

Abstracts

Wolska B. 2020. Applying isotope analyses of cremated human bones in archaeological research – a review. *Analecta Archaeologica Ressoiviensia* 15, 7–16

Numerous experiments have recently been conducted on burnt bones in order to develop methods of isotope analysis which would be useful in archaeological research. Since the results of these studies are not yet widely known, this review presents their potential applications in investigations of human remains from cremation burials. Radiocarbon dating of burnt osteological materials is discussed, including problems related to the “old wood effect”. Also considered is the analysis of light stable isotopes, i.e. $\delta^{13}\text{C}$, $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$, which is unsuitable for palaeodietary determinations, but useful as a source of information about certain parameters of funeral pyres. Tracing geographical origins and human mobility is possible by means of the analysis of strontium isotope ratio $87\text{Sr}/86\text{Sr}$. Since an understanding of high-temperature-induced transformations of bone structure and chemical composition is important for these considerations, a detailed account of the processes is given as an introduction.

Key words: isotopes, cremated human bones, radiocarbon dating, funerary practices, migration

Trąbska J. 2020. Graphite in an archaeological context comparing to other black substances – research problems and prospects. *Analecta Archaeologica Ressoiviensia* 15, 17–29

In the archaeological context, substances with a black color have been extensively used in many ancient communities, in the form of items and layers, with the use of biogenic and mineral substances, and requiring a separate methodological approach. Each of them behaves differently in technological and postdepositional processes. The potential degree of the complexity of intentionally applied layers (e.g. paints or cosmetics) and the overlap of secondary substances and crusts, increases difficulties in obtaining unambiguous results and their interpretation. Graphite plays an important role among them. Several areas of the current use of graphite are, or at least could be, commonly shared in the present and in the past, and thus their analysis could be inspiring for archaeology and archaeometry. Graphite fingerprint and potential fingerprints are discussed in terms of their variability. The problem of graphitization as a potential source of misleading interpretation is discussed.

Key words: black substances, black layers, graphite, archaeology, fingerprints

Nerudova Z., Novak J. 2020. The influence of redeposition on the anthracological records from the Moravian Karst caves (Czech Republic, Central Europe). *Analecta Archaeologica Ressoiviensia* 15, 31–43

The study focuses on some methodological problems associated with the research of cave sites. A large amount of anthracological material came from the context of the layers with archaeological material from the Pod hradem Cave (Moravian Karst, Czech Republic). Some samples were determined as *Taxus*, which in this context would be among the first evidence

of yew in the Middle Pleistocene. However, their dating showed significant secondary redepositions. Similar redepositions of material were repeatedly found in the dating of material from the Kůlna Cave (Moravian Karst, Czech Republic). Here, too, in certain parts of the cave, there was secondary redeposited archaeological material in seemingly intact sediments. Both caves were inhabited – Kůlna Cave from MIS 8 to MIS 2, Pod hradem Cave – from MIS 3e to MIS 2. At the same time, intensive post-sedimentation processes took place in both caves, accompanied by the activities of large carnivores inhabiting these caves alternately with humans. The last important factor influencing stratigraphy was the archaeological excavations at the end of the 19th and the beginning of the 20th century.

Keywords: Pod hradem Cave, Kůlna Cave, Anthracology, 14C dating, Post- depositional processes

Pelisiak A., Rybicka M. 2020. The Mesolithic settlement and economy in the Lake Gościąż area *Analecta Archaeologica Ressoviensia* 15, 45–52

Lake Gościąż is located in a Gostinińskie Lake District (Central Poland). It contains long and good preserved continuous sequence of the annually laminated lake sediments spanning from the end of the last glaciation to contemporary times. They offer unique opportunities for investigating changes in the environment and human activity in the vicinity of the lakes. This paper is focused on correlation of palynological indicators of activity of the Mesolithic people with the picture of settlement in the region. Another problem discussed there question of reliability of palynological data, and therefore their usefulness for studies on settlement and economy.

Key words: annually laminated lake sediments, palynology, Mesolithic, Gościąż lake, environmental changes

Pasterkiewicz W., 2020. The first radiocarbon dates for the Globular Amphora culture cemetery in Sadowie in the Sandomierz Upland. *Analecta Archaeologica Ressoviensia* 15, 53–75

The article presents new results of radiocarbon dating for the settlement of the Globular Amphora culture from the Sandomierz Upland area. These are three determinations obtained for animal graves (No. 4, 7 and 11) coming from the site 23 in Sadowie near Opatow, where traces of a vast cemetery were discovered. 14C dating was established in the Poznań Radiocarbon Laboratory. The received values were verified by indicating diagnostic features in the composition of artefacts that are referenced in groups of other features of the Globular Amphora culture.

Keywords: Globular Amphora culture, Sandomierz Upland, radiocarbon dates

Jarosz P., Boroń T., Witkowska B., Winiarska-Kabacińska M., Rożańska-Tuta Z., Skrzyński G., Osypińska M., Kerneder-Gubała K., Szczepanek A., Sołodko A., Włodarczyk P. 2020. The early Bronze Age feature from Wilczyce, site 10, Sandomierz district – An interpretation of its functioning in light of multidimensional analysis. *Analecta Archaeologica Ressoviensia* 15, 77–102

