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Sviatoslav TERSKYI

PhD hab. (History), Professor of the Academic Department of History, Museum Studies and Cultural Heritage Lviv Polytechnic National University, 12 Bandera Street, Lviv, Ukraine, postal code 79013; researcher at the Lviv Historical Museum (tersky@ukr.net)

ORCID: 0000-0003-0177-8087

Researcher ID: F-8617-2018

Iryna ZINKIV

PhD hab. (Art Criticism), Professor of the Academic Department of Music Theory Lviv National Music Academy named after M. Lysenko, 5 Nyzhankivsky Street, Lviv, Ukraine, postal code 79005 (i.zinkiv@gmail.com)

ORCID: 0000-0002-0406-3370

Researcher ID: AAD-1893-2021

Святослав ТЕРСЬКИЙ

доктор історичних наук, професор кафедри історії, музеєзнавства і культурної спадщини Національного університету “Львівська політехніка”, вул. С. Бандери, 12, м. Львів, Україна, індекс 79013; науковий працівник Львівського історичного музею (tersky@ukr.net)

Ірина ЗІНКІВ

доктор мистецтвознавства, професор кафедри теорії музики Львівської національної музичної академії ім. М. Лисенка, вул. О. Нижанківського, 5, м. Львів, Україна, індекс 79005 (i.zinkiv@gmail.com)

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**ARCHEOLOGICAL MUSICAL INSTRUMENTS FROM THE TERRITORY
OF GALICIA-VOLHYNIA STATE AS PART OF SLAVIC INSTRUMENTS
OF THE Xth – the XIVth CENTURIES**

Abstract. *The discoveries of musical nature occupy a prominent place among the numerous nomenclature of medieval artifacts of the Galicia-Volhynia state period discovered during archeological excavations of its chronicle centers (Halych, Volodymyr, Zvenyhorod, Peresopnytsia, Dorohobuzh, etc.). The study purpose – to study archeological artifacts found in the historical lands of the Galicia-Volhynia state, identified by archeologists and instrumentalists as musical instruments, as well as to introduce into scientific circulation those artifacts that received incorrect nominations in archeological works or appear in archeological publications as items of “unspecified origin”. The methodology is the first ever attempt to combine archeological and musicological, in particular organological*

methods of the medieval musical instruments study (according to the international Hornbostel-Sachs classification). The proposed methodology can be applied to the study of medieval musical instruments of the Slavic world. **The scientific novelty.** The paper initiates a joint archeological and musicological study of medieval musical instruments found in the historical lands of the Galicia-Volhynia state. The considered archeological musical instruments of different types showed their existence in the Galicia-Volhynia state developed in a common stream with the all-Slavic musical and instrumental culture of the European Middle Ages. In the future, the authors plan to work on developing a Catalog of medieval musical instruments of Kievan Rus and Galicia-Volhynia state, which will be equally significant for both archeologists and representatives of historical organology (archeomusicology). **The Conclusions.** Paper research results are of methodological significance and will serve as the basis for correct identification by Ukrainian archeologists of musical artifacts from the musical and instrumental culture of medieval Ukraine.

Key words: musical archeology (archeomusicology), strings, percussion, wind musical instruments, Galicia-Volhynia state, Slavic world of medieval Europe.

АРХЕОЛОГІЧНІ МУЗИЧНІ ІНСТРУМЕНТИ З ТЕРИТОРІЇ ГАЛИЦЬКО-ВОЛИНСЬКОЇ ДЕРЖАВИ В КОНТЕКСТІ СЛОВ'ЯНСЬКОГО ІНСТРУМЕНТАРІЮ X – XIV ст.

Анотація. Серед чисельної номенклатури середньовічних артефактів доби Галицько-Волинської держави, виявлених під час археологічних досліджень її літописних центрів (Галич, Володимир, Звенигород, Пересопниця, Дорогобуж, ін.) помітне місце займають знахідки музичного призначення. **Мета дослідження** – вивчити археологічні артефакти, знайдені на історичних землях Галицько-Волинської держави, що ідентифікуються археологами та інструментознавцями як музичні інструменти, а також ввести до наукового обігу ті артефакти, що отримали в археологічних працях некоректні номінації або ж фігурують у публікаціях археологів як предмети “нез'ясованого призначення”. **Методологія дослідження** полягає у вперше здійсненій спробі поєднати археологічні та музикознавчі, зокрема органологічні методи дослідження середньовічних музичних інструментів (за міжнародною систематикою Горбостеля-Закса). Запропонована методологія може бути застосована до вивчення середньовічного музичного інструментарію слов'янського світу. **Наукова новизна.** Стаття започатковує спільне археологічно-музикознавче дослідження середньовічних музичних інструментів, знайдених на історичних землях Галицько-Волинської держави. Розглянуті археологічні музичні інструменти різних типів показали, що їх побутування в Галицько-Волинській державі розвивалося в спільному річищі із загальнослов'янською музично-інструментальною культурою доби європейського Середньовіччя. У подальшому автори планують працювати над створенням Каталогу середньовічних музичних інструментів Київської Русі та Галицько-Волинської держави, який рівною мірою буде потрібним як археологам, так і представникам історичної органології (археомузикології). **Висновки.** Наукові результати статті мають методологічне значення і стануть підґрунтям для коректної ідентифікації українськими археологами музичних артефактів музично-інструментальної культури середньовічної України.

Ключеві слова: музична археологія (археомузикологія), струнні, ударні, духові музичні інструменти, Галицько-Волинська держава, слов'янський світ середньовічної Європи.

