

HISTORY OF APPLICATION OF PETROGRAPHY TO ARCHEOLOGY IN POLAND

Summary

The present paper reviews Polish petroarcheological investigations with references to respective studies in Europe. In 1980 will be held in Wrocław II Petroarcheological International Seminar under the guidance of doc. dr A. Majerowicz. Achievements of Polish Petroarcheology are going to be presented at this seminar.

The paper presents the results of petrographic studies of stone tools, stone building and ceramic materials. The stone tools drew the greatest attention. Their first petrographic descriptions are as old as the beginning of XX-th century (E. Majewski 1904). A systematic co-operation between an archeologist and geologist (S. Krukowski and J. Samsonowicz) commenced in 1920. This resulted in a recognition by J. Samsonowicz (1923-1925) the outcrops of striped, brown, and gray flints. It was K. Łydka (1956), who first studied beneath the microscope 21 tools discovered in Gródek Nadbużny. Since 1972 the present authors have started a long-term project devoted to studies on the usage of stone raw material in the Neolithic of central-western Poland. Three groups of methods have been employed in the studies. These are: a) petrographic, b) archeologic, c) statistic. A number of new data concerning Neolithic stone productivity has been obtained (A. Prinke, J. Skoczylas 1974, 1975 a, 1978, 1979 a, b, c; J. Skoczylas, A. Prinke 1979). Among others was recognised a wide spectrum of stones used for creation of Neolithic tools in the investigated region (tab. 1). Moreover, it appeared that basalt of plagioclase-nepheline variety, outcropping in Western Sudetes (the village of Leśna near Lubań Śląski), was imported to the Piła region (distance of 180 - 250 km) and olivine-lacking basalts occurring near Równe (U.S.S.R.) were transported to western Kujawy (distance of 600 - 700 km).

Also erratic boulders were undoubtedly strongly selected in order to obtain rocks fulfilling demands for their practical properties. According to the present authors, the results obtained so far provide a model of investigations acceptable for the whole area of the Central European Lowland.

The aims of analytical studies of stone building materials were precised by A. Weber-Kozińska and B. Penkala (1962). They recognised outcrops of limestones and sandstones used for building architectural monuments in Wiślica and defined directions of rock transportation (B. Penkala 1963; M. Weber-Kozińska 1963). Much alike studies were carried out by Polish geologists near Novae (northern Bulgaria). (J. Skoczylas, Z. Walkiewicz 1974, 1976). It is worthy to mention that the agreement for 1976 - 1980 was made between Geology Department of Poznań University and Geology Department of Plovdiv University in the field of common petroarcheological investigations of stone monuments of the Plovdiv region.

In Poland, first microscopic studies of archeological objects were initiated by T. Reyma (1935, 1936, 1959) being concerned with the so-called gray ceramics. Pottery of the Igołomia region was extensively investigated by M. Wirska-Parachoniak (1968, 1979 a, b).

Three stages of development of petroarcheology in Poland are distinguishable. The first stage ended in 1923, when appeared the paper by J. Samsonowicz exemplifying how geology may be useful for archeological purposes. The second period lasted from 1923 to 1955. The third stage commenced in 1955 and is characterized by wide usage of microscopic and physico-chemical methods for studying the archeological monuments.