

Record of marine ingression in the Holocene deposits of the Mrzezyno area based on ostracodological analysis

Jarmila KRZYMINSKA & Bernard CEDRO

The object of the research was ostracod fauna occurring in the Holocene deposits within the Pomerania proglacial stream valley. At the beginning of Holocene, the area of the Lowland was covered with numerous shallow water reservoirs. Their existence is confirmed by the results of fauna research which indicate presence of species typical for cool water oligotrophic reservoirs such as: *Cytherissa lacustris* (SARS), *Candona angulata* MÜLLER, *Candona neglecta* SARS and *Candona weltneri* HARTWIG. The oldest Holocene deposit located on the Lowland is extensive peat plain slightly sloping northward. Its age was radiocarbon dated at $10,039 \pm 220$ BP to 7560 ± 140 BP (BORÓWKA & CEDRO 2011). Uplift of water level in Boreal period caused flood of big part of the Lowland. Marine deposits connected with sea transgression, within described area, were found near fossil edge of the upland and they can be an indicator of the previous sea range. In Subboreal period in northern part of the Lowland, brackish reservoir already existed. Its creation was probably caused by uplift of the level of underground water and floating of marine water during the last phase of littorinian transgression. It is confirmed by ostracodological analysis showing the presence of marine species such as: *Cyprideis torosa* (JONES) and *Cytheromorpha fuscata* (BRADY) in deposits of this reservoir. Thickness of marine and lagoon sands varies from 0.5 m in previous coastal zones to 3.5 m in deepest parts of lagoon bays. Big part of marine sands eroded by later occurrence of meandering Rega in 5900–4000 BP. In Subatlantic period (1700 ± 50 BP), accumulation of peat on the area of the Lowland was finished as a result of rapid changes of hydrological conditions. Simultaneously, among marine barrier sands intensive eolian processes began causing origin of numerous parabolic and barchan-like dunes which next changed in arch dunes and numerous deflation inselbergs and also channels and potholes.

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Reference

BORÓWKA, R.K. & CEDRO, B. (2011): Holocene marine ingressions in the coastal zone of the Pomeranian Bay based on radiocarbon assays. – *Geochronometria*, 38(1): 85-92.

Authors addresses:

Jarmila Krzyminska

Polish Geological Institute-National Research Institute, Branch of Marine Geology, Kosciarska 5, 80-328 Gdansk, Poland

jarmila.krzyminska@pgi.gov.pl

Bernard Cedro

University of Szczecin, Institute Sciences of the Sea, Department for Geology and Palaeogeography, Mickiewicza 18, 70-383 Szczecin, Poland

petromin@univ.szczecin.pl