The Problem Statement. The history and art of the Galicia-Volhynia lands have long been the subject of thorough research by archeologists, historians and art critics. Today, the musical instruments of the Galicia-Volhynia state remain an understudied area of the all-Slavic musical and instrumental culture. It is virtually unknown among the instrumentalists dealing with the issues of medieval musical instruments in Europe. So far, there is no separate study devoted to the musical instruments of the Galicia-Volhynia state in its comparison with the synchronous instruments of the Slavic world of medieval Europe. The difficulty of focusing on this problem is, in particular, the lack of contacts and consultations among

Ukrainian archeologists and instrumentalists. The scientists from many countries have long been cooperating in this area of study¹.

The following offers some reasons for this situation:

1). The authors in publications of archeological excavations mention briefly the artifacts with certain features of a musical instrument, presenting these in drawings among the total mass of other artifacts, describing them mainly with the general terms such as a “pipe”, “flute”, “whistle”, “bell”, etc.

2) Many of the artifacts, which may be musical instruments, are scattered in various archeological archives and museum repositories. Even the drawings of artifacts published by archeologists, which, according to the instrumentalists, have all the features of a musical instrument or its individual structural details (mouthpiece, pin, etc.), lack sometimes a detailed textual description.

3). Some artifacts found by archeologists who do not have professional knowledge of instruments and are insufficiently oriented in the specifics of the certain musical instruments structure, do not always receive a correct interpretation and often appear in reports and publications as objects of “indeterminate origin” or “household use” of needle-case type, which are the open flutes, or whistles, interpreted as accessories for twisting threads (“yurok”), etc.

The Analysis of Recent Research and Publications. Today, the most studied by archeologists medieval musical instruments include shaken idiophones in the shape of an egg – “Easter egg”² (V. Hupalo, H. Shovkoplias, D. Kozak) and whirling aerophones – “hurkala”, “brunchaky”, “brunchalky”³ (Hupalo, 2011, pp. 397–411; Povetkin, 1990; Terskyi, 1993; Serheieva, 2012). Exclusively instrumentalists of Central (Staššiková-Štukovská, 1981) and Eastern Europe (Russia, Ukraine) studied the wind instruments of medieval Slavs (Povetkin, 1997; Zinkiv, 2018). The works by I. Zinkiv (Zinkiv, 2013; Zinkiv, 2019) are devoted to medieval stringed instruments; the work by B. Kindratiuk (Kindratiuk, 2012) – to bells; the same author (Kindratiuk, 2001, pp. 105–131) devoted one of his works to a brief review of certain types of musical instruments.

The Purpose of the Article. The authors see the purpose of the paper in studying the archeological artifacts found in the historical lands of the Galicia-Volhynia state, identified by archeologists and instrumentalists as musical instruments, as well as in introducing into scientific circulation those musical and instrumental artifacts that were erroneously nominated in archeological works or publications as items of “unspecified purpose”.

In order to study the medieval musical instruments of Galicia-Volhynia state in the paper there is used the generally accepted in modern instrumentation international musical instruments classification by E. M. Hornbostel – K. Sachs (Hornbostel & Sachs, 1987, pp. 226–261). It is based on two criteria – the sound source (membrane, string, air column, etc.) and the method of its extraction (impact, pinch, friction, etc.). The proposed system divides all musical instruments into four main types, which differ in types of vibrator: 1) idiophones – self-sounding solids, 2) membranophones (membranes that require tension, drums), 3) chordophones (strings), 4) aerophones (winds). Each type has its main numerical nomenclature: 1 – idiophones,

¹ In 1986, the International Study Group on Musical Archeology was established at UNESCO (ISGMA) “The International Study Group on Music Archaeology, ISGMA. In 1990, V. Povetkin created the Novgorod Center of Musical Antiquities, the main activity of which was the study, reconstruction and popularization of ancient Slavic musical instruments.

² In parentheses, the authors present the traditional names of Ukrainian musical instruments.

³ In the archeological literature, this type of aerophones is defined differently: in the Russian terminology, the term “brunchalka” is used, in the Ukrainian sources it corresponds to the names “bruchak”, “brukalo”. The term “gurkalo” is used in the Ukrainian instrument science.

membranophones – 2, chordophones – 3, aerophones – 4, which using additional numbers are differentiated by specific morphological features. The constructive shape of the instrument, as well as the method of excitation of oscillations (sound production) identify the features of each sub-type: impact, pinch, friction (frictional method), and airblow. For example, chordophones are divided into simple (zither subtype) and complex (harps, lyres, lutes). According to the method of sound production, they are divided into plucked and bowed. Each sub-type of chordophones has its own varieties, which can be detailed further.

Aerophones are divided into *free* (index 41), which include *bullroarers* (another name “churyynha”) and Ukrainian “hurkala”, “brunchaky”, as well as the actual *wind* (all kinds of flutes, trumpets, etc.). Wind instruments have numerous types and sub-types, which are differentiated by specific design features and method of sound production, for example cutting the air column (flute), oscillations of the plate (a single or double reed – cane in oboes, clarinets), vibration of the performer’s lips in mouthpiece aerophones (trumpets, horns). Idiophones have numerous types and sub-types. In particular, shakenidiophones include ceramic rattles in the form of an egg (Ukrainian – “pysanka” [Easter egg]) and other forms (Ukrainian – “briazkaltsia”, “kalataltsia”), as well as metal rattles, bells, glockenspiels.

The Main Material Statement. Archeological discovery of a musical instrument always becomes a real scientific sensation, because “fossil” musical instruments (or their remains) belong to those isolated rarities, which can facilitate the reconstruction of significant musical and instrumental culture layers, interpenetration of different musical and ethnic traditions, and sometimes – the migration processes of medieval ethnic groups that have been settling in Europe, transferring to new lands their material and spiritual culture, including musical instruments.

