1186-925 BCE, or 1186-1126±80 – 925-920±50 BCE [Gorbenko 2007, 9]) the Dykyi Sad was situated on a high foreland of the steep edge of the plateau left bank of the river.

1. In recent years, scientific disputes have been intensified about whether the Dykyi Sad is a fortified settlement or a hillfort (see, for example, about the first discussions [Otroshchenko 2008]). Since this archaeological site is not unequivocally defined as a hillfort, the authors will hereinafter use the less controversial term 'fortified settlement'.

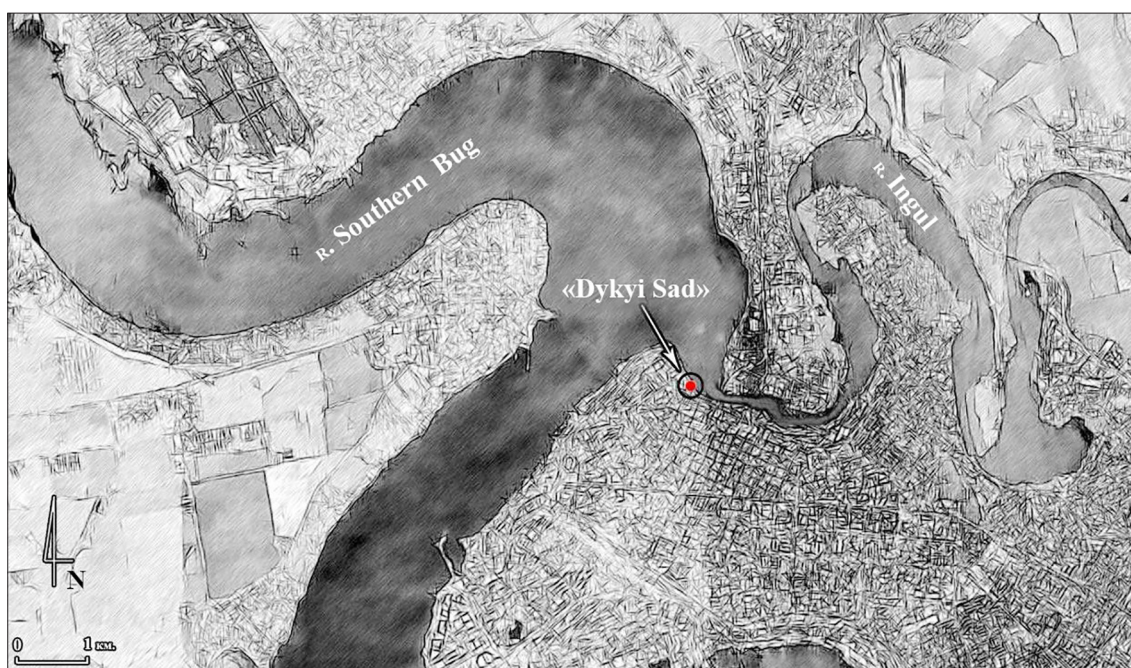


Fig. 1. Situation plan. Mykolaiv Peninsula. The historical part of the city of Mykolaiv. A confluence of the rivers Ingul and Pivdennyi Bug.

The foreland from the direction of the steppe was protected by gullies and two moats between them. According to its design features, the fortified settlement comprised a 'Tsitadel' (Citadel) surrounded by a moat, a 'Peredmistya' (Suburbs), and a 'Posad' (Posad) located behind the outer moat. Architectural structures were disposed in lines along the Ingul river and practically adjoined each other, forming a single architectural complex.

As of 2021, 7,700 m² of the Dykyi Sad area had been excavated (55 archaeological sites). Among them are 43 constructions with nearby yard areas; 3 utility pits outside the 'Peredmistya' constructions (two pits near construction № 1 and one pit near construction № 15); a moat around the 'Tsitadel' and a moat around the entire fortified settlement; a plot along the moat of the 'Tsitadel' with the remains of defensive fortifications; a ritual-cult ramp; a central plot of the 'Tsitadel', a utility and ritual plot opposite the moat of the 'Tsitadel', a utility plot near construction № 9, a central plot of the distant 'Peredmistya' – 21 pits for utility and ritual purposes, 1 pit behind the outer moat (Fig. 5). The pits were located on a flat plot between the houses, forming a kind of central utility area of the 'Peredmistya.' The shards of pottery, bones of animals and fish, as well as the remains of charred grains of common millet (*Panicum mili-*

aceum), barley, wheat, grape vine (*Vitis vinifera*), and charcoal were found in them.

In the proposed paper, the authors' purpose is to uncover the main stages of the fortified settlement Dykyi Sad study and analyze the main results obtained during the excavations. The authors are in an attempt to trace how the accumulation of archaeological materials turned into the qualitative characteristics of a fortified settlement, assessing its place among time parallel sites and its role in the historical development of the Circumpontic ecumene region.

In the furtherance of this goal, three main periods of study of the site are distinguished: pre-systemic (1927-1929, 1956), regular studies headed by Yuriy Grebennikov (1991-1998) and Kyrylo Gorbenko (1998 – to the present) (at the same time, there are alternative points of view on the periodization of the site study²).

1st period – 1927-1929, 1956 (pre-systemic)

The first period, which the authors conditionally called 'pre-systemic', covers the time from 1927 to 1991. Two small stages can be distinguished in it: 1927-1929 and 1956.

The first stage (1927-1929) is associated with the name of the famous Mykolaiv archaeologist

2. Kyrylo Gorbenko is of the opinion about 5 stages, but considers his point of view not final [Gorbenko 2016a, 21-22].



Fig. 2. Situation plan. Aerial view. The historical part of the city of Mykolaiv, the plateau at the intersection of Naberezhna and Artyleriiska streets.

and local history expert Feodosii Tymofiiiovych Kaminskyi (1888-1978), who could be named the discoverer of the fortified settlement. From 1923 to 1929 he headed Mykolaiv State Historical and Archaeological Museum, but at the same time collected and studied materials from ancient settlements located in the boundaries of the city of Mykolaiv, and studied the history and culture of his native land [Gorbenko 2017, 9].

F.T. Kaminskyi began to explore the territory of the Dykyi Sad urochyshe in 1926. In the report on the activities of Mykolaiv State Historical and Archaeological Museum for the 2nd quarter of 1926, Feodosii Tymofiiiovych wrote about an accidentally discovered burial (January 21, 1926), in which there were two dead men without any items. Kaminskyi dated that burial to the first half of the 19th century, noting that the burial was of no ar-

chaeological interest [Mykolaivs'kyj muzej 1924-1927, 4]. In addition to burials in 1926, nothing was discovered on the territory of the Dykyi Sad.

In August 1927, F.T. Kaminskyi drew attention to the fragments of ceramic dishes, and the bones of animals washed out by rains in the place of an ancient gully. According to the researcher's report, the first material evidence of an ancient settlement existence in the Dykyi Sad urochyshe was found on August 15, 1927. At the same time, the researcher attributed the first ceramics to archaic times, considering the settlement on the territory of the Dykyi Sad as part of the settlement system at the beginning of AD [Mykolaivs'kyj muzej 1924-1927, no paginations].

Following the historical toponymy, Feodosii Kaminskyi retained this name for a new archaeological site – the Dykyi Sad settlement. During 1927-1929 F.T. Kaminskyi and his colleagues (the

circle 'Friends of the Museum') performed surface sampling in the Dykyi Sad and collected fragments of pottery, lithic objects, and animal bones. The most significant finds of the first stage of research were a Sabatynivka type bronze dagger (Fig. 10, 17), a belt hook (Fig. 9, 14), and a bronze two-handed riveted cauldron (Fig. 10, 28) [Gorbinko 2017, 9]. A cauldron on a conical pallet (height with parts 0.74 m; body height 0.5 meters; capacity 86 liters) [Goshko, Agapov, Otroshhenko 2018, 96-104, fig. VII, 1-8] was found in the sheer drop of the eastern plateau slope (materials are exhibited in the exposition of Mykolaiv Museum of Local Lore).

Unfortunately, the surface sampling did not turn into excavations, because F. Kaminskyi and many of his entourage were arrested in 1929 as members of a fictitious anti-Soviet Ukrainian organization, the 'Union for the Liberation of Ukraine.' F. Kaminskyi was sentenced to 5 years in the camps and returned to Mykolaiv only after the death of Stalin [Trygub, Vovchuk 2018].

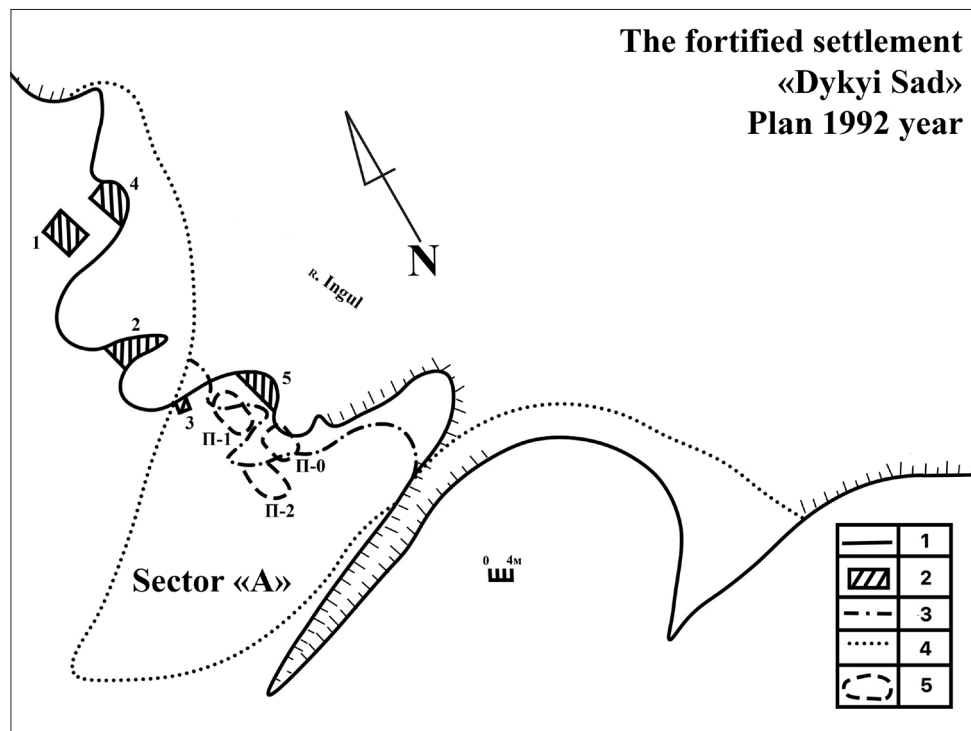


Fig. 3. Settlement plan 1956-1992. 1 – edge of the plateau (level 19.0 m) in 1956; 2 – digs in 1956; 3 – edge of the plateau (level 19.0 m) in 1992; 4 – territory covered with modern garbage; 5 – structures studied in 1991-1992.

