XIV SUBFOSSIL CLADOCERA WORKSHOP

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ABSTRACT BOOK

FONDAZIONE EDMUND MACH

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A.I.O.L.

Studies of subfossil Cladocera (Branchiopoda, Crustacea) from bottom deposits of Lake Medvedevskoe (Karelian Isthmus, Russia

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The object of the study is Lake Medvedevskoye (60 ° 14' N, 29 ° 54' E., 102.2 m a.s.l., surface area is 0.44 km^2, 0.5 km width, 1.18 km length, maximum depth is about 4 m), located in the Central highlands of Karelian Isthmus, which due to its high-altitude location, has not been flooded by the waters of the large periglacial basins after the last deglaciation, and is characterized by a high degree of the rate of sedimentation. The lake basin formed before 13000 cal.yr. BP, possibly due to melting of stagnant glacier ice.

In spring of 2012 two sediment cores of 1 and 2.5 m respectively were selected from the ice surface. The sediment subsamples from the core were collected with 1-6 cm intervals for the radiocarbon dating by an accelerator mass spectrometry (^{14}C AMS-method), and for loss on ignition (LOI %), lithostratigraphy, and micropaleontological analyses including Cladocera analysis.

In total 3745 individual of subfossil Cladocera were recovered from 35 slide-mounted samples of the investigated sediment. The most abundant taxa were *Bosmina (Eubosmina) cf. longispina* (14,37% of total abundance), *Alonella nana* (13,18%), *Acroperus harpae* (11,64%), *Chydorus* cf. *sphaericus* (11,16%). The number of taxa per sample varied throughout the core from 4 to 24 with a mean of 17 taxa. The qualitatively and quantitatively dominants are typical littoral taxa (51,5%). Taxonomic richness was lower at the bottom of the core and increased towards the sediment surface. Organic content (LOI) in the sediment constantly increases throughout the sediment core. The changes in the cladoceran community suggest that the lake ecosystem is characterized by increasing of organic productivity through the Holocene.

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