The musical and instrumental culture of Galicia-Volhynia state has been developing along the general processes characteristic of the Slavic world of the Middle Ages. Its musical instruments also reflect the state of development of various musical instruments as part of the European musical and instrumental tradition, which characterized its development in the Xth – the XIVth centuries.

CHORDOPHONES:

lyre-like gusla, or Slavic lyres (321.2 + 314.12)

In 1984, the archeological expedition under the supervision of prof. I. Svieshnikov found a fragment of the upper gusli part during excavations of the annalistic Zvenyhorod suburbs (modern village of Zvenyhorod, Pustomyty district of Lviv region) (Fig. 1 a). Discoveries of string instruments and their fragments are usually a sensational event. They immediately became the subject of research by instrumentalists and music archeologists. However, a unique musical artifact of the Middle Ages, found in Galicia-Volhynia state was unknown to a wide range of specialists for over 40 years. I. Svieshnikov did not publish during his life the details of this discovery and its drawing. He briefly mentioned it in the local lore essay “Zvenyhorod” (Svieshnikov, 1987, p. 18). This unique musical artifact is the first evidence in Ukraine of the lyre-shaped gusla existence in the Middle Ages. Like in Ancient Novgorod, local peat soils have well preserved products of organic matter, which otherwise decompose completely. The method of dendrochronological analysis under the guidance of prof. V. G. Kolishchuk determined the exact date of instrument production – the first third of the XIIth century (Svieshnikov, 1987, p. 18).

The preserved fragment of the instrument upper part and reconstruction (based on analogues) of the lost body allowed identifying the type which belongs to the medieval lyre-like chordophones (Slavic lyres), as it has a hole in the upper part (Zinkiv, 2013, pp. 72–73).

According to Hornbostel-Sachs classification, the Zvenyhorod *gusla* can be defined as a synthesis of two instruments of different types – the lyre (index 321.2) and the zither with a sounding box (314.12). They inherited relict features from the lyre-like instruments – lateral risers and cross-bar, which eventually transformed into a large hole, and an elongated flat sounding body from the psalter-zither.

These *gusla* are a unique phenomenon of the medieval musical and instrumental culture of the Slavs. Their existence in Slavic instruments back at the end of the VIth – the beginning of the VIIth centuries is evidenced by the discoveries of zoo- and anthropomorphic figures with images of this type of instruments (Fig. 1 d). They were discovered among the items of the Velestyn treasure in 1909 near the village of Velestyno in Thessaly (Greece) (Zinkiv, 2019, pp. 174–176), and a written mention of this type of Slavic chordophones can be found in the work by Th. Simokatta «The History» (VI century), where authors call it twice a “cithara” and once a “lyre”. In the 1940s, the Polish archeologists discovered the XIIIth century *gusli* with a hole in the upper part at the territory of Pomeranian Poland (Gdansk) (Fig. 1 c), and in the 1970s – the 1980s – the North-Western Russia (Novgorod) (Fig. 1 b) and Western Ukraine (Zvenyhorod) (Fig. 1 a) confirmed the existence of this type of chordophones in the instruments of the Eastern, Western and Southern Slavs used in their instrumental culture during the VIth – the XIIIth centuries.

Due to the lack of publication on Zvenyhorod *gusli*, researchers of this type of instruments Konrad Jazdżewski (Poland) and Vladimir Povetkin (Russia) came to erroneous conclusions about the distribution of this type of *gusla*, limiting their distribution area exclusively to the Baltic region (Jazdżewski, 1950; Povetkin 1989, pp. 116–121). Similar outlines of Novgorod, Gdansk and Zvenyhorod instruments and their common vertical type of holding suggest that they all had a single original prototype, the oldest image of which preserved on objects from the Velestyn treasure, and developed along the lines of a single Slavic musical and instrumental tradition of Southern, Western and Eastern Slavs.

The fact that this type of *gusla* was not a single phenomenon, but existed among instruments of Zvenyhorod inhabitants, and possibly other lands of Galicia-Volhynia state, is evidenced by the discovery of a pin for tensioning strings, which was found in a residential building of Zvenyhorod (building 49) (Hupalo, 2014, p. 324). Similar pins are known from excavations in ancient Novgorod (Povetkin, 1997, pp. 179–185. Tables 108, 9, 10; Povetkin, 1993, p. 150, Fig. 2–4). A similar pin was found north of the Galicia-Volhynia Principality, in Grodno (modern Belarus) (Voronin, p. 64, Fig. 27, 3). Probably, the reason for a few number of discoveries of wooden musical instruments in Galicia-Volhynia state (found in large numbers in Novgorod), is the fact that its towns and settlements (as evidenced by archeological excavations and historical sources) were constantly burned during the Mongol invasion. Another, more important reason, is that this type of *gusla* belonged to the oldest ritual pagan instruments, and had a sacred significance. Therefore, since Christianization of Rus', these *gusla* were destroyed as “demonic instruments”. Even before the XIIIth century, pagan Novgorod residents resisted Christianization and preserved ancient traditions, including ritual musical instruments (Zinkiv, 2013, p. 73).