Despite that, Kaminskyi and his colleagues from the 'Friends of the Museum' circle, in those remote and hard years, managed to take the first, and probably the most important step – to find a settlement of ancient people, collect the first assemblage of artifacts from a fortified settlement (38 depository items), and initiate measures for its preservation.

The second stage (1956) of the Dykyi Sad exploration is associated with the work of the Black Sea archaeological expedition of Taras Shevchenko National University of Kyiv in Mykolaiv oblast in 1956. The expedition was headed by Lazar Moiseiovych Slavin (1906-1971), the Head of the Department of Archeology, and the excavations of the Dykyi Sad were headed by Oleksandr Mykhailovych Maliovanyi (1921-2001).

Field work on the territory of the Dykyi Sad was carried out for about a month – from June 28 to July 24, 1956, with short breaks. The scale of field work was limited and was largely of a survey nature, and only partially of an excavation character. Based on the analysis of excavation materials, L.M. Slavin attributed the settlement to the era of Sabatynivka archaeological culture (the 16th – 13th century BCE).

According to the field documentation of the expedition, along the sheer drop of the eastern plateau slope on which the settlement was located, five digs were laid (today they are destroyed by natural erosion) (Fig. 3). In the information about the excavations, it was stated that little was left of the settlement, since, being built on the very edge of a high coastal sheer drop, for its most part, it slipped down and collapsed into the waters of the Ingul. In addition, modern buildings (military warehouse) largely have blocked access to the surviving remains of the settlement [Mal'ovanyj 1956; Malevanyj 1956].

During the excavations, a detachment headed by O.M. Maliovanyi failed to find full-fledged dwellings (semi-dugout or ground-based), however, indirect evidence showed the presence of remains of dwellings (stone rubble of a collapsed wall and stone foundations of the walls), especially in dig № 1 (Fig. 3), and to a lesser extent in digs № 4, 5. The researchers of the Dykyi Sad pointed out that in that settlement, as well as in other settlements of Sabatynivka type, dwellings had stone foundations, on which clay walls, interspersed with sporadic stones, were carried up. Those ground-based structures, apparently, were

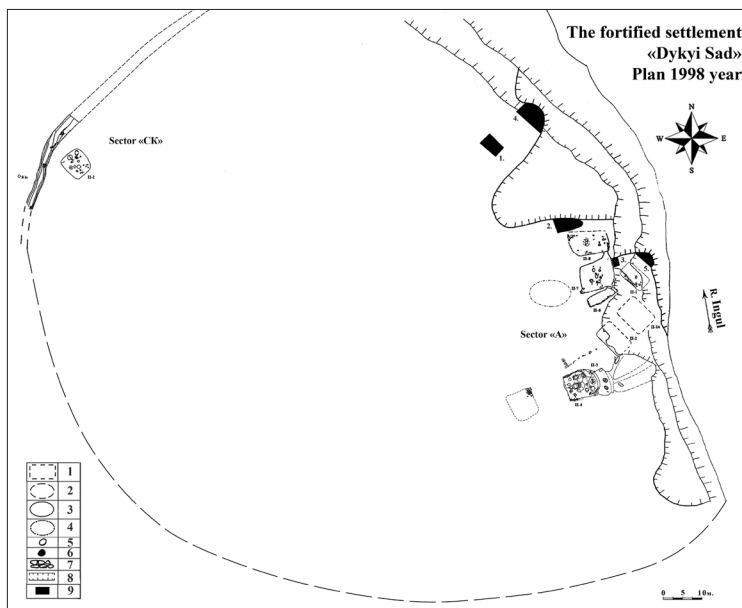


Fig. 4. Settlement plan 1998. 1 – boundaries of probable objects; 2 – boundaries of the fortified settlement; 3 – outlines of the structures; 4 – central plot; 5 – pits; 6 – hearths; 7 – masonry; 8 – moat; 9 – contours of excavations in 1956.

summer dwellings, as evidenced by the absence of hearths made of stone and clay in them.

Among the material objects in 1956, mainly ceramics were found (over 1000 fragments of pottery). The field documentation tells that a significant part of those dishes was completely devoid of ornament, which indicated that a series of dishes mostly used in the household prevailed there. At the site of the settlement, they succeeded to find quite a lot of pots decorated with molded rollers, some ones decorated with oblique cuts, indents made with the finger, hatched triangles, parallel lines, indents of a simple rope, rows of oblique indents, etc.

L. Slavin focused on the fact that the ceramics of the Dykyi Sad settlement had its closest analogies in Sabatynivka settlement, and was also very similar to the ceramic complexes of the settlement near the Bilozerka estuary.

In addition to pottery fragments, two small tetrahedral metal awls of relatively good preserva-

tion, a bone borer, as well as animal and fish bones, were found at the settlement.

Material artifacts originating from the Dykyi Sad settlement evidenced that the population that left it was mainly engaged in cattle breeding and fishing. L. Slavin concluded that there was no information to speak about agriculture, and that, apparently, it did not occupy a significant place in the economy there, as evidenced by the complete absence of agricultural tools. Based on those facts, L. Slavin and his colleagues dated the settlement of the Dykyi Sad to the Late Bronze Age, i.e. late 2nd – early 1st millennium BCE.

Thus, in 1956 the expedition headed by L.M. Slavin carried out, albeit fragmentary, but, nevertheless, the first excavations on the territory of the settlement Dykyi Sad. During the research, a significant assemblage of ancient artifacts (ceramics, bronze, and lithic objects) was gained, and an attempt was made to fill in the gaps in the region's history of the Late Bronze Age. But the general

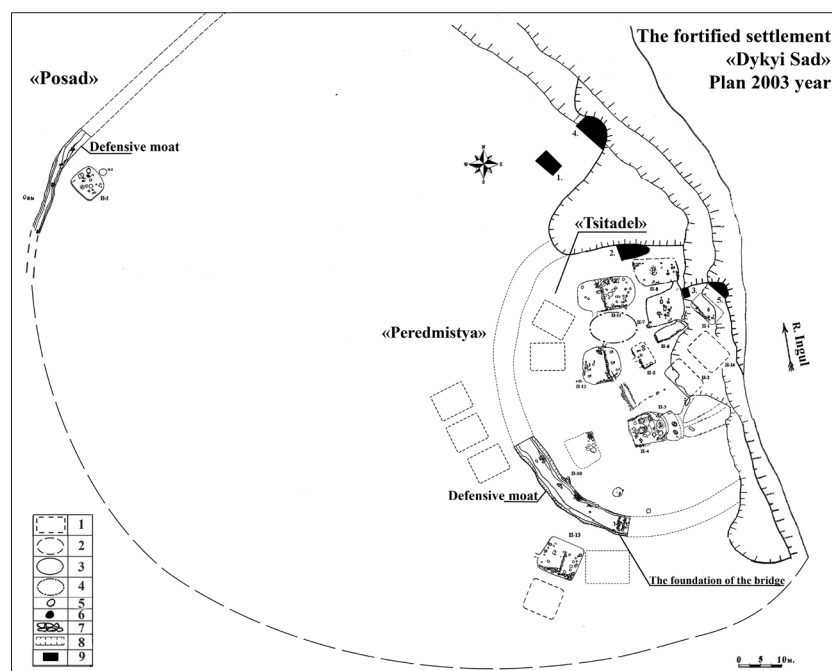


Fig. 5. Settlement plan 2003. 1 – boundaries of probable objects; 2 – boundaries of the fortified settlement; 3 – outlines of the structures; 4 – central plot; 5 – pits; 6 – hearths; 7 – masonry; 8 – moat; 9 – contours of excavations in 1956.

