TITLE: SWL2017_SPECIES_Macroinfaunal taxa_README

Sir Wilfrid Laurier 2017 Macroinfaunal Taxa (Species Level)

AUTHORS: P.I.(S): Jackie M. Grebmeier/Lee W. Cooper University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory

> tel: +1 410-423-7334 (JG), +1-410-326-7359 (LC) fax: +1 410-326-7302 email: <u>jgrebmei@cbl.umces.edu</u>, <u>cooper@cbl.umces.edu</u> website: <u>http://arctic.cbl.umces.edu</u>

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ORIGINAL AWARD TITLE: Collaborative Research: The Distributed Biological Observatory (DBO)-A Change Detection Array in the Pacific Arctic Region

DATA ARCHIVE: NSF Arctic Data Center, https://arcticdata.io/

KEYWORDS: benthic macroinfauna, sediment, abundance, biomass, Distributed Biological Observatory, DBO

DATASET OVERVIEW:

This dataset contains benthic macroinfaunal population level from sediment samples collected at each station for the CCGS Sir Wilfrid Laurier cruise-Leg 1 in 2017, identified by station number (#), Station name (Stn. Name), Date (mm/dd/yy), latitude (°N), longitude (°W), and station depth (m). The following macroinfaunal parameters were determined: abundance, wet weight biomass (gww/m2), dry weight biomass (gC/m2), and taxon type.

INSTRUMENT DESCRIPTION:

A van Veen grab (0.1 m²) weighted with 32 kg of lead, was used in the collection of sediment samples for macroinfaunal collections.

DATA COLLECTION AND PROCESSING

On average, four successful grabs were sieved on a 1 mm screen and macroinfauna collected and packaged in plastic containers with preservation in 10% seawater formalin, buffered with hexamethylenetetramine. The number of replicates collected at each station is provided in the data set. Macrofauna were sorted, counted, and weighed (wet weight) to the species or lowest taxon level possible at the Chesapeake Biological Laboratory. The dry weight biomass was calculated from published carbon conversion values (Stoker 1978, Grebmeier et al. 1989). The "X" values next to the taxa names means that this taxa was excluded from summary analyses since we exclude meiofauna (foraminifera, nematodes) and motile macroinfauna (e.g., motile gastropods, and encrusting epibenthos (e.g., bryozoans) from our further statistical analyses. Bracketed taxon names [] indicate a prior name used in time series analyses before updated taxa name changes. The carbon biomass was calculated from published carbon conversion values (Stoker 1978, Grebmeier et al. 1989). Samples were subsequently archived in 50% propanol.

DATA FORMAT

File Names (Formats): SWL2017_SPECIES_Macroinfaunal_taxa.csv

Data Parameters:

Cruise-Ship, Year, Cruise # = SWL2017 Station No - sequentially numbered from beginning to end of cruise Station Name - based on transect names (for DBO name, see table below) No of Grabs - number of replicate grabs collected at each station Latitude-decimal degrees Longitude-decimal degrees Date - mm/dd/yy Gear_code - van Veen grab Gear size - 0.1 m2 van Veen grab Depth - bottom station depth in meters Abundance - abundance of each taxa type in number/m2 Wet Weight - wet weight (ww) of each taxa type in gww/m2 Carbon Biomass – Carbon dry weight of each taxa type in gC/m2 using conversion factor for each taxa (see reference list below) Taxon code-12 digit NODC taxon code (internal use only; no connection to an official database) Species- full taxon name

Additional Notes:

- Since many taxa names have changed in official taxa databases such as the World Register of Marine Species (WoRMS; <u>https://www.marinespecies.org/</u>) and the Integrated Taxonomic Information System (ITIS; <u>https://www.itis.gov/</u>), users should check the current status of any taxa important to their research. An example is that a species we have been calling Synaptidae (identified at the family level) has branched into the family Myriotrochidae (also, identified at the family level), so users will need to make the change themselves if either family is relevant to their research. Please contact our lab with further guestions (jgrebmei@cbl.umces.edu).
- The taxon code that we use is for internal use only and has no relationship to an official database.

• Table of Historical and DBO Station Names (DBO1-8)

DBO Station Name	Historical Name
DBO1.1	SLIP1
DBO1.2	SLIP2
DBO1.4	SLIP3
DBO1.6	SLIP5
DBO1.8	SLIP4
DBO2.0	BCL6C
DBO2.1	UTBS5
DBO2.2	UTBS2
DBO2.3	UTBS2A
DBO2.7	DBO2.7
DBO2.5	UTBS1
DBO2.4	UTBS4
DBO3.1	SEC8
DBO3.2	SEC7
DBO3.3	SEC6
DBO3.4	SEC5
DBO3.5	SEC4
DBO3.6	SEC3
DBO3.7	SEC2
DBO3.8	SEC1
DBO4.1	NotApplicable
DBO4.2	NotApplicable
DBO4.3	NotApplicable
DBO4.4	NotApplicable
DBO4.5	NotApplicable
DBO4.6	NotApplicable
DBO4.1n	NotApplicable
DBO4.2n	NotApplicable
DBO4.3n	NotApplicable
DBO4.4n	NotApplicable
DBO4.5n	NotApplicable
DBO4.6n	NotApplicable
DBO4.1N	NotApplicable
DBO4.2N	NotApplicable
DBO4.3N	NotApplicable
DBO4.4N	NotApplicable
DBO4.5N	NotApplicable
DBO4.6N	NotApplicable

DBO Station Name	Historical Name
DBO5.1	BarC1
DBO5.2	BarC2
DBO5.3	BarC3
DBO5.4	BarC4
DBO5.5	BarC5
DBO5.6	BarC6
DBO5.7	BarC7
DBO5.8	BarC8
DBO5.9	BarC9
DBO5.10	BarC10
DBO6.1	NotApplicable
DBO6.2	NotApplicable
DBO6.3	NotApplicable
DBO6.4	NotApplicable
DBO6.5	NotApplicable
DBO6.6	NotApplicable
DBO7.1	NotApplicable
DBO7.2	NotApplicable
DBO7.3	NotApplicable
DBO7.4	NotApplicable
DBO7.5	NotApplicable
DBO7.6	NotApplicable
DBO8.1	NotApplicable
DBO8.2	NotApplicable
DBO8.3	NotApplicable
DBO8.4	NotApplicable
DBO8.5	NotApplicable
DBO8.6	NotApplicable

Data Version Number and Date: Version 1, 07/18/2022 Software Compatibility: This dataset will be posted in CSV format

REFERENCES

Grebmeier, J. M., Howard M. Feder and C. Peter McRoy (1989), Pelagic-benthic coupling on the shelf of the northern Bering and Chukchi Seas. II. Benthic community structure, Marine Ecology Progress Series, 51, 253-268.

Stoker, S. W. (1978), Benthic invertebrate macrofauna of the eastern continental shelf of the Bering/Chukchi Seas., Ph.D. thesis, University of Alaska Fairbanks.