AEROPHONES

Whirling aerophones (412.22):

“hurkala”, “brukala”, “brunchalky”

The excavations of the annalistic cities of the Galicia-Volhynia state – Zvenyhorod, Lutsk, Dorohobuzh, Peresopnytsia, Lviv, discover sometimes one of the types of aerophones defined

as “hurkala”, “brukala”, and “brunchalky” (Hupalo, 2011, p. 84; Pryshchepa, Nikolchenko, 1996, p. 212, Fig. 78; Terskyi 2014, p. 159, Fig. 112, 10; Terskyi, 1993, p. 69, Table 1) (Fig. 2 a). These instruments are found throughout Ancient Rus (Sergeeva 2011, p. 219, Table 48, 1–4; 25; Sergeeva, 2012, pp. 118–125; Povetkin 1990, pp. 187–188) (Fig. 2 b, c), as well as in the settlements and sites of the Western Slavs in Moravia, Germany and Poland (Fig. 2 d) (Staššiková-Štukovská 1981, p. 397, Fig. 6,6; Biermann 2008, p. 243, Fig. 2). According to Hornbostel-Sachs classification they belong to the whirling aerophones, where an instrument, rotating around its axis, produces sound (412. 22) (Hornbostel & Sachs, 1987, p. 255). “Hurkala” were made of short tubular bones of animals. A rope was stretched through the drilled hole to half its length, then wrapped around the bone, threaded from the other side to the same hole, with tied together two ends. To produce sound, the resulted loop was stretched with the thumbs of the left and right hands in different directions and quickly twisted until it squeezed the fingers. The bone, when stretching and loosening the rope, produced while rotating the sounds of different pitch levels. We would like to note that these Slavic medieval instruments belong to the same type of bullroarers (“churnyhy”), which have been known since the late Palaeolithic age and still exist among the aborigines of Africa and Australia. According to Hornbostel-Sachs classification, they belong to the same subtype as the “hurkala”, the sound of which is formed by rotating the instrument around its axis (Hornbostel & Sachs, 1987, p. 255). From ancient times, these instruments were considered magical and had exclusively ritual functions (Oliynyk, 2014, pp. 6–7). They were made of wood and bone and have been known since the late Paleolithic Age. Whirling aerophones had different shapes and sizes. Their original semantics symbolized the voices of spirits and totem ancestors. “Churnyhy”, “hurkala” made of wood and bones of animals and birds, as sacred sonorous symbols are still known among instruments of the peoples of Siberia, which even today are forbidden for use as the household items or children’s toys (Sheykin, 2002, pp. 87–88). Numerous ethnographic evidences of the ritual and magical functions of this instrument of different peoples give grounds to state that it had similar functions in the ancient Slavs. V. Povetkin, a researcher and reconstructor of musical instruments of Ancient Novgorod, considers this instrument one of the most archaic talismans (Povetkin, 1990, pp. 187–188). D. Staššiková-Štukovská holds the same opinion, noting that this instrument, having lost its sacred functions, eventually became a children’s toy (Staššiková-Štukovská, 1981, p. 399).

There is information about the use of “hurkala” in Ukraine at the end of the XIXth – the beginning of the XXth century (Hrushevskiy, 1904, pp. 54–55). M. Hrushevskiy gives a detailed description of materials for producing the instruments (“bones of a pig’s or sheep’s leg”) and a rope (“twisted of wool”), noting that a woollen cord allows achieving the highest volume (Hrushevskiy, 1904, p. 55).

FLUTE-LIKE AEROPHONES.

Open flutes without finger holes (421.111.11)

Among the discoveries at the Muravytsia settlement, a bone tube was found (Pryshchepa & Nikolchenko 2001, Fig. 27.11) (Fig. 3 a). Archeologists mostly define these either as needle-case, or limit themselves to the definition of a “bone tube”, or present their images without definition, among other bone products. This type of flute instruments is well known to researchers of Slavic musical instruments from Central and Eastern Europe (Fig. 3 b, c) (Staššiková-Štukovská, 1981, p. 401, Fig. 6, 1–3; Hruby V., p. 179, Figs. 17, 7). In instrumentology, these are defined as open flutes without lateral, i. e., fingerholes (Hornbostel & Sachs, 1987, p. 255). Such tubes as “lures” for attracting animals also existed among

the traditional instruments of many modern peoples; they are known from archeological materials from the late Paleolithic Age. Interestingly, of a large number of these artifacts found in different archeological cultures, in different areas and in different chronological periods, the *needles inside occur extremely rare*. Therefore, to provide final dilemma solution whether a needle-case is a musical instrument, it is necessary to conduct a trasological study of each of these artifacts. Instrumentalists and wind instrument performers are well aware of the fact that the quality of cleaning and polishing of the inner channel determines whether the instrument will sound. If the inner channel has longitudinal mechanical damage (scratches) caused by the sharp edge of the needle – this clearly indicates that the object was used as an object for storing needles – a “needle-case”. If such damage is absent, and the inner channel is carefully polished, it is a wind musical instrument. Thus, the widespread use of archeological methods of trasological analysis will allow identifying more accurately these artifacts.

Whistle flutes without fingerholes. Whistle (421.221.11)

The archeological discoveries on the territory of the Galicia-Volhyniastate include *bone whistles* with one and two horizontally located holes. The main structural part of these wind instruments, which is preserved on a very rare occasions, is a wooden cork (other names – “chopyk” or “dontse⁴”) of a cut semicircular shape, which is inserted inside the blow-in hole so as to provide a channel between the wall with the whistle hole in it (Fig. 4 a), through which the air stream is directed to the hole, forming a whistle. These musical instruments are known, in particular, from excavations in Lutsk and the village of Horodnytsia (next to Ancient Halych) (Fig. 4 b), as well as in Poland, Moravia, Germany, etc. (Staššiková-Štukovská, p. 401, fig. 6.8–11).