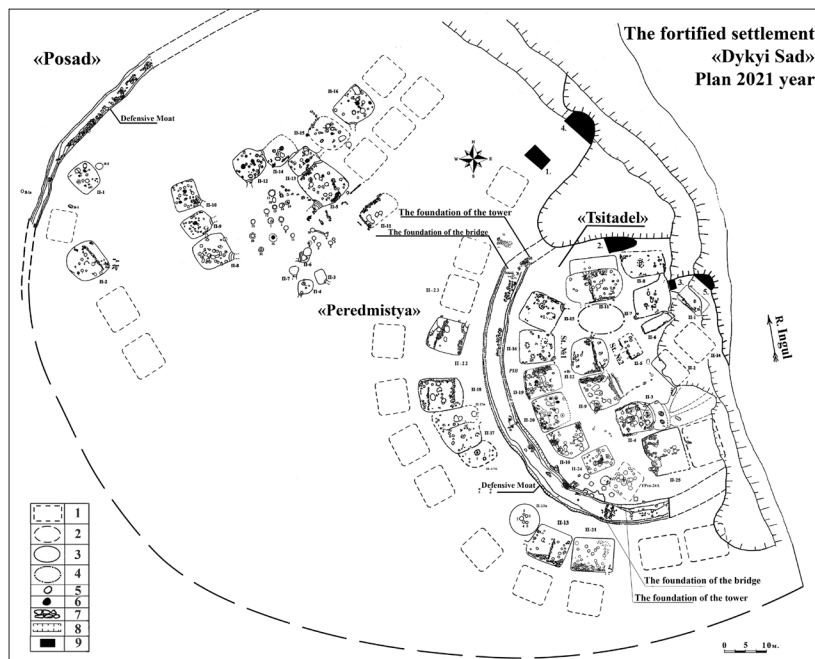


Fig. 6. Settlement plan 2021. 1 – boundaries of probable objects; 2 – boundaries of the fortified settlement; 3 – outlines of the structures; 4 – central plot; 5 – pits; 6 – hearths; 7 – masonry; 8 – moat; 9 – contours of excavations in 1956.

conclusion about the Dykyi Sad was disappointing – the settlement is of minor importance Sabatynivka's culture site, one of many in the Northern Black Sea region, moreover, almost completely destroyed due to natural and man-made impacts [Gorbenko 2013b].

It should be noted that in the second half of the 1950s, the collection of materials from the territory of the Dykyi Sad was resumed by Feodosii Kaminskyi, who returned to Mykolaiv. Those surface samplings (ceramic tableware, a bronze knife, and a small awl, animal bones, etc.) were the last studies on the territory of a fortified settlement during the first period. They added nothing new to the issue of the specificity of the site [Gorbenko 2018b, 8-9]. The Dykyi Sad has got a determinate reputation as a settlement of minor importance, almost completely destroyed by natural erosion.

2nd period – 1991-1998 (Yurii Grebennikov)

Since the beginning of the 1990s, the second period of the fortified settlement exploration began, and it was associated with the name of Yurii Spyridonovych Grebennikov (1947-2017), a famous Mykolaiv archaeologist, researcher of the Scythian period in the south of Ukraine. In

the late 1980s – early 1990s, he began to collect material on the territory of the Dykyi Sad, which appeared after the site was being eroded by rainwater from the storm drain. Thus, apart from ceramics and bones, a half-drilled stone axe, a single-edged bronze knife, and a stone grinder were found in the washed-out dwelling [Grebennikov 1991, 21].

The return of attention to the site occurred in 1991 when part of its territory was freed from the presence of a military base and permission to carry out the excavation was obtained from the military authorities. As a result, the territory of the settlement,

which later got the name 'Tsitadel', was laid out in squares and the squares along the sheer drop started to be excavated. There, two dwellings, located in the collapse zone, were studied (Fig. 3), where about 250 fragments of ceramics were found (of which about 20 were well preserved) – goblet-shaped and jar-shaped vessels, a deep plate, a large pot, frying pans (braziers), etc., a fragment of a bronze fish hook, and also the masonry of the ground-based wall was uncovered. The first year of excavations made Yu. Grebennikov doubt that the settlement belonged to the Sabatynivka culture, since the way of masonry and the location of dwellings were not typical for that culture [Grebennikov 1991, 21-25].

In 1992-1994, the excavation area of the site was increased (during that period, Oleksandr Trygub participated in the excavations, and in 1994 Kyrylo Gorbenko joined in). Primary attention was focused on the territory of the 'Tsitadel' (structures № 3 and № 4), and also structure № 1 and part of the 'Posad' outer moat (Fig. 4) were studied³. The concept of the site gradually changed. The new artifacts made it possible to reconsider the cultural affiliation of the fortified settlement (the Dykyi Sad began to be attributed to the Bilozerka archaeological culture), its structure, and nature. New residential, utility, and religious

3. Until 2003, the territory of the 'Tsitadel' was provisionally named 'excavation unit A', and 'Posad' – 'excavation unit CK'

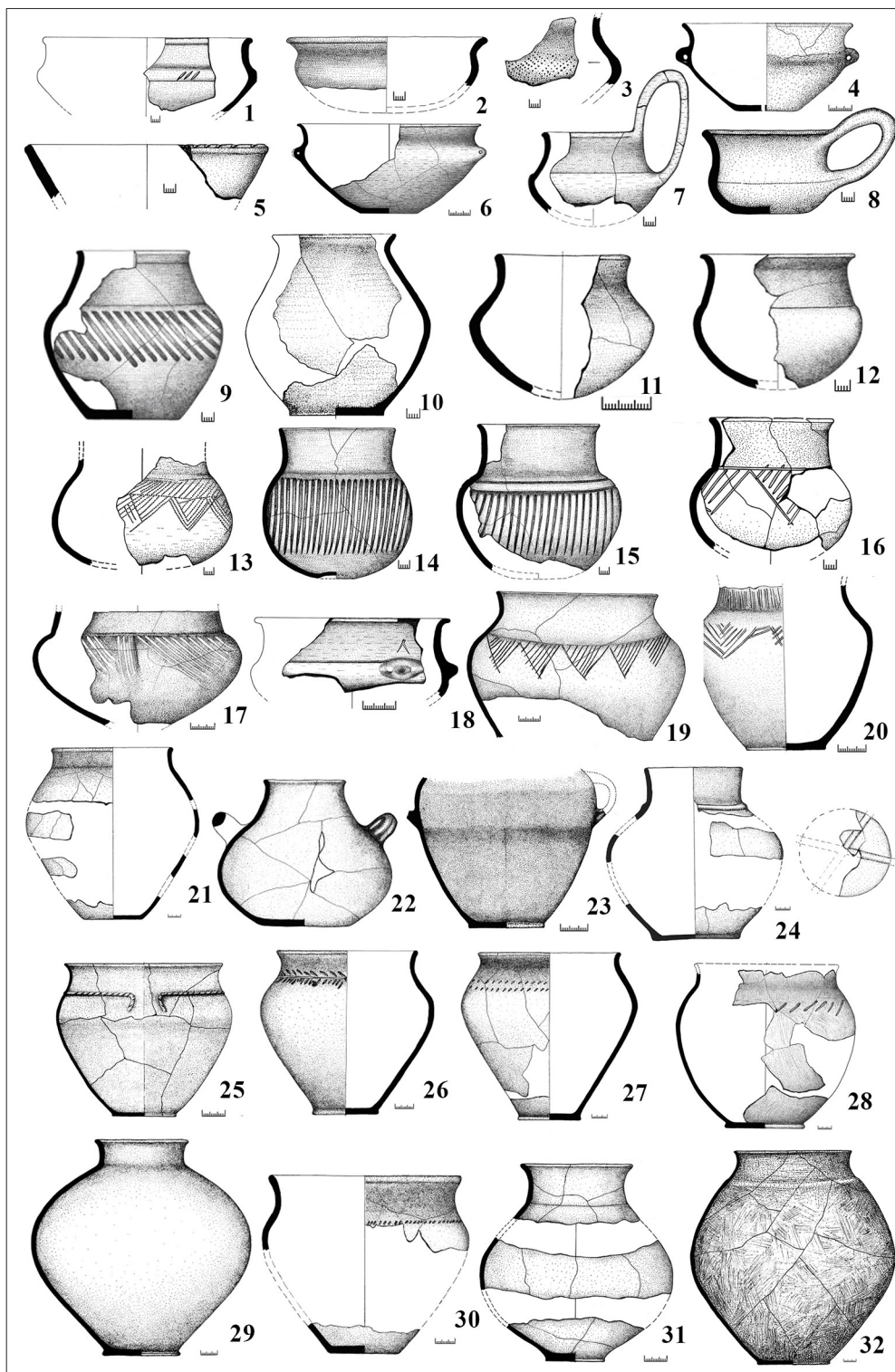


Fig. 7. Ceramic vessels ('Citadel' and moat). 1, 2 – deep plates; 3 – goblet wall with an ornament; 5 – deep plate-frying pan; 4, 6, 17, 18 – bowls; 7, 8 – bailers; 3, 11, 12, 13, 14, 15, 16 – goblets; 19, 20, 21, 24, 25, 26, 27, 28, 30 – pots; 9, 10 – goblet-shaped pots; 22, 23 – vessels with handles; 29, 31, 32 – large pots.

objects were found, and the assemblage of material objects (ceramic tableware, objects made of

bronze, bone, horn, and stone) was significantly enlarged and diversified.

The most interesting object of that period was the cult complex (structures № 3 and № 4). The 'Temple' was a room 8.5×6.3 m with rammed earth walls, in which there were 12 pits of various shapes, located in a certain system, without overlapping each other. Also, there were a large number of hearths, all the ashes from which, probably, were collected in certain pits. A tortoiseshell and some human bones were found in the central part of the room: a skull and jaw belonged to different individuals. Those finds, the arrangement of hearths and pits according to the points of solar movement, prompted Yu. Grebennikov to think that the construction was a temple with the practice of combining chthonic and solar cults [Grebennikov 1994]. The discovery in 1996 of another cult complex (II-7), where a fragment of a clearly recognizable stone phallus was found (Fig. 11, 12), evidenced the presence of a phallic cult [Grebennikov, Gorbenko 1996, 4] in the religious practices among the fortified settlement population (for details see [Grebennikov 2000; Gorbenko 1999; Kozlenko 2016]).

An analysis of the cult structures of the settlement allowed Yu. Grebennikov to conclude that at the turn of the 2nd and 1st millennium BCE, a system of rituals was formed among the local population and the first structures for a targeted cult purpose, associated with the worship of the phallus, the sun, the moon, and fire, appeared. In the settlement, the main rituals of the ancient man associated with the chthonic and solar cults were performed (ritual ramp, turtle burials, cult pits, and hearths); the cult of fertility (phallic symbols, ceramic loaves); the cult of ancestors (burials of human skulls without a lower jaw in ritual pits).

