

STONE AGE DATING ISSUES:
 IN 'DONKALNIS AND SPIGINAS MESOLITHIC-NEOLITHIC
 CEMETERIES: THE OLDEST BURIAL SITES IN LITHUANIA'
 (*DONKALNIO IR SPIGINO MEZOLITO-NEOLITO KAPINYNAI.
 SENIAUSIEJI LAIDOJIMO
 PAMINKLAI LIETUVOJE*)
 BY A. BUTRIMAS (VILNIUS, 2012);
 AND 'NEW ¹⁴C DATES OF NEOLITHIC AND
 EARLY METAL PERIOD CERAMICS
 IN LITHUANIA' BY G. PILIČIAUSKAS,
 M. LAVENTO, M. OINONEN AND G. GRIŽAS,
 IN *RADIOCARBON* (2011, VOL. 53/4)

ALGIRDAS GIRININKAS

After information about the radiocarbon dating of the Neolithic Ceramics and Mesolithic/Neolithic period graves 2 and 3 in the Donkalis burial ground (in the Telšiai district in western Lithuania) circulated in research publications, quite a few questions arose regarding important discrepancies between the archaeological material and the radiocarbon data.

Let us examine the dating of burial 2/3 (a double burial) and the buried individuals. The abundant specialist archaeological literature dealing with the graves in the Donkalis burial ground indicates that it is a simultaneous double grave of a 20 to 25-year-old man (grave 2) and a 25 to 30-year-old woman (grave 3). The man, designated in archaeological literature as a pagan priest, was buried on his back and decorated with a string of animal teeth in the area of the head, and other animal teeth with holes drilled in their roots in other parts of the grave. According to the authors of the research, individual teeth with drilled holes were placed in the cavities of the face: the ears, the mouth and the eye sockets. Beside the man's body, a pile of broken stones strewn with ochre was found, identified by the author of the research as a fireplace. The grave was especially thickly strewn with ochre. In the woman's grave, no shroud was found, and the amount of ochre around the body was much smaller. The shin bones were drawn up close to the thigh bones.

The simultaneity of both graves claimed by the author (Butrimas 2012, p.159) raises some doubts, due to the form of the burial of the bodies. In no burial grounds dating from the Mesolithic period have buried individ-

uals been found with such bent legs (cf. Gurina 1956; Zagorskis 2004; Albrehtsen, Brinch Peterson 1975, pp.1-28). The legs of buried individuals in the Oleneostrovski burial ground, for example, were just slightly bent (cf. Gurina 1956, pp.288, 292), as the bodies were buried on their sides, and the shin bones were not so closely drawn up to the thigh bones as in graves 2 and 3 in the Donkalis burial ground. The method of burial whereby the shin bones are found close to the thigh bones is only possible by specially bending or even tying the legs after an individual's death. This custom is believed to have existed in the periods of Globular Amphora and Corded Ware cultures (Szmyt 1999; Machnik 1979, pp.337-411).

Moreover, the radiocarbon data from the individuals buried in graves 2 and 3 in the Donkalis burial ground were different. As is stated by the author of the excavations in the Donkalis burial ground, the date of grave 2 was 7405±45 (bp), 6377-6221 cal BC (CAMS-85221); while that of grave 3 was 5785±40 (bp), 4706-4552 cal BC (CAMS-85220) (Butrimas 2012, p.88, Table 1). However, when the author discussed the chronology of graves 2 and 3, he had already attributed both graves to the Mesolithic period, and dated them 6377-6221 cal BC (Butrimas 2012, p.89). Furthermore, he indicated that the later date for grave 3 could be explained by the fact that the sample, part of the female skeleton, had been contaminated with chemicals during conservation (Butrimas 2012, p.55).

If some kind of contamination was possible, and if it could have affected the dating, the dates ought to be

totally rejected in research publications. In the event of even the slightest doubt about the dating, research ethics require us to revise the material, and to begin again from scratch, rather than to argue stubbornly that the graves belong to the same period, and to use inappropriate scientific arguments for the justification of the statement (cf. Gurina 1956, pp.34, 288, 292). Therefore, I believe that the latest publication by A. Butrimas about the Donkalis burial ground (Butrimas 2010) fails to dispel doubts that graves 2 and 3 examined there really were simultaneous.

In the framework of the Lithuanian-Finnish project 'Chronology of the Neolithic and Bronze Ages Based on the Ceramics AMS Dating Data', G. Piličiauskas dated 25 samples of charred ceramics, charcoal and burnt human and animal bones from 14 Prehistoric sites in Lithuania, and published the data not only in *Radiocarbon*, but also in Lithuanian research periodicals. The outcomes of the project were presented in tables (Piličiauskas 2012, p.13), which very clearly show that the typological data of the archaeological material failed to comply with the data obtained by dating the charred ceramics by ¹⁴C AMS (accelerator mass spectrometry) in the laboratory of the University of Helsinki, and by using the OSL (optically stimulated luminescence) dating method.