Whistles with two horizontally located holes was found in Zvenyhorod, Horodnytsia, Plisnensk, Muravytske settlement (Hupalo, 2014, p. 154, Fig. 42, 12; 20; Pryshchepa & Nikolchenko, 2001, p. 61, Fig. 13, 15) (Fig. 4 b, c, d). They are also known from excavations of other settlements and sites in Ukraine (Sergeeva 2012, Fig. 3.3) and the lands of the Western Slavs (Fig. 4 e, f) (Kaminski, 1977, p. 46, Fig. 37; Biermann, 2008, p. 252, Fig. 11). Quite often these wind instruments are defined as “accessories for twisting threads”, or are limited to the definition of “bone product” and very rarely – as a whistle. If this artifact belongs to the objects of handicraft production, then the question arises: why, in contrast to weights and other devices of material production, it occurs so rarely. Unlike household items, the musical instruments usually make up a small percentage in any ancient culture. Thus, this fact makes it more likely to interpret these as *wind instruments*. The final solution to this problem is possible only after a trasological examination, which should determine the degree of polishing the two holes. If it was an accessory for twisting threads, there would be oval sections of the bone in front of the two holes. Otherwise, one can say confidently that this artifact is a musical instrument.

Whistle flutes with fingerholes – Recorder (421.221.12) (“sopilky”)

Whistle flutes have the same sounding device as whistles (cork and whistle hole on the body) and differ from them only by the presence of a certain number of finger holes along the body. They are made of elderberry, willow, viburnum, etc. The earliest written mention of *sopilky* (сопѣли) come from the XIth century. Thus, the saltimbanco’s play on *sopilka* caused the condemnation of Theodosius of Pechersk, and Kyiv Metropolitan Cyril (the XIIIth century) called this instrument a “devil’s pipe” (Cherkasy, 2003, p. 207).

Three instruments made of elderberry have been discovered in Zvenyhorod. One is preserved completely, and the other two – in fragments (Fig. 5 a) (Svieshnikov, 1987, p. 99).

⁴ That is why in the Hutsul region the whistle flute (“sopilka”) is called “dentsivka”.

They date from the end of the XIth – the first half of the XIIth century (Svieshnikov, 1985, p. 354). The preserved instrument is 8 cm long and 1.7 cm in diameter. There are five holes on one side and four holes on the other. Similar wooden sopilky are known from excavations in Novgorod (Fig. 5b) (Povetkin, 1997, p. 353, Tables 107, 7,8), as well as in Szczecin (Poland) (Fig. 5c). These instruments, without undergoing any constructive changes, still function among the traditional instruments of the Ukrainians (Cherkaskyi, 2003, pp. 206–212).

A unique discovery comes from Muravytskiy settlement of a bone mouthpiece from a wind instrument (Fig. 6a). This artifact was included among the illustrative material, but not commented on in the text of the work dedicated to the unique settlement (Pryshchepa & Nikolchenko, 2001, p. 75, Figs. 27, 17).

The mouthpiece discovery is an important evidence of the existence in the musical and instrumental culture of the Galicia-Volhynia state of other types of wind instruments – *mouthpiece-like, such as trumpet* (423.121.12), the image of which is preserved in a book miniature of the Kyiv chronicle in a scene depicting the reception by Prince Yaroslav Osmomysl of a group of boyars (Fig. 6c). A bone mouthpiece from a trumpet was also found in Wolin (Poland) (Fig. 6b) (Rulewicz, 1963, p. 221, tab. II, 9). Two similar instruments are depicted on the “Musicians” fresco from the Cathedral of St. Sophia in Kyiv (1037) (Fig. 6d). The trumpets are also mentioned in “The Lay of Igor’s Warfare”: “Horses roar behind Sula, glory rings in Kyiv; *trumpets blare* in Novgorod, flags shiver in Putivl” (The Lay of Igor’s Warfare, 1970, p. 25). No trumpet-type instrument was found in Novgorod itself, but the existence of this variety among the Slavs, in addition to iconographic materials, is evidenced by the discovery of a trumpet in a Slavic settlement near Liodig Lake (near Parkhim, East Germany) (Fig. 6e) dating back to the XIth – the XIIth centuries. The instrument is about one meter long, made of one piece of conical shaped wood wrapped in a bark. This discovery is unique because allows us defining the technology and process for making the instrument. The tree was split in half and the core was chosen. Then the two halves were closed together, fastened with glue and wrapped with boiled bark. This technology of making wooden trumpets and horns is still preserved in the traditional Slavic culture of Polissia, the Carpathians, Poland, Slovakia, etc. (Zinkiv, 2018, pp. 26–28).

IDIOPHONES

Ceramic shaken idiophones

Egg-shaped (“pysanky”) (112.13)

The shaken idiophones – “pysanky” are the most studied among all Slavic musical instruments (Shovkoplias, 1980, pp. 92–98; Sushko 2011, pp. 46–53; Kozak, 2014, pp. 421–431). They belong to the type of vessel percussion idiophones (Hornbostel & Sachs, 1987, p. 241). About 100 discoveries of pysanka come from the territory of Kievan Rus. About a dozen of them were found in the cities and settlements of the Galicia-Volhynia principality – Zvenyhorod, Plisnensk, near Zhydachiv, Rivne, Khrinnyky (Fig. 7a) (Kozak, 2014, p. 425). This percussion instrument has been a sacred ritual instrument since the Eneolithic and Bronze Ages (Sushko, 2011, pp. 49–51; Kozak, 2014, pp. 424–425; Shovkoplias, 1980, p. 97).

