

TITLE: **AMBON2017_SPECIES_Macroinfaunal_taxa_README.pdf**
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AWARD TITLE: (for subcontracted effort): “**Arctic Marine Biodiversity Observing Network (AMBON): Water column and benthic processes**”

NOTE: For macroinfaunal taxa data for DBO3 and DBO4 stations, please visit the NSF Arctic Data Center to download Sir Wilfrid Laurier 2017 macroinfaunal data and extract those stations. Jacqueline M. Grebmeier and Lee W. Cooper. 2022. Benthic macroinfaunal samples collected from the Canadian Coast Guard Ship (CCGS) Sir Wilfrid Laurier, Northern Bering Sea to Chukchi Sea, 2017. Arctic Data Center. [doi:10.18739/A2Z60C36Q](https://doi.org/10.18739/A2Z60C36Q).

DATA ARCHIVE: AOOS (Alaska Ocean Observing System research workspace) data archive link: <https://researchworkspace.com/project/234399/files>

DATASET OVERVIEW:

This dataset includes measurements of macrofaunal samples collected at select stations during the AMBON cruise on the RV Norseman II from August 4-25, 2017. Stations are 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, UMCES. 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): **AMBON2017_SPECIES_Macroinfaunal_taxa.csv**

Data Parameters:

Cruise-Ship, Year, Cruise #

Station Number - sequentially numbered from beginning to end of cruise

Station Name - based on transect names

Number of grabs/stn=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

Station 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

Family or Species-taxon name associated with 20 digit NODC taxon code

Data Version Number and Date: Version 1, 01/28/2025 Software Compatibility: This dataset will be posted in Microsoft Excel.

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.