

TITLE: BEST_HLY0802_Benthos_Isotopes

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DESCRIPTION:

This file contains data for stable carbon and nitrogen isotope values ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) of benthic invertebrates from van Veen grab collections made during HLY0802. For details on expeditions as well as station locations, check the cruise reports available at <http://www.eol.ucar.edu/projects/best/>.

The data are in a standard excel format spreadsheet.

Benthic invertebrates were collected with multiple (1-3 per station) van Veen grabs, the combined catch sieved over 1 mm mesh and sorted to lowest taxonomic level. Where available, taxa were sampled in three replicates per station. Individuals were sampled whole, as pieces of body wall (without intestine), or as muscle tissue, and then samples were kept frozen (-20°C) individually. Frozen samples were later dried at 60°C for 24 h. Dry samples of those taxa containing carbonates (e.g., Amphipoda, Cumacea) were treated with 1N HCl until bubbling ceased, rinsed with distilled water, and dried again at 60°C for 24 h. All samples were then treated with chloroform:methanol (2:1) to remove lipids. After drying at 60°C for 24 h, samples were measured for carbon and nitrogen isotopic composition at the UAF Stable Isotope Facility. Stable isotope ratios are reported in conventional δ notation as ‰ deviation from the international standards PDB (carbon) and air (nitrogen) according to the following equation:

$$\delta X = [(R_{\text{sample}}/R_{\text{standard}}) - 1] \cdot 1000$$

where X is ^{13}C or ^{15}N of the sample and R is the corresponding ratio $^{13}\text{C}/^{12}\text{C}$ or $^{15}\text{N}/^{14}\text{N}$.

Description of columns

Cruise: Indicates the cruise during which samples were taken (HLY0802 = HLY: ice breaker USCGC Healy, 08: year 2008, 02: second leg).

Station: Contains the station name also referred to in the cruise catalogue.

Date: Calendar date when sample was taken (day, month, year)

Lat: Latitude of sample location (degrees north, minutes with decimals)

Long: Longitude of sample location (degrees west, minutes with decimals)

Taxon: Refers to the lowest taxonomic resolution identified for each sample, mostly at the species or genus-level, but occasionally at the family level.

Class/Order: Refers to the class or order classification of the taxa.

Replicate: Number of replicate sample for each taxon at any given station.

Tissue: Tissue type (whole, body wall, muscle) used for the analysis.

$\delta^{15}\text{N}$: Stable carbon isotope ratio (in ‰).

$\delta^{13}\text{C}$: Stable carbon isotope ratio (in ‰).