

POLSKA AKADEMIA NAUK · ODDZIAŁ W POZNANIU

---

LESZCZYŃSKIE TOWARZYSTWO KULTURALNE W LESZNIE

KULTURA  
PUCHARÓW LEJKOWATYCH  
W POLSCE

POZNAŃ 1981

POLSKA AKADEMIA NAUK · ODDZIAŁ W POZNANIU

---

LESZCZYŃSKIE TOWARZYSTWO KULTURALNE W LESZNIE

KULTURA  
PUCHARÓW LEJKOWATYCH W POLSCE  
(studia i materiały)

THE FUNNEL BEAKER CULTURE  
IN POLAND

POZNAŃ 1981

ECONOMICAL UTILIZATION OF STONE RAW MATERIALS  
OF THE FUNNEL BEAKER CULTURE IN  
CENTRAL-WESTERN POLAND

Summary

The article is a summation of the results of archaeological-petrographical studies on the Neolithic manufacture of smoothed stone tools in central-western Poland. These studies were conducted by the Archaeological Museum in Poznań and the Chair of Geology at the A. Mickiewicz University in Poznań. The problem belongs to one of the most neglected aspects of studies on Neolithic economy. The research programme comprised a collection of over 1500 tools, representative from the chronological-cultural, typological and geographical point of view (216 items from the TRB culture). Macroscopic tabulation of the kind of raw material was verified in the series of 45 microscopic analyses. The new data obtained were listed in the columns of three thematic groups as shown below: 1. The Origin and ways exploitation of raw materials. Three possibilities have been accepted as for the supply of rock raw materials: a) selection of local erratic rock of Fennoscandian origin, found on the surface or in secondary deposits (moraine, river valleys); b) import from rock-bearing areas of southern Poland and neighbouring territories (these raw materials were of the highest technical and aesthetic quality; c) exploitation of sparse, primeval rock-bearing deposits in the Lowland (mainly the silicified variegated clays in Poznań district).

Ad a). In reference to all erratic raw materials, a rational and highly selective usage has been stated; the most popular were the schist crystallin, diabase, gabbro; they appeared more frequently in archaeological materials than in the structure of erratics (A. Prinke, J. Skoczylas 1980b, tab. 1). This proves a high level of petrographic knowledge of the Neolithic peoples. It seems that this knowledge was higher than in the territories with primeval rock quarries, where the problem of selection appeared once only, before the beginning of exploitation.

Ad b). Information concerning imported stone raw materials are

particularly valuable as they may throw some light on wider cultural problems. Owing to the application of the thin slices and micrometrical methods it was possible to carry out a synchronization between the finds of stone tools in the Lowland and corresponding rock-bearing territories. Particularly favourable possibilities for studies offers basalt, as it is a rock, strongly internally differentiated and permits sometimes even the establishing of the origin of raw materials with the exactitude to a single layer. Traces of the Neolithic influx of basalt raw material have been noticed, so far, in northern Great Poland (the vicinity of Piła), imported from the western Sudeten (Leśna near Lubań Śląski); to the western limits of Kujavia (vicinity of Mogilno and Szubin) - from the region of Równe-Volhynia (A. Prinke, J. Skoczylas 1978, 56, 59; 1980a). Also the import of nephrite from the rich deposits in Jordanów Śląski, has been stated (L. Zotz 1934); of serpentine marble from Ślęza (F. Geschwendt 1931; K. Smutek 1950), the products of which were found in TRB settlement in Janówek (W. Wojciechowski 1973) and Tomice near Dzierżoniów (J. Romanow 1973), as well as in the Lengyel culture settlement in Siciny near Góra Śląska (W. Wojciechowska 1972).

Ad c). The participation of Lowland raw materials in the examined collection amounted only to about 3,1%, owing to its low quality.

2. Distribution in the Lowland. Numerous and deep differences statistically essential were stated in the distribution of products made of individual raw materials in successive region and chronological groups. Data concerning the participation of basalt (Danub. c. -9,1%, TRB - 11,5%, CWc - 16,5%, Early Br. - 16,3%) prove, that the import of this raw material was of a mass character and lasted through the whole Neolithic with varied intensity (A. Prinke, J. Skoczylas 1980b).

3. The various ways of utilization. This problem was analyzed from the chronological-cultural and typological aspects. It was confirmed that the collection consists of 71,2% of the most numerous six raw materials (amphibolite, basalt, diabaz, gabbro, gneis and leptite), while the remaining 103 categories from the raw material list appear considerably rare. This unification of raw material is even stronger in the TRB culture, reaching the value of 82% (A. Prinke, J. Skoczylas 1978, 52).

This is a further proof of a conscious optimalization of stone manufacturing, based on good knowledge of the technical properties of rocks. The typological analysis depends on the detection of dependencies between the type of the tool and the raw material used in its manufacturing. Several such relations were discovered: in the TRB culture basalt - as raw material - was used three times more often in the production of axes than in the production of hatchets, owing to its highest quality. The full selection of the raw material depended on the manufactured tool as can be seen in the case of maces. The six most popular raw materials were applied universally; diorite was used mainly in the manufacturing of hammers, granitoid - exclusively for maces (A. Prinke, J. Skoczylas 1980a).

Further studies on the problems under discussion will comprise sources of a full cognitive value, i.e. stone materials of a well-defined chronological-cultural affiliation, obtained from systematic studies. This will permit a deeper and more precise approach to hitherto, general assignments. At present a comparative analysis of some stone inventories from sites of the TRB culture in the western part the Polish Lowland is still carried out (Table 1).