Planktonic Omnivores and Stable Isotopes: Developing, Validating and Field-testing a Multi-species Functional Response Model

Data Policy Compliance

The project investigators will comply with the data management and dissemination policies described in the *NSF Award and Administration Guide* (AAG, Chapter VI.D.4) and the *NSF Division of Ocean Sciences Sample and Data Policy* (NSF 17-037).

Pre-Cruise Planning

Description of Data Types

Observational Data:

- Data from net tows and benthic cores including abundance and concentration of *Neomysis americana* (hereafter, *Neomysis*), zooplankton, zoobenthos, phytoplankton, and detritus, as well as depth and geospatial coordinates (DD). File types: spreadsheets.

- *Neomysis* gut contents data from field collections including counts of major prey taxa (e.g., zooplankton, zoobenthos, phytoplankton, detritus). For major prey taxa – basic conversion equations to convert counts of prey taxa to dry weight (µg dry wt / individual). File types: spreadsheets.

- Electronic hydrographic data: Electronic from profiling CTD equipment with environmental sensors (temperature, salinity, fluorescence, dissolved oxygen, turbidity) from field collections. File types: raw (.hex, .con, .hdr., .bl) and processed data (spreadsheets)

Experimental Data:

- Predation rates and prey preferences from single and mixed-diet feeding experiments of *Neomysis* on zooplankton (adult + naupliar copepods), phytoplankton and detritus and physiological (weight, length) *Neomysis* data from experiments. File types: spreadsheets

- Data from chemical analyses of *Neomysis*, zooplankton, phytoplankton and detritus collected during stable isotope equilibration rate and trophic enrichment factor experiments for carbon and nitrogen values of bulk tissues and nitrogen values of compound-specific amino acids. File types: spreadsheets

Modeling Data

- Multispecies functional response modeling code. File types: .R file.

- Multispecies functional response model development and model testing datasets. Files types: spreadsheets.

Data and Metadata Formats and Standards

Data will be recorded in notebooks and computer spreadsheets, which will be transcribed to spreadsheets or databases and these electronic files will be archived and backed up. All notebooks will be scanned into PDF files.

Data and metadata will be submitted to BCO-DMO as either comma- or tab-separated ASCII files (.csv, .txt), as spreadsheet files (.xls, .xlsx), or as code (.R). All data will be accompanied by FGDC compliant metadata.

Data Storage and Access During the Project

Electronic archiving of data will be on the PIs desktop computer and backed up to a separate network storage device, accessible remotely and in different buildings on respective campuses (CBL or HPL). An additional backup drive attached to the PIs' computers will retain tertiary copies of all electronic data and PDF copies of notebook recorded data.

All data will be made available to all personnel working on the project through an institutional file-sharing site until the data are submitted to BCO-DMO. Data access and storage by project team members will be accomplished through the use of network attached storage devices, file-sharing site and email of files among PIs. Coordination of final data will be accomplished by PI Woodland.

Mechanisms and Policies for Access, Sharing, Re-Use, and Re-Distribution

Data and metadata from this project will be submitted and published on a timely basis by BCO-DMO (http://www.bco-dmo.org/data-management-best-practices-guide) located at Woods Hole Oceanographic Institution, compliant with the requirements of the Division of Ocean Sciences Data and Sample Policy. The best practice guidelines provided by BCO-DMO for data and metadata preparation will be followed and all metadata will be provided in FGDC compliant formats. The PIs will be in contact with BCO-DMO personnel to make sure adequate planning is done for the submission of data created during this project and appropriate to this repository.

Public access to data will be given once the data is quality controlled and published, and in accordance with federal, NSF, and UMCES institutional guidelines for data accessibility.

Plans for Archiving

Samples will be stored frozen in cyrovials at -20°C or in sealed sample jars with formalin in climate controlled storage facilities. Electronic data that is contributed to BCO-DMO will be archived properly at the appropriate National Data Center for long-term archive preservation.

Roles and Responsibilities

PI Woodland will be responsible for coordinating all data management activities, which will be carried out by the PIs, technicians and the graduate student on this project. Co-PI Pierson has worked with BCO-DMO for previous projects for which data are currently available on their website and he will assist PI Woodland in working with BCO-DMO to ensure compliance for this project.