**April Fools B15**

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

The April Fools B15 core was sampled between 42 cm and 765 cm (composite depth) using .5 cm sampling increments in drive SC, and 1 cm sampling increments in drives 2 throug 10. Samples were collected by ? with ? volume. One sample in drive 10 was taken at a .5 cm increment and multiple macrofossil specimens were picked from specified depths at the time of core splitting. The sampling interval is generally every 15 cm throughout the core, however samples were taken at finer (1 cm) and coarser (19 cm) intervals especially in drives 7, 8, 9 and 10 (below 565 cm).

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 in de-ionized water in a refrigerator.

**Plant Macrofossil Record**

Plant remains in the April Fools B15 core were not highly abundant or diverse. Several woody tree/shrub, wetland, and aquatic plant taxa were identified. Trees/shrubs are represented by remains of conifers (needles, cone scales, twigs, seeds, and stem fragments) and deciduous taxa (buds, 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 (pine) family (cf. *Picea*) and Cupressaceae (cypress) family (*Juniperus horizontalis*). Deciduous taxa belong to the genera *Betula* sp. (birch) and *Salix*-type (willow). Wetland plants are represented by seeds of *Carex* sp. and aquatics by the oogonia of the calcareous algae *Chara* sp. The presence of other macroscopic materials was also recorded including ostracodes, bivalve/gastropod shells and shell fragments, *Daphnia* sp. egg cases, insect fragments, bryophytes, and herbaceous (likely aquatic) plant material.

Remains of woody taxa, wood/bark macrofossils and broadleaf macrofossils are present in the upper part of the record between 0 and 345 cm and in the lower part of the record between 600 and 748 cm. There is a gap in these macrofossil types between 345 and 600 cm except for the occurrence of one Pinaceae specimen at 475 cm and 1 charcoal specimen at 410 cm. Conifers are only represented in the record by 4 specimen occurrences with remains of Pinaceae occurring near the top, middle, and bottom of the record at 42 cm (cf. *Picea* sp., likely spruce), 475 cm (Pinaceae), and 748 cm (cf. *Picea* sp., likely spruce), and one specimen of *Juniperus horizontalis* (creeping Juniper*)* present at 600 cm. Birch occurs with spruce and possibly willow in the lowermost sample at 748 cm.

The macrofossil record overlaps the pollen record for drives 7, 8, and 9 from 580 to 749 cm. The pollen record shows the presence of birch and willow throughout this interval. Macrofossils support the presence of these taxa at 749 cm and the presence of woody taxa throughout this interval along with commonly occurring charcoal and *Chara* which are absent or very uncommon in the record above this interval. A possible spruce macrofossil also occurs at 749 cm when spuce is in very low abundance in the pollen record or maybe zero?

**Paleoenvironmental Interpretation**

This is pretty tough to do based on macros alone since the record is very coarse. We could possibly mark very broad zones of presence of trees/shrubs but lack of macros doesn’t necessarily mean a true absence, we will have to compare to the isotope and other data.

**Viereck and Little, 1972. Juniperus horizontalis** – In Alaska, rare and local on dry rocky slopes and sunny sands, Southeast interior Alaska along Chitina and Copper Rivers and west to Hicks Creek (east of Palmer). Alaska, Mackenzie and Yukon, east to Great Slave Lake, Hudson Bay, Labrador and Newfoundland, south to NY, MI and CO.