Metal idiophones

***Glockenspiels (bells), bells* (111.242.122),**

rattles (“bubontsi”) (112.13)

Slavic metal idiophones are divided into two varieties in terms of shape and design features in instrumental science – hanging bells with internal strikers and shaken. The hanging bells include small and large bells with a striker inside (Fig. 7b, d). These instruments produce sound by the

elongated striker percussion against the body. According to Hornbostel-Sachs classification they have an index of 111.242.122 (Hornbostel & Sachs, 1987, p. 240). Shaken idiophones include spherical rattles (“bubonsti”) with one or two cross-shaped slots at the bottom and a metal ball inside (Fig. 7 e) (Hornbostel & Sachs, 1987, p. 241). The sound is produced by shaking the instrument or other movements that cause the ball to strike the walls inside the body. They belong to the type of vessel shaken idiophones and according to the musical instruments classification have an index of 112.13 (Hornbostel & Sachs, 1987, p. 241). This group of instruments also includes various forms of rattles (“kalataltsia”) made of clay, wood, wicker or dried fruits of plants.

The oldest type of bells with strikers include “*botalo*” or “shepherd’s bell” (Fig. 7 b, c). Unlike small and large bells cast of bronze, they were made of iron. Many cultures of the world considered wrought iron, hardened in fire and water, a powerful magical talisman. *Botalas* had a rectangular body shape and were made of a thin sheet of iron, about 2 mm thick. *Botala* of the Xth – the XIth centuries was found in the Lystvynske settlement. (Fig. 7 b) (Chaika, 2009, p. 163, Fig. 27.1). Similar instruments are known from excavations in Novgorod (Fig. 7 c). In Western Europe (Ireland) the oldest iron *botalas* of this shape are known from the Vth century, in Ukraine – from the time of Cherniakhiv culture (the first half of the IIIrd – first half of the Vth century). In ancient Rus until the XIIth century, the time of the beginning of casting bronze bells, *botalas* and *bylas* were used as signal and ritual instruments. *Botalas* tied to the neck of cattle also had signal and protective functions (Povetkin, 2008, p. 129).

The Galicia-Volhynia state, from the XIIth century, in addition to those imported from Latin-speaking Europe produced its own large bells (Fig. 7 d). It is known from chronicle sources that in the town of Kholm the King Danylo first “brought some bells from Kyiv” for St. John the Baptist Church, (a) and casted the others” (Terskyi, 2014, p. 133). Later, the chronicle mentions Volodymyr Vasylykovich who “casted the bells of a strange sound. There were no alike across the lands” (Terskyi, 2014, p. 133). The texts of ancient Russian chronicles mention the facts of convening community to meeting (*viche*) with bells’ sound. In particular, the “Russian Chronicle” mentions that the townspeople rang the bells to convene a community meeting when enemy troops surrounded the princely city of Vladimir in Volhynia (Kindratiuk, 2012, p. 186).

The fragments have been found on the central fortified part of Volodymyr (modern Volodymyr-Volynskyi) of broken bells, as well as in Luchesk and Peresopnytsia (Terskyi, 2014, p. 133). Fragments of broken church bells were also found in princely Halych on the foundation of the Assumption Cathedral, and a fragment of the canon of a large bell was found in the fields near ancient Halych. A fragment of a bell from the Resurrection Church of the second half of the XIIth and the beginning of the XIIIth centuries was found in Krylos, which gave grounds to claim the existence of a wooden church-chapel, which could serve as a bell tower (Lukomskyi, 2001, p. 286). Archeologists believe that such hanging bells were already common in the Galicia-Volhynia principality (Kindratiuk, 2012, pp. 183–184). Unique images of large bells, which were fixed on U-shaped beams, are preserved on the wall graffiti of the St. John the Theologian Church in Luchesk (modern Lutsk) (Fig. 7 e). According to chronicles, the bells in Galicia-Volhynia principality were casted after Kyiv occupation by the Mongol-Tatars (Rus Chronicle, 1989, p. 418).

Tiny bells (small bubontsi). In the IXth – the XIIIth centuries, these served as the elements of jewelry (temple rings, earrings, hryvnias, necklaces), decoration of clothes and hats, as well as horse harness (Fig. 8 a, b, c, d). From ancient times, the clothing and jewelry of many peoples of Europe included sound symbolism. Apotropaic function is the oldest function of bells, as well as of “pysanka-kalataltse”.

A unique decoration of the ceremonial armor of the prince's horse was found in the Ancient Peremyl (Fig. 8 e) (Tersky, 2007, p. 20, Fig. 5.7). This is a bone plate-decoration, decorated with three cross-shaped motifs. Its center has four-round holes cut located by a cross-like principle. There is a central hole in between with four slots running crosswise. Round-shaped bells attached to the plate, which also had cross-shaped slits in the lower part.

The Conclusions. The presented in the paper artifacts the archeologists found in the cities and settlements of the Galicia-Volhynia state (Volodymyr, Halych, Dorohobuzh, Zvenyhorod, Kolodiazyn, Krylos, Lystvyn, Luchesk, Lviv, Peremyl, Peresopnytsia, Plisnensk, etc.) represent different types of instruments: strings (gusla), winds (flutes, sopilky, trumpets, whistles, etc.) and percussion (bells, tiny bells, bubontsi, kataltsia, etc.), and require detailed study as part of the medieval musical and instrumental culture of ancient Ukraine. Their analogues exist in the musical instruments of other lands of medieval Slavia.

The correct interpretation of certain archeological findings of musical instruments and their fragmented parts from the territory of the Galicia-Volhynia state allowed clarifying the controversial issues resulted from their incorrect identification by archeologists. To overcome this, further cooperation of archeologists and musicologists is needed, which will allow developing a full-scale catalog of medieval musical instruments in Ukraine, similar to publications in the Western Europe.

The medieval musical instruments presented in the paper, their fragmented parts and separate constructive details constitute a small part only of this type artifacts from the territory of the Galicia-Volhynia state. They need professional identification, impartial assessment and introduction into scientific circulation in order to be used by a wide range of archeologists and organologists (instrumentalists) who study the musical instruments of the medieval Slavic peoples.

