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NEOLITHIC IMPORT OF AMPHIBOLITE AND SERPENTINITE INTO THE AREA OF GREAT POLAND

Summary

This article is a continuation of several earlier papers by the same authors devoted to the raw-material base of Neolithic stone industry¹. This topic was considered in the exploitation and distribution aspects, as well as that of the utilisation of rock raw-materials. One of the major problems concerning the distribution of those raw-materials is that of their origin. A general division of the whole of petrographically identified raw-materials into three genetic groups has already been accepted. These are: a) local erratics, found on the surface or in secondary deposits; b) raw-materials imported from rock-bearing areas south of the Polish Lowlands; c) rocks from the quarries situated in the Lowlands (mainly silicified Poznań loams).

Informations about the group of imported raw-materials (b) has the greatest importance for the archaeologist because they are connected with broader problems of economy, inter-cultural relationships, primitive forms of exchange, etc. Therefore, on the basis of the results of microscopic analysis carried out by the method of thin slices, it was attempted to synchronize the tools of imported raw-materials found in the Lowlands with the corresponding deposits.

In former publications it was documented that there existed import of basalt raw-material (of plagioclase-nepheline variety) from its parent deposit in Leśna near Lubań Śląski to the Piła area (the distance of c. 250 kilometers) and of non-olivine basalts from Janowa Dolina, Micko and Berestowiec in Volhynia to the Western Kuyavia area (c. 700 kilometers)². In this paper we discuss the results of the microscopic analysis of another group of stone tools from the area of Mid-Western Poland, which made it possible to accomplish a further synchronization of this kind.

The present stage of research included tools made of gabbro, amphibolite and serpentinite (over 200 items in all). Through successive macroscopic observations a group of 14 items was chosen for microscopic investigation. In this way it was found that 9 tools were made of amphibolites, 3 of microgabbro, 1 of amphibolic gabbro and 1 of serpentinite (see table 1; abbreviations: KCW-2 — younger cultures of the Danubian Cycle, KPL — Funnel Beaker Culture, KCS — Corded Ware Culture).

From among the rocks listed in that table 1 serpentinite and 5 amphibolites derive from South-Western Poland (Lower Silesia, the Sudety Mountains; see table 2). In the case of amphibolite objects, it has not been possible to identify beyond doubt the area of their natural abundance yet. The carbonate serpentinite, of which the perforated axe of Corded Ware Culture from Kiszkowo, Poznań voivodship, was made (table 1, item 4) derives from the Gogołów—Jordanów Massif, extending to the south of Ślęza (Lower Silesia; fig. 1)^{3,4}. A special concentration of this rock is known from the eastern part of the Massif, where the process of serpentinization had been the most intensive. The Gogołów—Jordanów Massif, 10 kilometers to the south of Ślęza, extends almost exactly along the parallels in a ridge c. 20 kilometers long and has the area of 80 km². Serpentine rocks appear on the surface on the highest hills which surround Ślęza by a wide arch from the west, south and south-east. In the western part on the Massif there is the ridge of the Kiełczyńskie Hills with the highest peak of 468 meters above sea level. To the east of them, behind a wide depression, there is another ridge of serpentinite hills of Radunia with the highest peak of 468 meters above sea level. To the east of them, behind a wide depression, there is another ridge of serpentinite hills of Radunia with the highest peak — Sępia Góra (572,9 m), further — a serpentinite Winna Góra Group and the Tomickie Hills with 2 peaks (196,0 and 252,7 m — Jańska Góra; fig. 2, 3). Finally to the north of the Tomickie Hills one more serpentinite deposit is known on the Nasławskie Hills with peaks 201,3 and 190,0 meters high (fig. 3). These hills form natural serpentinite rocks croppings, well exposed and easy to locate. The most probable place of exploitation of the rocks described above are the Nasławskie and Tomickie Hills, and also the hills of the Winna Góra Group (fig. 2-4). This hypothesis is confirmed by the discovery, made by W. Wojciechowski on the slopes of Jańska Góra, of prehistoric exploitation places of this raw-material. The transport of the rock material from the Gogołów—Jordanów Massif to the Kiszkowo area near Gniezno covered the distance of c. 190 kilometers in straight line.