Also, rather non-standard finds were found in the structure № 4: a ceramic 'disk' with traces of a sign system resembling the linear letter 'Б' (Fig. 10, 1; see for more details [Kozlenko 2015; Gorbenko 2014a, 29, fig. 9]) and a ceramic 'incense cup' – an object with a complex profile in the form of a shallow saucer with a bottom diameter of 10 cm, a rim of 12 cm, and a height of 2.0 cm. The 'incense cup' is a single whole with a saucer of 2.0 cm height, a rim of 9.0 cm diameter (Fig. 10, 6). Yu. Grebennikov attributed this find to ritual and cult objects.

Expedition headed by Yu.S. Grebennikov studied 13 archaeological objects over seven years.

Among them – the northern boundary of the fortified settlement – a gutter, adapted by the inhabitants of the Dykyi Sad to defense needs; a utility pit for grain storage; 5 structures of different functional affiliation – residential and utility (excavation unit 'БК' № 1; excavation unit 'А' № 1, 2, 5, 14); 5 places of worship, which made up two ritual and cult centers of the fortified settlement (excavation unit 'А' № 3, 4, 6, 7, 8); ritual descent-ascent (ramp) [Grebennikov 1996].

The key finds of that period are the fragments of closed and open ceramic vessels. Ceramic complex is represented by the main forms associated with the Final Bronze Age. Among them, there are the following types of tableware: large earthenware pots, pots of various types, goblets, bowls, bailers, deep plates, frying pans, and braziers. Ornamental patterns are also diverse (incised lines, oval and nail indentations, rollers, vertical grooves, figured moldings, denticulated and rounded stamps) and specific to the archaeological cultures of the Black Sea ecumene (Fig. 7, 1, 2, 11, 20, 24, 26, 27, 30). The tableware was both locally produced and imported from Central and Western Europe.

The complex of metal produced items of those years is represented by bronze knives, daggers, saws, and a bracelet (Fig. 10, 10, 14, 18, 22).

Bone produced items belonged to the local types and most likely were made in the workshops of the fortified settlement. Bone and horn objects are represented by: 'skates' – items for moving on ice; blunt knives and shaving slickers – tools for processing leather; arrowhead; handles for attaching awls; knife, and spoon (Fig. 9, 1, 5, 10, 12, 15, 23).

For the first time, rigging tools were found – 'spikes', a device for cabling ropes (Fig. 9, 2, 3, 4, 6). This item is made of an animal horn and, most likely, is not a work item, but a ritual-cult (votive) one. Votive objects presuppose a certain cult, and such a cult, after all, is more peculiar to peoples whose basis of life is sea fishing.

Lithics found in the second period of excavations are represented by paint grinders-hammers, grinders, mealing stones, anvils, plummets, pestles, anthropomorphic votive objects (a flint stela, large limestone figurines of a stela, and a ritual ax) (Fig. 11, 2, 3, 9, 13, 14, 15, 16, 20-22, 23-25, 26-28).

Among the osteological materials, there are the bones of large and small cattle, horses, pigs, red deer, saiga, and wolverines.

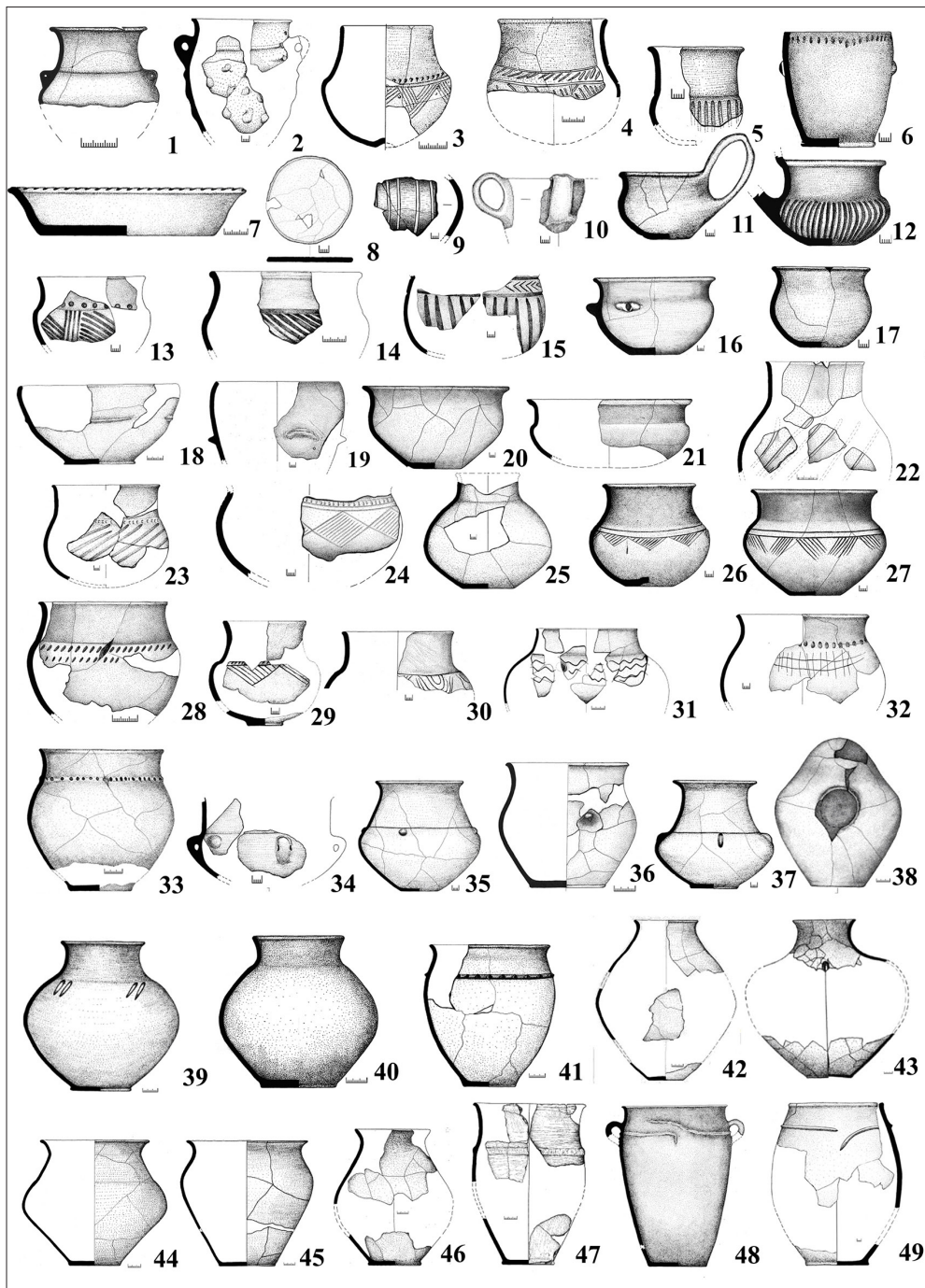


Fig. 8. Ceramic vessels ('Suburbs' and outer moat). 1, 3, 4, 5, 13, 14, 15, 17, 23 – goblets; 6 – jar-shaped pot; 7 – deep plate-frying pan; 8 – flat brazier; 9 – smoothed goblet wall with grooves; 16, 20 – bowls; 2, 22, 24, 25, 26, 27, 28, 29, 30, 34, 35, 36, 37 – goblet-shaped pots; 18, 19, 21 – deep plates; 10, 11, 12 – bailers; 31, 32, 33, 40, 41, 45, 47, 48, 49 – pots; 38 – urn; 39, 42, 43, 44, 46 – large pots.

Yu. Grebennikov unequivocally associated the settlement Dykyi Sad with the late culture of Bilozerka tribes. In the settlement's history, he singled out two periods (construction-chronological horizons) associated with the destruction of the set-

tlement due to burning and its subsequent rebuilding and final disappearance. The first was dated within the framework of Bilozerka culture, to the 11th – 9th century BCE, and the second – to the 9th – 8th century BCE, and overlapped with the Cim-

merian period in the Northern Black Sea region [Grebennikov 2000, 29].

Unfortunately, almost all archaeological seasons (except for 1991) were not funded. Excavations during that period were carried out mainly by the student of the Faculty of History of Mykolaiv State Pedagogical Institute having practical training, as well as members of the archaeological circle, established by Yu. Grebennikov at the Faculty. Although all that made excavations regular, but the amount of work was clearly insufficient to make a breakthrough in the study of the archaeological site.

3rd period – 1998-2021 (Kyrylo Gorbenko)

Since 1998, the modern (third) period of the exploration of the Dykyi Sad began. The expedition was headed by Kyrylo Volodymyrovych Gorbenko, who involved young archaeologists Oleksandr Smyrnov, Leonid Smyrnov, Oleh Trebukh, Denys Bondarenko, Roman Kozlenko, Volodymyr Kuzovkov, Dmytro Filatov, Oleksandra Apuneych, and others in the excavations.

During 1998-2003 the dire funding situation made it impossible to carry out large-scale excavations. The work was carried out by the students of the Faculty of History within the framework of archaeological practical training and student volunteers who were passionate about archeology. By 2003, 19 archaeological objects had already been studied – a gutter – the northern boundary of the fortified settlement, a utility pit, a ritual ramp, and 15 structures of various functional affiliations – residential, utility, and religious [Gorbenko, Grebennikov, Pankovs'kyj 2013]. They also started excavating defensive fortifications (Fig. 5).

