Dataset: Zooplankton from hypoxic waters of Chesapeake Bay

Project(s): Hypoxia in Marine Ecosystems: Implications for Neritic Copepods (DeZoZoo)

Abstract: These data represent a merging of electronic data collected with the MOCNESS sensor systems and the zooplankton count data from the sample collected with the MOCNESS net tows. For a complete list of measurements, refer to the supplemental document 'Field_names.pdf', and a full dataset description is included in the supplemental file 'Dataset_description.pdf'. The most current version of this dataset is available at: http://www.bco-dmo.org/dataset/564755

Description: Zooplankton - esp. copepods - from hypoxic waters of the Chesapeake Bay

These data represent a merging of electronic data collected from the MOCNESS sensor systems and the count data from the samples collected with the net tows. Some nets were used for zooplankton samples, while others were collected specifically to estimate bay anchovy concentrations. (See associated dataset: http://www.bco-dmo.org/dataset/563428.) These are contained on different sheets, and the count data was merged individually.

Processing Description: Electronic data was post-processed by PI Pierson. Zooplankton sorting data was analyzed, processed, and quality controlled in PI Pierson's lab.

DMO adjustments: added column for official cruise name; replaced sal=50 (error) with sal=nd; changed C. canadensis in parenthesis to Coullana canadensis in the appropriate columns; used MOCNESS start lats and lons as best, according to PI instructions; removed MOCNESS-recorded times and used GPS times instead, which is much more accurate (according to PI instructions); changed decimal days for 1102 (HRS110719JP) to HH:MM;

Deployment Information

Deployment description for R/V Hugh R. Sharp HRS100524JP

Cruise in Main Channel of Chesapeake Bay

Deployment description for R/V Hugh R. Sharp HRS100819JP

Cruise in main channel of Chesapeake Bay to collect zooplankton samples.

Deployment description for R/V Hugh R. Sharp HRS100920JP

Deployment description for R/V Hugh R. Sharp HRS1005205

One of a series of cruises in the main channel of the Chesapeake Bay to collect gelatinous zooplankton.

Deployment description for R/V Hugh R. Sharp HRS110525JP

One of six week-long cruises in the main channel of Chesapeake Bay to collect gelatinous zooplankton.

Deployment description for R/V Hugh R. Sharp HRS110719JP

One of six week-long cruises in the main channel of the Chesapeake Bay to collect gelatinous zooplankton

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Deployment description for R/V Hugh R. Sharp HRS110922JP

One of 6 week-long cruises in the main channel of the Chesapeake Bay, collecting gelatinous zooplankton.

Instrument Information

Instrument	1/4 Meter MOC
Description	Had trouble communicating with the 1/4 m2 MOCNESS in the beginning of the first cruise. Picked up replacement parts and were able to get it working again with an underwater unit borrowed from BESS, the manufacturer of the MOCNESS system. (Subsequent analysis by BESS, Inc. showed that some damage to the underwater unit was caused when it was plugged into the sea cable with some charge still in the cable -- most likely from the Seabird deck unit still turned on.) -- from the Cruise Report
Generic Instrument Name	MOCNESS.25
Generic Instrument	The Multiple Opening/Closing Net and Environmental Sensing System or MOCNESS is a family of net systems based on the Tucker Trawl principle.

Description	The MOCNESS-1/4 carries nine 1/4-m2 nets usually of 64 micrometer mesh and is used to sample the larger micro-zooplankton.

Instrument	Tucker Trawl
Description	1 m2 Tucker Trawl fitted with 280 um mesh.
Generic Instrument Name	Tucker Trawl
Generic Instrument Description	The original Tucker Trawl, a net with a rectangular mouth opening first built in 1951 by G.H. Tucker, was not an opening/closing system, but shortly thereafter it was modified so that it could be opened and closed. The original had a 183 cm by 183 cm flexible rectangular mouth opening 914 cm long net with 1.8 cm stretched mesh for the first 457 cm and 1.3 cm mesh for last 457 cm. 152 cm of coarse plankton or muslin netting lined the end of the net. Tucker designed the net to collect animals associated with the deep scattering layers, principally euphausiids, siphonophores, and midwater fish. (from Wiebe and Benfield, 2003). Currently used Tucker Trawls usually have 1-m2 openings and can have a single net or multiple nets on the frame.