Illustrations

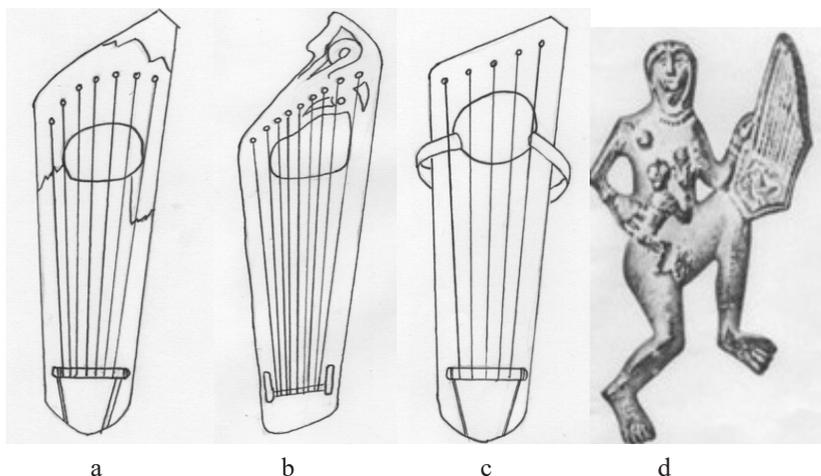


Fig. 1. Lyre-shaped gusla: a – Zvenyhorod (first third of the XII century, reconstructed by I. Zinkiv); b – Novgorod (XIII century); c – Gdańsk (XIII century); d – Velestyno (end of VI – beginning of VII century). According to: I. Zinkiv, 2013 (a); V. Povetkin, 1989(b); K. Jażdżewski, 1950 (c); N. Causidis, 2005 (d).

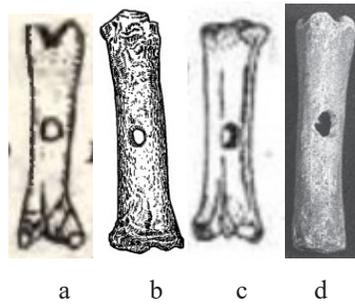


Fig. 2. Whirling aerophones “hurkala”, “brukala”, “brunchalky:
 a – Peresopnytsia; b – Kyiv; c – Novgorod; d – Pomerania (Poland). According to:
 S. Terskyi, 2014 (a), M. Sergeeva, 2011 (b); V. Povetkin, 1990 (c); F. Biermann, 2008 (d).

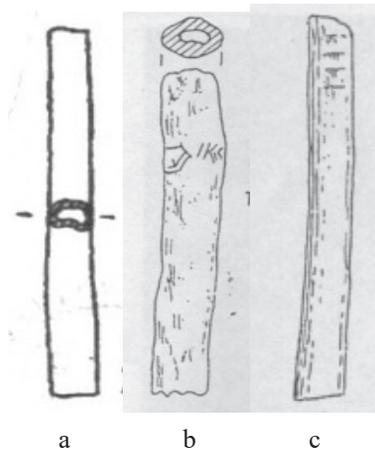


Fig. 3. Open flutes without fingerholes: a – Muravytske settlement;
 b – Wroclaw; c – Brno. (According to B. Pryshchepa, Y. Nikolchenko, 2001 (a);
 D. Staššiková-Štukovská (b); V. Hruby, 1957 (c).

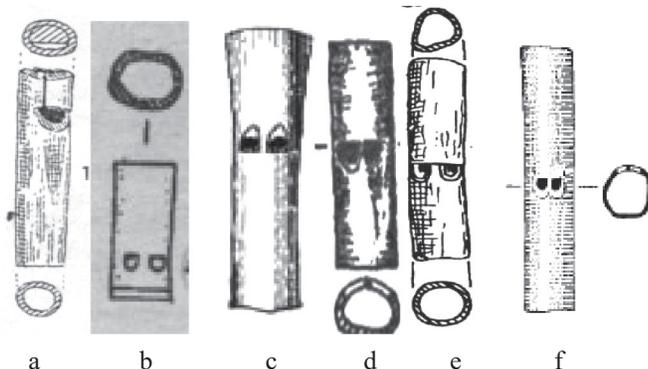


Fig. 4. Whistle flutes: a – Wolin (Poland); b – Horodnytsia; c – Zvenyhorod;
 d – Muravytske settlement; e – Opole (Poland); f – Gutenberg (Germany). According
 to: M. Rulewicz, 1963 (a); S. Terskyi, 1993 (b); V. Hupalo, 2014 (c); B. Pryshchepa,
 Y. Nikolchenko, 2001 (d); W. Kaminski, 1977 (e); F. Biermann, 2008 (f).

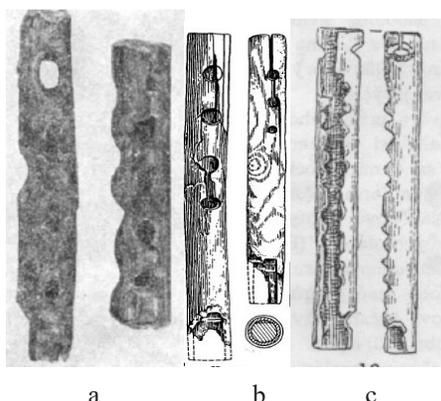


Fig. 5. Whistle flutes with fingerholes (sopilky):
 a – Zvenyhorod; b – Novgorod; c – Szczecin (Poland). According to:
 I. Svieshnikov, 1987 (a); V. Povetkin 1997 (b); M. Rulewicz, 1963 (c).