Since 2003, full-scale excavations have been carried out on the territory of the Dykyi Sad, which have become the largest and most sensational in the entire previous history of the fortified settlement study (it became possible thanks

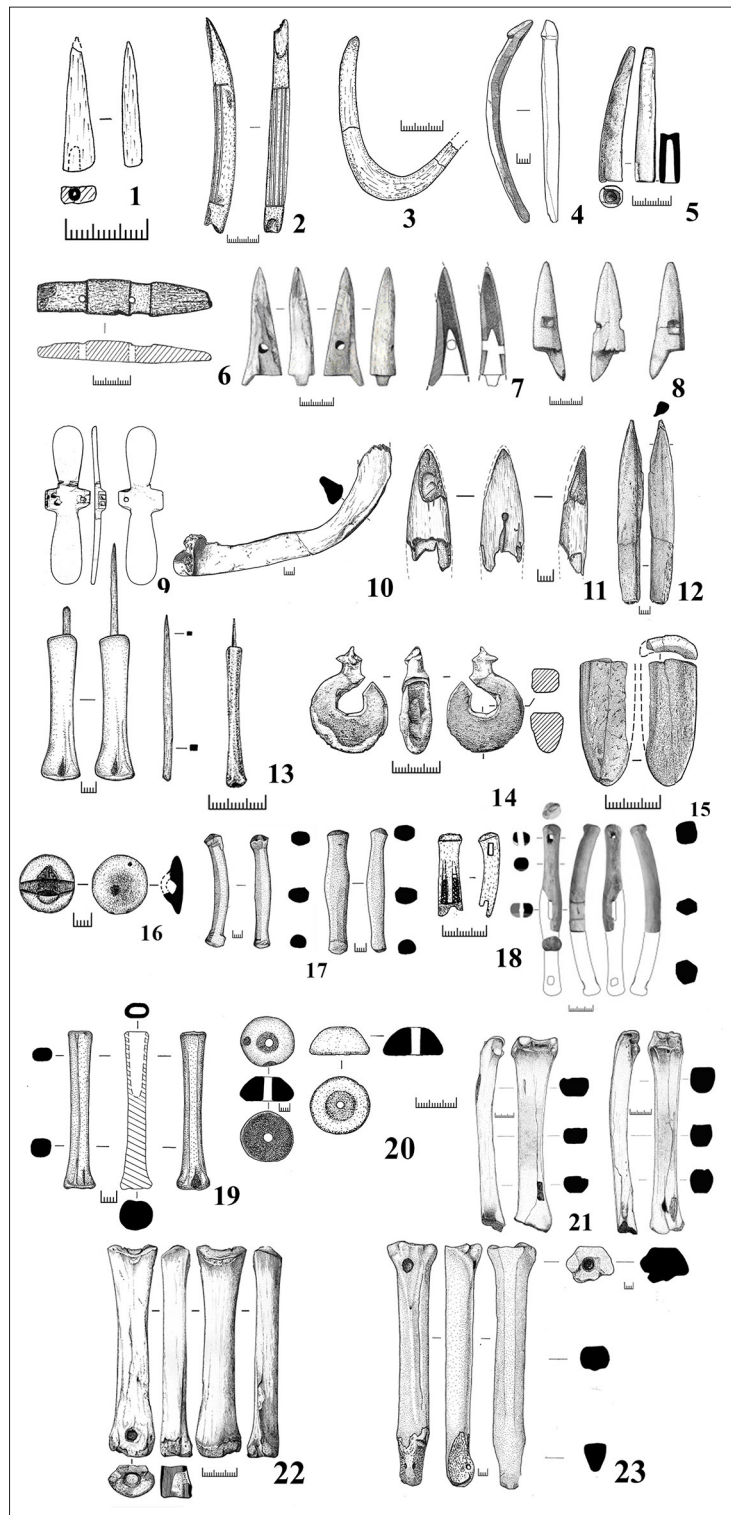


Fig. 9. Bone and horn of animals produced items. 1 – arrow; 2, 3, 4 – spikes; 5, 13, 19 – handles for awl; 6 – rigging tool for cabling; 7, 8, 11 – harpoon heads; 9 – plate for a strap bridle; 10 – blunt knife; 12 – knife; 14 – belt hook; 15 – spoon; 16 – button, 17 – blanks of cheekpieces; 18 – cheekpieces; 20 – spindle blocks; 21, 22, 23 – ‘skates’.

to the financing of the excavations by a private person, and since 2016 to 2019 – by the city authorities). New architectural structures (defensive ditches, utility complexes) were discovered, which made it possible to generalize the main material on the features of the ‘urban planning’ of the Final Bronze Age in the Northern Black Sea region [Gorbenko 2013a; Gorbenko 2016b; Gorbenko 2019b; Gorbenko, Pistrui 2020; Gorbenko 2020; Gorbenko 2021].

Completely new ancient objects were found (Fig. 7; 8; 9; 10; 11) – elements of a horse bridle (cheekpiece), casting molds, various bronze (celts), and bone objects (rigging tools). Complex analyzes of excavation materials (metal, stone, ceramics, and samples of paleobotany [Gorbenko, Pashkevych 2010]) were performed. New research had significantly changed the concept of the archaeological site and allowed not only to take a different look at the historical development of the Bug Steppe region, but also at the nature and cultural heritage of the entire Bilozerka culture of the Northern Black Sea region. It was the research of 2003-2014 that allowed raising the issue of its museification [Gorbenko 2014b].

A comparative analysis of the archaeological material allows asserting that the fortified settlement Dykyi Sad was founded in the late 13th – early 12th century and functioned until the end of the 10th century BCE. To clarify the absolute dating, an analysis of the processed bone and ceramic material was carried out in Kyiv Radiocarbon Laboratory (M.M. Kovaliukh). The obtained dating fit into the following chronological framework – $1186-1126\pm 80$ – $925-920\pm 50$ BCE. Thus, L. Slavin’s assumptions about the belonging of the site to Sabatynivka culture were completely discarded and the preliminary dating by Yu. Grebennikov, who mistakenly believed that there was a separate layer of the 9th – 8th century at the settlement, was clarified.

By 2021, 27 constructions on the territory of the ‘Tsitadel’ and the near ‘Peredmystya’ (three constructions have letter numbering – П-13a, П-17a and П-24a), and 16 constructions of the distant ‘Peredmystya’ had been studied (Fig. 6). Most of the deepened constructions played the role of dwellings. They were rectangular with oval corners, long axis stretched along the Ingul river. Their dimensions were from 4-6 to 7-8 m, depth

was 0.8-1.1 m. Ground-based and partially deepened structures were probably used by the inhabitants of the fortified settlement for utility purposes – cattle pens, workshops, utility warehouses (utility pit at the ‘Peredmystya’, a stone building near structure № 9, structures № 5, 11, 12 of the ‘Tsitadel’). In most of the structures, the remains of the stone foundations of the walls are preserved. The foundations of the walls were made of local limestone in one row, having from two to five courses with binding elements. By the 2018 season, it had become obvious that the buildings had a clear layout and K. Gorbenko marked assumed streets on the settlement plan.

One of the most interesting finds of the 2003-2004 season was the founding of a defensive moat with the foundation of the bridge (the second bridge was discovered in 2009). The foundations were built of large limestone slabs with binding elements and, almost in pristine condition, have been preserved in the southern and northern parts of the moat. In 2015, the foundations of defense towers were also found near the bridges. Thus, the defense fortifications of the settlement comprised a moat 5 meters wide and over 2.5 meters deep and a bulwark or clay-made wall built on a stone foundation. Overturning bridges (width 2 m, length 4 m, height 1.7 m) marked the entrance gates to the settlement from the north and south, which had defensive towers [Gorbenko 2019a, 20-21].

By 2021, the material collection of the fortified settlement had enlarged considerably. *Ceramic vessels* are massively represented – about 2,000 rims, over 1,000 bottoms, and about 15,000 walls, from which 200 with different ornaments, as well as over 100 large and medium whole vessels in parts of various shapes and types (Fig. 7; 8). The analysis of the ceramic assemblage shows that, on the one hand, it has genetic links with Sabatynivka ceramics, and, on the other hand – a strong influence of the cultures of the early Thracian Hallstatt (Babadag I) and Bilohrudivka and Chornolis-sia culture of the northern forest-steppe zone of Ukraine. In a cultural and chronological aspect, the ceramics of Dykyi Sad fortified settlement in general belongs to the post-Sabatynivka stage and Bilozerka culture (late 13th – mid 11th century BCE) [Gorbenko 2018a; Gorbenko 2019a].

