

## DATA MANAGEMENT PLAN

This Data Management Plan was produced using the DMP Tool.

**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 Sample Policy.

**Pre-Cruise Planning** Samples and data will be collected by collaborators during regular NOAA fisheries surveys. Samples collected for the current project are add-ons to the main surveys, therefore any pre-cruise planning that will involve the PI of the proposed project will be limited to her samples needs.

**Description of Data Types** The project will produce several observational and experimental datasets, described in the list below. In addition to the datasets described below, educational resources produced by the project, including data and images, will be made available for public use on the COSEE.net website. Observational data will be collected on several NOAA fisheries surveys in the Northern California Current (NCC) planned to take place during the spring and summer months of 2018 (May-August). Experiment-derived data will be obtained using animals collected either on the NOAA fisheries surveys or during single-day surveys from smaller research platforms. The experiments will be conducted at the Hatfield Marine Science Center in Newport, OR.

### Observational Datasets:

1. CTD and Niskin bottle data. File types: Raw (.con, .hdr, .hex, .bl) and processed and .cnv, .asc, .bt1) ASCII files. Repository: BCO-DMO.
2. Pyrosome sampling logs and abundance and length frequency data. File types: PDF files of scanned log sheets; Excel files of sampling logs. Repository: BCO-DMO.
3. Pyrosome gut pigment contents. File types: Excel files of gut pigment contents. Repository: BCO-DMO.
4. Pyrosome colony and fecal pellet organic carbon and nitrogen content. File types: Excel files of gut pigment contents. Repository: BCO-DMO.

### Experimental Datasets:

1. Pyrosome gut evacuation rates results. File types: Excel file(s). Repository: BCO-DMO.
2. Pyrosome fecal pellet production, sinking and decomposition rates results. File types: Excel file(s). Repository: BCO-DMO.
3. Pyrosome colony sinking and decomposition rates results. File types: Excel file(s). Repository: BCO-DMO.

**Data and Metadata Formats and Standards** CTD data will be stored in flat ASCII files, which can be read easily by different software packages. CTD data will include date, time, latitude, longitude, cast number, and depth, as appropriate. Quality flags will be assigned according to the ODS IODE Quality Flag scheme (IOC Manuals and Guides, 54, volume 3; [http://www.iode.org/mg54\\_3](http://www.iode.org/mg54_3) ). Biological data will be stored in Excel spreadsheets and as .csv files. Metadata, for both CTD and biological datasets, will be prepared in accordance with BCO-DMO conventions (i.e. using the BCO-DMO metadata forms) and will include detailed descriptions of collection and analysis procedures.

**Data Storage and Access During the Project** The investigators will store project data (including spreadsheets, ASCII files, and PDFs of scanned logs) on laboratory computers that are backed up by the University's central IT organization. The Principal Investigator (PI) also has an account with the Apple Cloud Service for data storage. Personal computers in all laboratories are backed up daily to an onsite external hard drive, and weekly to an offsite hard drive.

**Mechanisms and Policies for Access, Sharing, Re-Use and Re-Distribution** Datasets produced by the science party will be made available through the BCO-DMO data system within two-years from the date of collection. The project investigators will work with BCO-DMO data managers to make project data available online in compliance with the NSF OCE Sample and Data Policy. Data, samples, and other information collected under this project can be made publicly available without restriction once submitted to the public repositories. Data produced by this project may be of interest to chemical and biological oceanographers, fishery, oceanographers and modelers (food web, ecosystem, biogeochemistry models). We will adhere to and promote the standards, policies, and provisions for data and metadata submission, access, re-use, distribution, and ownership as prescribed by the BCO-DMO Terms of Use (<http://www.bco-dmo.org/terms-use>).

**Plans for Archiving** BCO-DMO will ensure that project data are submitted to the appropriate national data archive. The PI will work with BCO-DMO to ensure data are archived appropriately and that proper and complete documentation are archived along with the data.

**Roles and Responsibilities** Each project participant will be responsible for sharing his/her subset of data among the other project participants in a timely fashion. Collaborators, J. Fisher, K. Jacobson, and R. Brodeur will be responsible for collecting pyrosomes during the NOAA fisheries surveys and for providing the CTD and event log data relevant to the study. Research assistants, E. Daly and S. Zeman will oversee the experiments on live pyrosomes run at the Hatfield Marine Science Center and will ensure that data are logged and recorded as necessary. An undergraduate student (TBD) will process pyrosome samples for gut pigment and organic carbon and nitrogen. The student will maintain a detailed lab notebook and will ensure all data are transferred from the notebook to Excel spreadsheets, under the supervision of Lead PI, K. Bernard. Lead PI, K. Bernard, will coordinate the overall data management and sharing process and will submit the project data and metadata to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) who will be responsible for forwarding these data and metadata to the appropriate national archive.