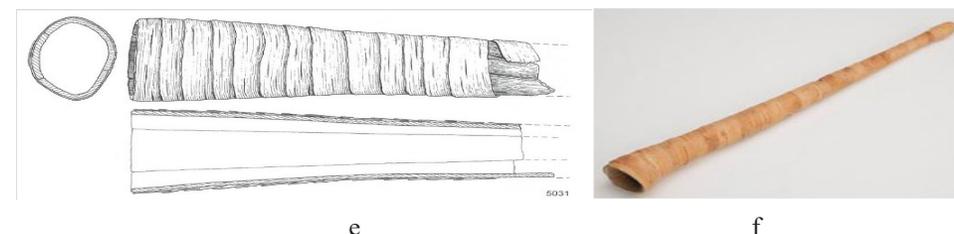


Fig. 6 a – trumpet mouthpiece (Muravytske settlement); b – mouthpiece (Wolin, Poland);
 c – a trumpet on a miniature from the Kyiv chronicle; d – trumpetson a fresco from the
 Cathedral of St. Sophia in Kyiv, e – a trumpet fragment of the
 XI – XII centuries from Parkhim (East Germany); f – folk trumpet (ligava). According to
 B. Pryshchepa, Y. Nikolchenko, 2001 (a); M. Rulewicz, 1963(b); V. Khomutskyi, 2014 (e).

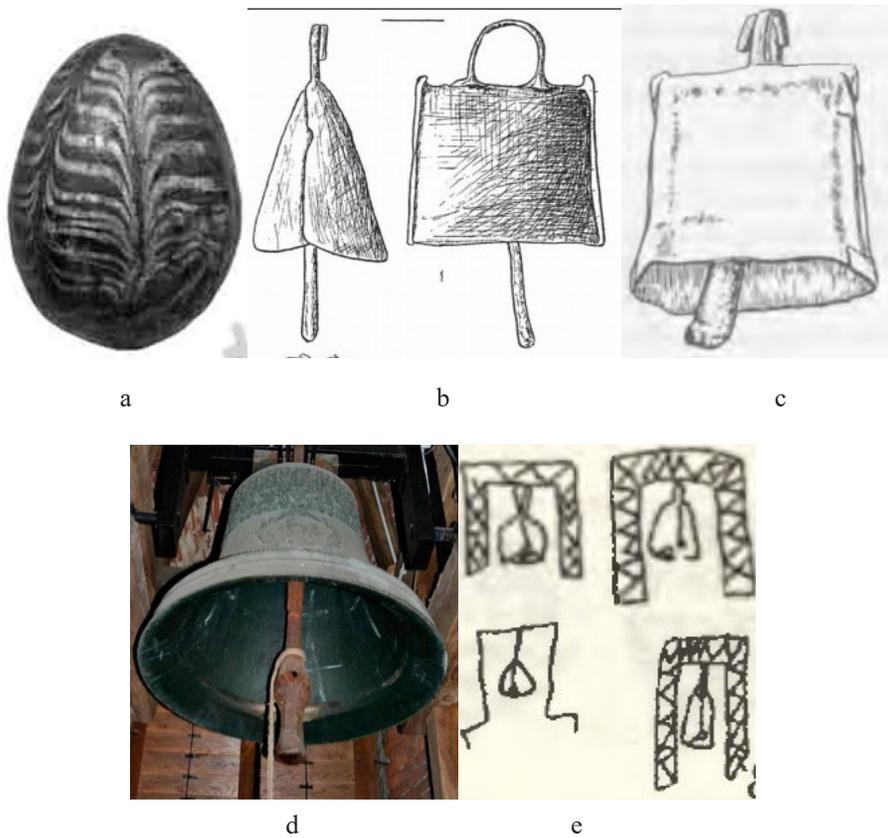


Fig. 7. Ceramic and metal idiophones: a – ceramic pysanka-kalataltse (Khrinnyky); b – metal bell “botalo” (Lystvyn); c – metal tiny bell “botalo” (Novgorod); d – Yakov Skora’s bell, 1341 (Lviv); e – bells on the graffiti of the St. John the Theologian Church (Lutsk). According to: D. Kozak, 2014 (a); R. Chaika (b); V. Povetkin, 2008 (p); S. Terskyi, 2014 (e).

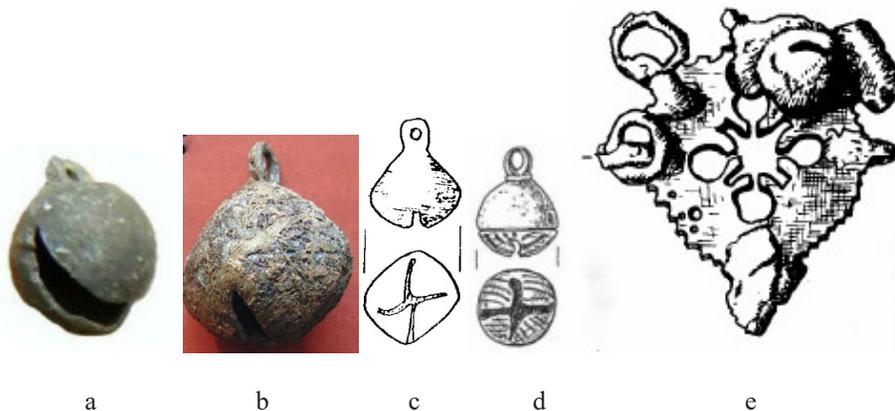


Fig. 8. Bubontsi: a – Pohorynnia (village of Verkhiv); b – Zvenyhorod; c – Dorohobuzh; d – Lystvyn; e – Peremysh. According to: B. Pryshchepa 2019 (a, c); V. Hupalo, 2014 (b); R. Chaika (d), S. Terskyi, 2007 (e).

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