The complex of *metal produced items* (Fig. 10, 7-28) includes 81 items (partially the complex was

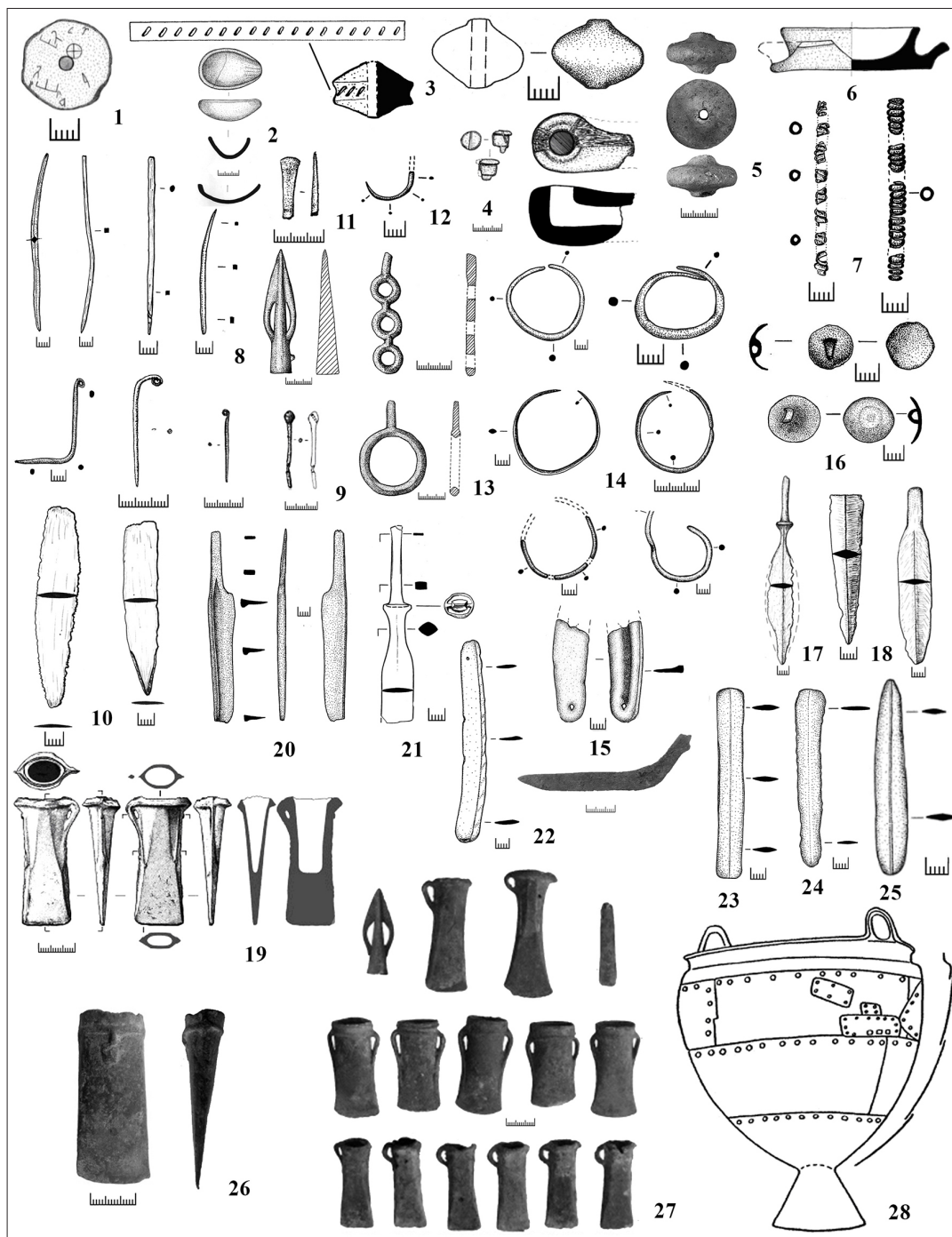


Fig. 10. Pottery and bronze produced items. 1-6: ceramic products. 7-28: bronze objects. 1 – ceramic disc with symbols; 2 – crucible, 3, 5 – spindle blocks; 4 – nozzle with bung; 6 – ‘incense cup’; 7 – spiral decorations; 8 – awls; 9 – fibulae; 10, 18, 20 – knives; 11 – small adze; 12 – fish hook; 13 – model of items from the casting mold; 14 – bracelets and earring; 15 – sickles; 16 – badges; 17, 21 – dagger; 19 – celt; 22, 23, 24, 25 – knife-saw blades; 26 – celt; 27 – hoard of bronze items (javelin head, knife-saw blade, celts); 28 – cauldron.

analyzed and covered in publications [Gorbenko, Goshko 2010; Gorbenko, Pankovskiy 2019]). These are weapons, utensils, and jewelry: daggers, knives, knife-saw blades, awls, fish hooks, a small adze,

hairpins, a large riveted cauldron, celts, a javelin head, earrings, sickles, bracelets, badges (buttons?), spiral decorations, and others. Finds of three stone casting molds are directly related to the bronze

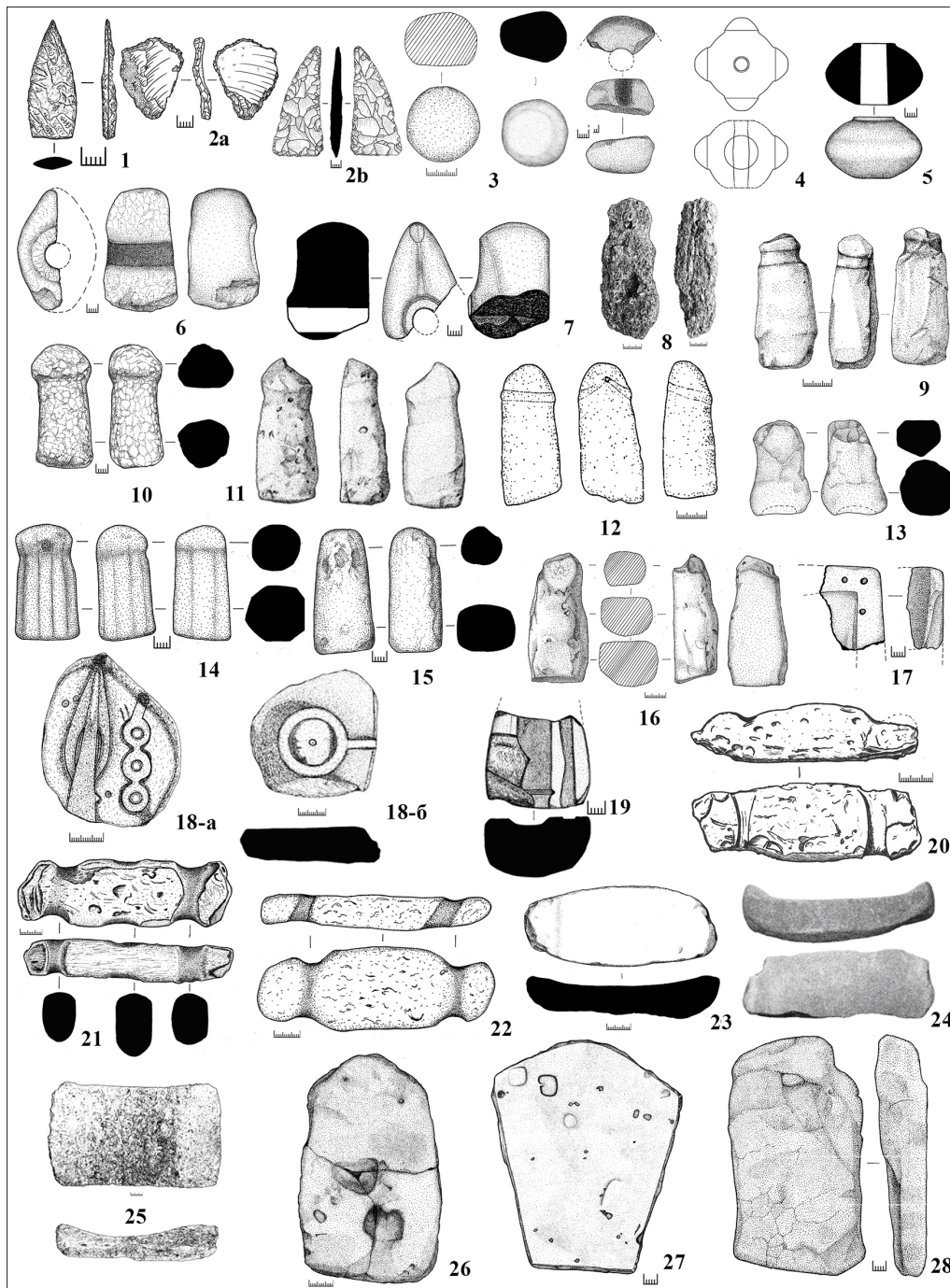


Fig. 11. Lithic and flint produced items. 1 – flint arrowhead; 2 – flint stela (a) and sickle (b); 3 – paint grinders; 4, 5 – maces; 6, 7 – drilled axes; 8 – limestone figurine of the female with traces of ocher; 9 – plummet; 10, 11, 12 – stone phalluses; 13, 16 – anthropomorphic figurines; 14, 15 – pestles; 17, 18, 19 – casting molds; 20, 21, 22 – large plummets or anchors; 23, 24 – grain grinders; 25 – mealing stone; 26, 27, 28 – anthropomorphic stelae.

foundry (double-sided for casting a bronze javelin head, a cheekpiece with three rings and a large ring for a horse bridle, and two single-sided with celts imprints) (Fig. 11, 17-19), a crucible, nozzles (slag, unidentifiable fragments of metal) (Fig. 10, 2, 4).

Lithic produced items are represented by over 250 items. Limestone, sandstone, quartzite, gneiss, granite, flint, basalt, marble, etc. served as raw materials for the production of lithic produced items. Lithic objects are represented by different func-

tional types. They can be preliminarily divided into three groups: a) utility (tools for agriculture, fishing, and crafts, primarily blacksmithing, weaving, and pottery), b) weapons and prestigious things, and c) ritual and cult items (Fig. 11) [Gorbenko 2012].

Among them there are tools for agriculture and grain processing (pestles, hoes, grain grinders); fishing equipment (weights for fishing nets, anchors for boats); craft tools (flint sickle, paint grinders, grinders, pestles for processing grain, paint and ores, grindstones (abrasives), spindle blocks, hammers, holder-up anvils for cold and hot metal working, casting molds, refining slabs for grinding paints, passive abrasives scrapers for leather processing, support ball bearings for rotating devices (drilling, turning) of vertical action; mining tools; weapons and prestige items (maces, battle axes, sling ammo, flint arrowheads, axes); ritual and cult items (anthropomorphic stelae and figurines, phalluses, ritual ax-hammer) [Gorbenko 2018b, 17].