The aim of this paper is to present the multidimensional characteristics of the feature number 4 at the site in Wilczyce located on the Sandomierz Upland. During exploration of the pit rich flint material, fragments of pottery vessels and animal bones were found and just above the bottom a “deposit” involved a human skull of the young female, two cattle mandibles, a sheep/goat tibia and astragalus, a damaged cattle scapula and radius, and a polishing stone

were deposited. The C14 date obtained from the tooth from the cattle jaw was 3790 ± 35 BP. Based on the shape and the size of discovered feature it is possible to classify it as a typical storage pit but presence of “deposit” enable to postulate a ritual character of assemblage that reflect some kind of burial practices of the Mierzanowice culture. Rituals in the form of interring the dead or parts of their bodies can be found also in the Unietice culture so such features may indicate the emergence of a certain supra- regional and cross-cultural trend in the early Bronze Age

Key words: Mierzanowice culture, Sandomierz Upland, funeral rite, settlement feature

Przybyła M.M. 2020. New finds of antler cheekpieces and horse burials from the Trzciniec Culture in the territory of western Little Poland. *Analecta Archaeologica Ressoiviensia* 15, 103–138

The subject of this paper are the new discoveries of antler cheekpieces of horse harness at Trzciniec Culture sites in Morawianki, Miechow and Jakuszowice (Little Poland, Poland). It also addresses the issue of double horse burials being parts of sepulchral complexes, with barrows at their centres. The article tackles the problem of the occurrence of such burials and cheekpieces in the Danubian regions, the steppe zone of Eastern Europe and in the territory of Greece. It also considers the function of cheekpieces, as parts of horse gear used for harnessing a horse to a chariot.

Keywords: antler cheekpieces, horse burials, chariots, barrows, Trzciniec Culture, bronze age

Kocańda P., Pisz M., Rajchel B., Filipowicz M. 2020. The Castle Hill in Biecz and fortified stronghold in Kobylanka. The results of interdisciplinary research from 2019. *Analecta Archaeologica Ressoiviensia* 15, 139–163

In 2019, new research was initiated at two archaeological sites located on the Ropa River, in Gorlice County, in the southeastern part of Małopolska Province. The first site was the Castle Hill in Biecz, and the second one was the fortified stronghold in Kobylanka. The research consisted of three stages. Firstly, extensive archival and library queries were conducted in order to gather basic information about both sites. Secondly, surface research was performed in order to collect any movable monuments. During the third stage, a reconnaissance by means of GPR, electrical resistivity imaging and geo-magnetic survey was carried out. These provided plenty of new valuable information on the spatial layout of both sites. In the case of the Castle Hill, the analysis of the discovered anomalies allowed for the interpretation of some of the finds as remnants of the brick elements of the castle, e.g. the tower, which corresponds with the plan from 1877. The results of the analyses of the anomalies from the fortified stronghold in Kobylanka, with its ramparts made of stone and earth as well as inner circular housing, were far more ambiguous. Its chronology may date back to the early Middle Ages.

Key words: castle, medieval archaeology, archaeological geophysics, ground-penetrating radar, magnetometry, stronghold

Niedźwiadek R., Rozwałka A. 2020. The stronghold on Kirkut Hill in Lublin. The state of recognition of the remains of the former stronghold and its role in the medieval Lublin agglomeration. *Analecta Archaeologica Ressoiviensia* 15, 165–185

The aim of the article is to present the state of the research conducted on the remains of a medieval stronghold on Grodzisko Hill, also known as Kirkut Hill (due to the Jewish cemetery from the late Middle Ages and early modern period located on its top), as well as to show the latest approach to dating the remains of the stronghold and its role in the medieval Lublin agglomeration. Archaeological research carried out on the hill and at its foot in the 1960s and

1970s was of limited range due to the existence of the Jewish cemetery. However, it can be considered that they provided an amount of data that enables the reconstruction of stratigraphy of the stronghold and recognition of the structure of its rampart running along the edge of the hill. After many discussions, both among historians and Lublin archaeologists, a certain consensus regarding the chronology and the function of the former stronghold on Grodzisko Hill has now been reached. It seems that it was in the 13th century that the stronghold was built and, then, before the century ended, it was destroyed. It coexisted with an older structure – probably built in the 12th century – namely the castellan stronghold on Zamkowe Hill. Recent research indicates that during the second half of 13th century, or at the turn of the 13th and 14th centuries, a new line of ramparts was built on Staromiejskie Hill. This is how three parts of the Lublin agglomeration were distinguished. Perhaps, in this structure, the stronghold on Kirkut Hill could have functioned as a guard post for a part of the long-distance route located in the area of today's Kalinowszczyzna Street. The 13th century, and especially its second half, was the time of numerous Yotvingian, Lithuanian, Mongolian, Ruthenian and Tatar invasions.

Keywords: Eastern Poland, Lublin, Grodzisko Hill, remains of a medieval stronghold, archaeological research

Florek M., Kokowski A. Archaeology in a scrapyard, or how a monument ceases to be a monument. *Analecta Archaeologica Ressoviensia* 15, 187–193

Amateur searches for archaeological artefacts, most frequently with the use of metal detectors, are generally aimed at building up private collections. They have also become a source of income in the illegal trade in artefacts. Collecting ancient artefacts as recyclable metal is a new phenomenon. At the scrapyard in Milczany, Sandomierz district, several kilograms of such scrap were found, among which two fibulae from the Roman period, Almgren 67 and 43, were recognised. They are valuable in the research into the history of the Przeworsk Culture. The authors also note the widespread practice of collecting striped flint, used by modern jewellers, which has resulted in the devastation of several sites which were relics of ancient mines of this material. The authors consider the scientific value of the recovered artefacts, which often cannot be localised precisely. They call for the unceasing promotion of the value of archaeological artefacts and indicate its effectiveness in the Hrubieszow Basin.

Keywords: Protection of archaeological cultural heritage, metal detectors, ancient materials, modern materials, Roman period, fibulae