Let us take one case: the Žemaitiškė II settlement (for unknown reasons defined as a findspot by the authors of the research), in which archaeological material was found. Flint artefacts (wide knives with large blades, triangular heart-shaped *širdiniai* arrowheads), bone-horn artefacts (fir-tree shaped points and harpoons, bone pins with small holes recalling the Bronze Age, and horn axes with polished surfaces), stone artefacts (hafted axes with polished surfaces, a 'grinder' for grinding and polishing bone-horn manufactured items, decorations for leather belts), and, finally, flat-bottomed pots and small cups, all indicate that the inventory from the Žemaitiškė II settlement belongs to the transitional period between the Late Neolithic and the Bronze Age (Girininkas 1990), just like other sets of artefacts and ceramics dating from the late third millennium to the first quarter of the second millennium, which in eastern Latvia (Loze 1979) and northern Belarus (M. Charniauski 2007; M.M. Charniauski 2011) are identified as belonging to the Early Bronze Age.

It is true that individual artefacts from earlier periods were found in the area of the Žemaitiškė II settlement, as the location was very favourable for fishing, and for building dams to catch fish, which had been known since the Mesolithic period. However, the set of artefacts from the settlement, including ceramics, could in

no way belong to the turn of the fourth to the third millennium BC (cal BC).

Other radiocarbon dates obtained by the authors in other settlements in Lithuania are also difficult to agree with. What has gone wrong? We would suggest that some samples were taken by the authors of the project from cultural layers of settlements where pottery was found in the gyttja (organic) layer. Whether it is a piece of ceramics (a pot or a bowl), especially a fluffy mass with a herbal or snail admixture, or charred remains which also stayed in the gyttja, the fact that they stayed there significantly distorts the outcomes of the radiocarbon dating, and ages the object by approximately 800 years. I believe the implementors of the project knew that, and ought to have informed the research community, as the inaccurate research data mentioned above were widely disseminated in research periodicals, and misled readers.

Literature

- ALBRETHSEN, S.E., BRINCH PETERSON, E., 1975. Excavation of a Mesolithic cemetery at Vedbeak, Denmark. *Acta Archaeologica*, 46, 1-28.
- BUTRIMAS, A., 2012. *Donkalis ir Spigino mezolito-neolito kapinynai. Seniausieji laidojimo paminklai Lietuvoje*. Vilnius: Vilnius Academy of Arts Publishing House.
- CHARNIAUSKI, M., 2007. *Kastcianaia i ragavyia vyraby na poselishchakh Krivinskago tarfianiku*. Minsk: Belaruskaja navuka.
- CHARNIAUSKI, M.M., 2011. *Kamenny vek Belorusi*. Minsk: Tekhnologija.
- GIRININKAS, A., 1990. Kretuonas. Vidurinis ir vėlyvasis neolitas. *Lietuvos archeologija*, 7.
- GURINA, N.N., 1956. *Oleneostrovskii mogil'nik. Materialy i issledovania po archeologii SSSR*, 47. Moskva-Leningrad: Izdatel'stvo akademii nauk SSSR.
- LOZE, I. A., 1979. *Pozdnii neolit i ranniaia bronza Lubanskoi niziny*. Riga: Zinatne.
- MACHNIK, J. 1979. Krąg kulturowy ceramiki sznurowej. Kultura rzucewska. In: W. HENSEL, T. WIŚLAŃSKI, eds. *Prahistoria ziem Polskich. Neolit*, t. II. Wrocław-Warszawa-Kraków-Gdańsk, 377-411.
- PILIČIAUSKAS, G., LAVENTO, M., OINONEN, M. AND GRIŽAS, G., 2011. New ¹⁴C dates of Neolithic and Early Metal Period Ceramics in Lithuania. *Radiocarbon*, 53/4, p. 629-643.
- PILIČIAUSKAS, G., 2012. Lietuvos neolito ir ankstyvojo metalų laikotarpio chronologija naujų radiometrinių datų šviesoje. *Lietuvos archeologija*, 38, 11-52.
- SZMYT, M., 1999. Between West and East. People of the Globular Amphora Culture in Eastern Europe: 2950-2350 BC. In: *Baltic - Pontic Studies*, 8. Poznań.
- ZAGORSKIS, F., 2004. *Zvejnieki (Northern Latvia) Stone Age Cemetery. BAR International Series 1292*.