Bone produced items (over 130 items) belong to local types and were most likely produced in the workshops of the fortified settlement. The entire production cycle is traced: from bone, horn-blank to the final produced item and the definition of the use of the certain item (cheekpiece, front bridle) – elements of a horse bridle, ‘skates’ – items for moving on the ice, blunt knives and shaving slickers – tools for processing leather, borers, handles for bronze awls, polishing tools made of hooves, spindle blocks, arrowheads, tools for fish processing, etc.) (Fig. 9). For the first time, a rigging tool was found – ‘spikes’, which we have already mentioned above.

The performed analysis made it possible to identify the main types of craft productions according to the forms of activity. One of the main ones is bone processing, and a large number of not only final produced items but also blanks and items with manufacturing defects were found. Woodworking was a very important production: numerous stone balls for flat horizontal bearings, handwheel counterbalances for vertical wood-turning lathes, grinders-hammers for metal processing, or possibly for grinding paints, were found. Actually, such craft activity had been known in our region since the previous times (Sabatynivka culture), but the appearance of new types of produced items – cheekpieces, a plate for

a bellyband, a belt hook, rigging tools (spikes and a plate for cabling ropes) hence, is associated with introducing innovations in production techniques (Fig. 9, 2-4, 6, 9, 14, 17, 18). The production of cheekpieces arose, undoubtedly, on a local basis. This is evidenced by a fully studied production process: from the horn-blank to the finished produced item.

The complex of material culture, accumulated over all stages of the exploration of the fortified settlement, allows us to conclude that these materials are syncretic in their nature. Undoubtedly, the material culture of the inhabitants of the Dykyi Sad was based on local traditions genetically related to Sabatynivka tribes, but at the same time, cultural influences and borrowings from neighboring time parallel cultures of the western, northern, and southern ecumene centers of the Final Bronze Age could be clearly traced.

Conclusion

Today, 30 years after the beginning of systematic excavations, based on the entire complex of artifacts of the fortified settlement (architectural structures, material and votive items), it may be affirmed that the Dykyi Sad was laid out because of the need to control trade routes that connected the north-south and east-west of the ecumene. Thus, from the 12th till the 10th century BCE the settlement fulfilled the function of the economic, cultural, religious, and political center of South-Eastern Europe, remaining the only Black Sea port settlement of the times of the legendary Troy and the Trojan War in the region of the steppe area of the Northern Black Sea region, and which population maintained a close relationship with the surrounding territories. Undoubtedly, a tremendous credit in obtaining these important results goes precisely to the researchers of the first half of the 20th century, who discovered the site and laid the foundations for further research. Their contribution to the study of the history and culture of the fortified settlement of Dykyi Sad is enormous.

It can be argued that during the flourishing of the fortified settlement, a clear system of unified settlement planning and development was formed within its territory: a citadel surrounded by a moat, suburbs in the hemisphere of the outer moat, and posad. Thus, we are dealing with a structure that corresponds to the classical concept

of 'urbs' – 'city'.

A similar situation is well known at the archaeological sites of Eurasia of the 2nd millennium BCE, which indicates the awareness of the population of the Dykyi Sad about a variety of traditions and proves the existence of contacts between the population of the Steppe Bug region and the regions of the Circumpontic ecumene in the late 2nd – early 1st millennium BCE. Based on the entire complex of finds, it can be argued that the Dykyi Sad arose as a result of the need to control both land and water trade routes. Practically speaking, the settlement was the northernmost point of the Black Sea route, and its inhabitants controlled a very important transport hub in the form of river crossing sites and a convenient harbor. Perhaps, in this place, transshipment was carried out from sea to river vessels with movement to the Bug rapids, where it was more convenient to access the Bug-Dniester interstream area in the north-western (Baltic and Central European) direction. The entire route from the Pivdennyi Bug to the upper reaches of the Zachidnyi Bug and the Yablunytzia Pass did not have any

river crossing, and was the shortest.

It should be noted that the historical phenomenon of the Dykyi Sad goes far beyond the traditional perception of both Bilozerka culture itself and the entire era of the Final Bronze Age in the south of modern Ukraine. In many respects (material culture, economy, crafts, architecture), the Dykyi Sad differs from the concepts that have been developed in science so far.

In addition, it should be mentioned that no traces of the combat assaults on the fortifications and any destruction of its structures as a result of hostilities have been found at the settlement. This fact indicates the military-fortification innovations of the inhabitants of the fortified settlement and the strong fortifications of the Dykyi Sad.

Given all the above facts, the fortified settlement of Dykyi Sad can be described as the most striking phenomenon among the archaeological sites of the final Bronze Age in the south of Ukraine. Undoubtedly, the Dykyi Sad was an important strategic center of the Final Bronze Age in the steppe zone between the Prut and Don rivers.

Bibliography

- Gorbenko 1999:** K.V. Gorbenko, Do pytannja pro rytual'no-kul'tovu praktyku naselennja Stepovogo Pobuzhzhja v epohu final'noi bronzy (za materialamy rozkopok poselennja «Dykyj Sad»). Zbirnyk naukovykh prac' NaUKMA. Mykolajivs'ka filija 4, 1999, 11-13 // K.B. Горбенко, До питання про ритуально-культурну практику населення Степового Побужжя в епоху фінальної бронзи (за матеріалами розкопок поселення «Дикий Сад»). Збірник наукових праць НАУКМА. Миколаївська філія 4, 1999, 11-13.
- Gorbenko 2007:** K.V. Gorbenko, Gorodyshhe «Dykyj Sad» u XIII-IX st. do n.e. Eminak 1 (1), 2007, 7-14 // K.B. Горбенко, Городище «Дикий Сад» у XIII-IX ст. до н.е. Емінак 1 (1), 2007, 7-14.
- Gorbenko 2012:** K.V. Gorbenko, Kamjani predmety z kolekcii artefaktiv gorodyshha Dykyj Sad. Naukovyj visnyk Mykolajivs'kogo derzhavnogo universytetu imeni V.O. Suhomlyns'kogo 3.33 (Istorychni nauky), 2012, 10-30 // K.B. Горбенко, Кам'яні предмети з колекції артефактів городища Дикий Сад. Науковий вісник Миколаївського державного університету імені В.О. Сухомлинського 3.33 (Історичні науки), 2012, 10-30.
- Gorbenko 2013a:** K.V. Gorbenko, Fortifikatsionnye sooruzheniya gorodishcha Dikiy Sad. Naukovyj visnyk Mykolajivs'kogo derzhavnogo universytetu imeni V.O. Suhomlyns'kogo 3.35 (Istorychni nauky), 2013, 28-34 // K.B. Горбенко, Фортификационные сооружения городища Дикий Сад. Науковий вісник Миколаївського державного університету імені В.О. Сухомлинського 3.35 (Історичні науки), 2013, 28-34.
- Gorbenko 2013b:** K.V. Gorbenko, Lazar Mojsejovych Slavin ta pochatok rozkopok gorodyshha Dykyj Sad. In: M.M. Shytyuk (gol. red.) Istorychni midrashi Pivnichnogo Prychornomorja: Materialy II Mizhnarodnoi naukovopraktychnoi konferencii. (Mykolaiv 2013), 83-95 // K.B. Горбенко, Лазар Мойсейович Славін та початок розкопок городища Дикий Сад. В: М.М. Шитюк (гол. ред.). Історичні мідраші Північного Причорномор'я: Матеріали II Міжнародної науково-практичної конференції. (Миколаїв 2013), 83-95.
- Gorbenko 2014a:** K. Gorbenko, Novi arheologichni doslidzhennja gorodyshha Dykyj Sad. Eminak 3-4 (9), 2014, 15-29 // K. Горбенко, Нові археологічні дослідження городища Дикий Сад. Емінак 3-4 (9), 2014, 15-29.
- Gorbenko 2014b:** K.V. Gorbenko, Rozkopky gorodyshha «Dykyj Sad» i stvorenja arheologichnoho muzeju pid

vidkrytym небом. Eminak 1-2 (8), 2014, 5-12 // К.В. Горбенко, Розкопки городища «Дикий Сад» і створення археологічного музею під відкритим небом. Емінак 1-2 (8), 2014, 5-12.

Gorbenko 2016a: K. Gorbenko, Osnovnye aspekty material'noy kul'tury gorodishcha Dikiy Sad. Eminak 4 (16), 2016, 19-32 // К. Горбенко, Основные аспекты материальной культуры городища Дикий Сад. Емінак 4 (16), 2016, 19-32.

Gorbenko 2016b: K. Gorbenko, Zhytlovo-gospodars'kyj kompleks «cytadelі» gorodyshha Dykyj Sad. Eminak 1 (13), T. 1, 2016, 5-15 // К. Горбенко, Житлово-господарський комплекс «цитаделі» городища Дикий Сад. Емінак 1 (13), T. 1, 2016, 5-15.

Gorbenko 2017: K. Gorbenko, Nachal'nyy etap arkhеologicheskikh issledovaniy gorodishcha Dikiy Sad. Eminak 3 (19), T. 2, 2017, 9-25 // К. Горбенко, Начальный этап археологических исследований городища Дикий Сад. Емінак 3 (19), T. 2, 2017, 9-25.

Gorbenko 2018a: K. Gorbenko, Posud diljanky «Cytadel'» gorodyshha Dykyj Sad. Arheologia 4, 2018, 28-46 // К. Горбенко, Посуд ділянки «Цитадель» городища Дикий Сад. Археологія 4, 2018, 28-46.

Gorbenko 2018b: K.V. Gorbenko, Ukriplene poselennja (gorodyshhe) epochy final'noi bronzy Dykyj Sad u misti Mykolajevi. Krajeznavstvo 1 (102), 2018, 6-20 // К.В. Горбенко, Укріплене поселення (городище) епохи фінальної бронзи Дикий Сад у місті Миколаєві. Краєзнавство 1 (102), 2018, 6-20.

Gorbenko 2019a: K. Gorbenko, Posud z rovu diljanky «Cytadel'» gorodyshha Dykyj Sad. Arheologia 2, 2019, 19-39 // К. Горбенко, Посуд з рову ділянки «Цитадель» городища Дикий Сад. Археологія 2, 2019, 19-39.

