

Arctic areas have low energy income and therefore harbour very simple food webs. Every environmental change has large and immediate impact. There are many types of lakes in the Arctic, and their sediments accumulate pieces of organisms that inhabited them. Most frequently those are Chironomidae, Diatomeae and Cladocera. My thesis is focused on Cladocera, which have very good subfossil record, most often carapaces, head shields, postabdomens and ephippia can be found. In palaeolimnological studies these records are used to reconstruct development of environmental factors such as temperature, water level and trophic status. These models can then be used to predict future changes of the environment. My future work will be focused on lake Garmaksla in the central Svalbard and therefore all aspect in presented thesis is focused on Svalbard.