**Neklason B16**

**Macrofossil sieving, separation, and identification methods**

The Neklason B16 core was sampled continuously (every 4th sample missing?) between 1 and 351 cm (composite depth) generally using a 1 cm sampling increment with volume of ?? Multiple macrofossil specimens were picked from specified depths at the time of core splitting.

Sediment samples were wet sieved with de-ionized water through a series of 5 nested screens to produce material for carbonate isotope analyses. The coarse sediment fraction (> 150 um) was described and examined for plant macrofossil remains. Sediment samples were examined in de-ionized water in a petri dish under a dissecting microscope. Identifiable plant remains were picked, identified, and stored in glass vials with de-ionized water in a refrigerator.

**Plant Macrofossil Record**

Plant remains in the Neklason B16 core were relatively abundant but not highly diverse. Several woody tree/shrub, wetland, and aquatic plant taxa were identified. Trees/shrubs are represented by remains of conifers (needles, twigs, seeds, cone parts) and deciduous taxa (buds, bud scales, seeds, bracts, and broad-leaf fragments). Wood, bark, and charcoal fragments also indicate the presence of woody trees/shrubs. Conifer taxa belong to the Pinaceae family (*Picea* sp., *Picea sitchensis*-type). Deciduous taxa belong to the genera *Betula*, cf. *Alnus/Betula,* and *Rubus*. Wetland and herbaceous plants are represented by seeds of cf. *Carex* sp. and cf. Brassicaceae, and aquatics by the oogonia of the calcareous algae *Chara* sp., and seeds of *Potamogeton* sp. The presence of other macroscopic materials was also recorded, including ostracodes, bivalve/gastropod shells and shell fragments, insect fragments, and herbaceous (likely aquatic) plant material.

Conifer macrofossils most commonly occur in the upper part of the record above 145 cm. Birch also occurs with conifers throughout the upper part of the record down to 145 cm. Between 145 to 218 cm no conifer macrofossils are present however birch, wood, broadleaf fragments, buds and budscales, and *Rubus* sp. are present in this interval. 1 cf. Pinaceae and 1 cf. Alnus/Betula specimen occur at 218 cm and 215 cm respectively and no conifer or deciduous taxa are found between 218 and 351 cm. Remains of wood and broadleaf fragments do continue to occur throughout the core down to 313 cm however, no plant macrofossils other than one occurrence of charcoal are found below 323 cm. Intervals where no wood is found occur between 75-117 cm and 215-255 cm.

Bivalve and gastropod shells and shell fragments were consistently present above 250 cm and less common below 250 cm. *Chara* oogonia or stem casts and insect remains are present throughout the core.