Gorbenko 2019b: K. Gorbenko, Struktura ta harakter prymishhennja № 21 gorodyshha Dykyj Sad. Eminak 1 (25), 2019, 9-29 // К. Горбенко, Структура та характер приміщення № 21 городища Дикий Сад. Емінак 1 (25), 2019, 9-29.

Gorbenko 2020: K. Gorbenko, Zalyshky budivel'nyh sporud «cytadelі» gorodyshha Dykyj Sad. Starozhytnosti Lu-komor'ja 1 (1), 2020, 5-44 // К. Горбенко, Залишки будівельних споруд «цитаделі» городища Дикий Сад. Старожитності Лукомор'я 1 (1), 2020, 5-44.

Gorbenko 2021: K. Gorbenko, Budivel'ni sporudy pivdennoi chastyny «cytadelі» Dykyj Sad. Eminak 1 (33), 2021, 36-66 // К. Горбенко, Будівельні споруди південної частини «цитаделі» Дикий Сад. Емінак 1 (33), 2021, 36-66.

Gorbenko, Goshko 2010: K.V. Gorbenko, T.Ju. Goshko, Metalevi vyroby z poselennja Dykyj Sad. Arheologia 1, 2010, 97-111 // К.В. Горбенко, Т.Ю. Гошко, Металеві вироби з поселення Дикий Сад. Археологія 1, 2010, 97-111.

Gorbenko, Grebennikov, Pankovs'kyj 2013: K.V. Gorbenko, Ju.S. Grebennikov, V.B. Pankovs'kyj, Rozkopky ukri-plenogo poselennja «Dykyj Sad» u 2004 r. Arheologichni doslidzhennja v Ukraini 2003-2004 rr. 7, 2005, 100-104 // К.В. Горбенко, Ю.С. Гребенников, В.Б. Панковський, Розкопки укріпленого поселення «Дикий Сад» у 2004 р. Археологічні дослідження в Україні 2003-2004 рр. 7, 2005, 100-104.

Gorbenko, Pankovskiy 2019: K. Gorbenko, V. Pankovskiy, Klad bronzovykh izdeliy iz ukreplennogo poseleniya Dikiy Sad. Stratum plus 2, 2019, 121-160 // К. Горбенко, В. Панковский, Клад бронзовых изделий из укрепленного поселения Дикий Сад. Stratum plus 2, 2019, 121-160.

Gorbenko, Pashkevych 2010: K.V. Gorbenko, G.O. Pashkevych, Paleobotanichni doslidzhennja na terytorii gorodyshha Dykyj Sad. Eminak 1-4 (5), 2010, 5-19 // К.В. Горбенко, Г.О. Пашкевич, Палеоботаничні дослідження на території городища Дикий Сад. Емінак 1-4 (5), 2010, 5-19.

Gorbenko, Pistruil 2020: K. Gorbenko, I. Pistruil, Prymishhennja № 25 gorodyshha Dykyj Sad. Eminak 1 (29), 2020, 324-341 // К. Горбенко, І. Піструїл, Приміщення № 25 городища Дикий Сад. Емінак 1 (29), 2020, 324-341.

Goshko, Agapov, Otroshhenko 2018: T.Ju. Goshko, S.O. Agapov, V.V. Otroshhenko. Metalevi kazany z Velykogo Stepu za doby rіzn'oi bronzy (Kyiv 2018) // Т.Ю. Гошко, С.О. Агапов, В.В. Отрощенко, Металеві казани з Великого Степу за доби різної бронзи (Київ 2018).

Grebennikov 1991: Yu.S. Grebennikov, Otchet o raskopkakh poseleniya «Dikiy Sad» v 1991 g. v g. Nikolaeve. Nauchnyy arkhiv Instituta arkhеologii NAN Ukrainy, Fe. 1991/1161, № 24738 // Ю.С. Гребенников, Отчет о раскопках поселения «Дикий Сад» в 1991 г. в г. Николаеве. Научный архив Института археологии НАН Украины, Fe. 1991/1161, № 24738.

Grebennikov 1994: Yu.S. Grebennikov, Kul'tovoe pomeshchenie na poselenii «Dikiy Sad». Drevnee Prichernomor'e. Kratkie soobshcheniya Odesskogo Arkheologicheskogo Obshchestva. (Odessa 1994), 26-29 // Ю.С. Гребенников, Культурное помещение на поселении «Дикий Сад». Древнее Причерноморье. Краткие сообщения Одесского Археологического Общества (Одесса 1994), 26-29.

Grebennikov 1996: U. Grebennikov, Connections of the steppe's Southern Bug river region of the northern coasts of the Black Sea with the eastern Hallstatt region. In: The Thracian world at the crossroads of civilizations (Bucharest 1996), 393-394.

Grebennikov 2000: Yu.S. Grebennikov, K voprosu o frako-kimmeriyskikh svyazyakh. Arheologichni doslidzhennja v Ukraini v 1994-1996 rokah. (Kyiv 2000), 29-30 // Ю.С. Гребенников, К вопросу о фрако-киммерийских связях. Археологічні дослідження в Україні в 1994-1996 роках. (Київ 2000), 29-30.

Grebennikov, Gorbenko 1996: Yu.S. Grebennikov, K.V. Gorbenko, Otchet o raskopkakh poseleniya «Dikiy Sad» v g. Nikolaeve za 1996 g. Nauchnyy arkhiv Instituta arkheologii NAN Ukrainy, Fe. 1996/40, № 26059 // Ю.С. Гребенников, К.В. Горбенко, Отчет о раскопках поселения «Дикий Сад» в г. Николаеве за 1996 г. Научный архив Института археологии НАН Украины, Ф.е. 1996/40, № 26059.

Kozlenko 2015: R.O. Kozlenko, Znaky liniynoi pysemnosti na keramichnomu kruzhku z gorodyshha «Dykyj Sad». In: Problemy vyvchennja ta ohorony pamjatok pervisnogo mystectva pivdnja Jevropy (kamjanij vik – epoha bronzy). (Zaporizhzhja 2015), 42-47 // Р.О. Козленко, Знаки лінійної писемності на керамічному кружку з городища «Дикий Сад». В: Проблеми вивчення та охорони пам'яток первісного мистецтва півдня Європи (кам'яний вік – епоха бронзи). (Запоріжжя 2015), 42-47.

Kozlenko 2016: R.A. Kozlenko, Ritual'naya praktika naseleniya gorodishcha Dikiy Sad. In: Vneshnie i vnutrennie svyazi stepnykh (skotovodcheskikh) kul'tur Vostochnoy Evropy v eneolite i bronzovom veke (V-II tys. do n.e). Kruglyy stol, posvyashchenny 80-letiyu so dnya rozhdeniya S.N. Bratchenko. (Sankt-Peterburg 2016), 122-126 // Р.А. Козленко, Ритуальная практика населения городища Дикий Сад. В: Внешние и внутренние связи степных (скотоводческих) культур Восточной Европы в энеолите и бронзовом веке (V-II тыс. до н.э). Круглый стол, посвященный 80-летию со дня рождения С.Н. Братченко. (Санкт-Петербург 2016), 122-126.

Maľovanyj 1956: O.M. Maľovanyj, Pol'ovuj shhodennyk. Nauchnyy arkhiv Instituta arkheologii NAN Ukrainy, Fe. 1956/10a, № 2802 // О.М. Мальований, Польовий щоденник. Научный архив Института археологии НАН Украины, Ф.е. 1956/10a, № 2802.

Malevanyj 1956: A.M. Malevanyj, Raskopki Prichernomorskoj arkheologicheskoy ekspeditsii KGU v 1956 g. Nauchnyy arkhiv Instituta arkheologii NAN Ukrainy, Fe. 1956/10a, № 2801 // А.М. Малеваний, Раскопки Причерноморской археологической экспедиции КГУ в 1956 г. Научный архив Института археологии НАН Украины, Ф.е. 1956/10a, № 2801.

Mykolaivs'kyj muzej 1924-1927: Mykolaivs'kyj muzej. Zvity za 1924-1927 rr. Nauchnyy arkhiv Instituta arkheologii NAN Ukrainy, F. VUAK, D. 116/47 // Миколаївський музей. Звіти за 1924-1927 рр. Научный архив Института археологии НАН Украины, Ф. ВУАК, Д. 116/47.

Otroshchenko 2008: V. Otroshchenko, Ukriplene poselennja «Dykyj Sad» u systemi pamjatok bilozers'koi kul'tury. Eminak 1-4 (3), 2008, 5-10 // В. Отрощенко, Укріплене поселення «Дикий Сад» у системі пам'яток білозерської культури. Емінак 1-4 (3), 2008, 5-10.

Trygub, Vovchuk 2018: A. Trygub, L. Vovchuk, «Poslednee delo» Feodosiya Kaminskogo. In: Forum Olbicum II: Pamjati V.V. Krapivinoi (do 150-richchja doslidzhennja Ol'vii). (Mykolaiv 2018), 37-38 // А. Тригуб, Л. Вовчук, «Последнее дело» Феодосия Каминского. В: Forum Olbicum II: Пам'яті В.В. Крапівіної (до 150-річчя дослідження Ольвії). (Миколаїв 2018), 37-38.

Kyrylo Gorbenko, senior lecturer, V.O. Sukhomlynskyi Mykolaiv National University, Nikolska st., 24, 54030, Mykolaiv, Ukraine, e-mail: dikiyasad1@gmail.com

Oleksandr Trygub, dr. in history, prof., Petro Mohyla Black Sea National University, 68 Desantnykiv st., 10, 54003, Mykolaiv, Ukraine, e-mail: alextrigub@ukr.net