

ANDRZEJ PRINKE, JANUSZ SKOCZYLAS

THE USE OF PETROGRAPHIC METHODS IN THE STUDY OF THE STONE AGE

The article provides information about petroarchaeology which is a new auxiliary branch of prehistory and the object of which is to study by petrographic methods archaeological artifacts of stone on account of the material used to their production. Petroarchaeology, the beginnings of which fall to the mid-19th century, became a branch of science in its own right about 1936—1937 when first independent research centres were set up in Great Britain and Germany. At present systematic research in this field is conducted in Czechoslovakia and France.

The value of this method consists therein it provides data on the origin of stone materials used in prehistoric times, on their technical and technological properties and on traces of use which survived on the relics. The findings thus obtained open new possibilities in the study of stone artifacts. Owing to them, it is possible in many cases to locate the exact place where raw material was extracted and also the nearby workshop where stone artifacts were made. On the basis of the results of petrographic research it is possible to determine with greater precision the function of the artifacts and the way in which they were made.

The principal method of petroarchaeology is the microscopic analysis of thin sections. Auxiliary and testing functions are performed by the quantitative chemical analysis by the spectral qualitative analysis, by thin surface sections reflected in light, by the determination of porosity of the rock and by the detection of magnetic components. On the other hand, most researchers reject the method of macroscopic determination as not exact enough. The function of tools is defined on the basis of the microscopic traseological analysis.

As concerns Poland, the petrographic method could contribute to the solving of the question concerning the influx of stone material of southern origin into the Polish Lowland during the Neolithic.