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Paleolimnological reconstruction of environmental variability during the Late Pleistocene and Holocene in the south-east Baltic region

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The main goal of our research is the high-resolution reconstruction of environmental and climatic changes in SE Baltic region since the Last Glacial Maximum by palaeolimnological data. The 6 objects – lakes and peat-bogs, were studied since 2009 in the Kaliningrad region, Russian Federation. According to palaeolimnological studies of bottom sediments of the Kamyshovoe Lake (N 54°22,6‘; E22°42,8‘, 189 m a.s.l.), located in the Vishtynets Highland, the south-east part of Kaliningrad district, the environmental and climatic changes after the late glacial have been reconstructed. At that moment the radiocarbon and loss-on-ignition (LOI) data, geochemistry and diatom analysis for the whole sediment core, and pollen analyze for the bottom part of the core have been completed. According to the pollen data the Alleröd interstadial starts at 13 200 cal. yrs BP and is marked by the rising of birch and pine pollen. The transition to the Younger Dryas around 12 700 cal. yrs BP corresponds with the development of patches of shrublands in which light-demanding species, such as juniper, flourished and communities of steppe herbs. The late Preboreal is marked by the appearance of Populus and an increase of the role of grasses in the vegetation cover 11 300–11 100 cal. yrs BP (Druzinina et al., 2015). The Holocene climatic zones have been identified by LOI and geochemistry analyses. The Boreal period started about 10 200 cal. yrs BP, Atlantic around 9100 cal. yrs BP, Subboreal 5800 cal. yrs BP, and Subatlantic 3200 cal. yrs BP (Kublitskiy et al., 2015). During the conference the new palaeolimnological data of environmental variability during the late Pleistocene and Holocene in SE Baltic region will be presented.

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References

Druzhinina, O., Subetto, D., Stančikaitė, M., Vaikutienė, G., Kublitsky, J., Arslanov, Kh., 2015. Sediment record from the Kamyshovoe Lake : history of vegetation during late Pleistocene and early Holocene (Kaliningrad District, Russia). Baltica, 28 (2). (in press).

Kublitskiy, I., Subetto, D., Kulkova, M., Druzhinina, O., Arslanov, Kh., 2015. Analysis of the climatic changes at the Late Pleistocene and the Holocene based on palaeolimnological studies of the Kamyshovoe Lake (Kaliningrad Region). Proceeding of the IX Russian conference on Quaternary Research (Irkutsk, 15-20 September 2015) [In Russian].