Glaciolacustrine environments related to retreat of the last Scandinavian ice sheet from Lithuania

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The glaciolacustrine sediments of the Late Pleistocene are widely spread in Lithuania. The origin of them was connected with damming up of meltwaters by edge of retreating last Scandinavian ice sheet. Palaeogeographical changes are reflected in the elementary sedimentation cycle of glacial–glaciolacustrine–lacustrine–glaciolacustrine deposits.

Paragenetic associations of these sediments are related to glacier recessions in South, Middle and North Lithuanian phases of glaciation. Beyond the field of dead ice in the uplands there stood the strong glacier which was in the position to readvance in lowlands. Different glaciolacustrine sediments of glacier oscillation, recession and readvance, and the lacustrine sediments which accumulated during rise in temperature in interphasials were find. The suspension flows from thawing glacier, temperature and pressure in basin, hydrodynamic conditions of water in oligotropic lake had a decisive. Also an activity of organic world which increased during summer periods influenced the lacustrine sedimentation. The glaciolacustrine deposits contain seasonal band of carbonates in interphasial layers. Glaciolacustrine sedimentation reflects the climatic changes within the limits of 120–130 years.

The glaciolacustrine–lacustrine profile of sediments may be subdivided into 3 palaeoclimatic and sedimentation intervals: 1) the time of retreat of the oscillating ice margin (glaciolacustrine sedimentation), 2) interphasial (or interoscillation) lacustrine sedimentation with seasonal warm–cold contrasts, 3) readvance of the oscillating ice (new glaciolacustrine sedimentation).