ENVIRONMENTAL CHANGES IN POLAND DURING THE LAST 12 000 YEARS RECORDED IN LAKE AND MIRE SEDIMENTS

by

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The subject corresponds with the aims of the international IGCP project No 158 B and has been carried out as the Polish contribution to this project. M. Ralska-Jasiewiczowa was the leader of the Polish working group and the secretary of the international coordination committee of IGCP – Project No 158 from 1978-1988.

The reconstructions of environmental changes are based on studies of reference sites representing palaeoecological regions (so called type regions) into which the country has been subdivided. Besides the basic analytic methods, i. e. pollen analysis and radiocarbon dating, other palaeoecological methods such as identification of cladocera, diatoms, molluscs, and insects were used. Chemical, mineralogical, and stable isotope analyses were also performed at many sites in cooperation with competent specialists.

With the aim of acquiring a uniform biostratigraphical base for correlations, numerical methods (programs ZONATION and PCA performed by A. Walanus) were applied to zonation of palaeoecological (mainly palynological) data sequences.

M. Ralska-Jasiewiczowa investigated the individual reference sites for four type regions: the Bieszczady Mts, the Olsztyn Lake District, the Masurian Great Lakes District, and the Baltic Coast. She was also the editor of the three Acta Palaeobotanica volumes (1) presenting Polish contributions to IGCP- Project 158 B.

Recently, she prepared, in cooperation with M. Latałowa, the synthesis of IGCP-158 palaeoecological studies for Poland, based on data from 38 reference sites, including also many other complementary sites. The histories of vegetation and climate, and of lakes and mires, in connection with the hydrological and pedological changes, and also of anthropogenic changes of natural environment, have been reconstructed. The results are correlated within the so called synthesis regions, grouping the type regions of those main landscape zones, where a sufficient amount of information has been obtained. The mountains, the uplands, the eastern mid-Polish lowlands, the lake districts and the Baltic coastal zone are treated as synthesis regions. The interpretations consider the geographic-climatic gradients, the situation of the area towards the limit of the last ice-sheet, the directions and rates of migration of individual plant taxa, the topographic and soil conditions etc.

References

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