

Collaborative Research: Adaptable life history strategy of a migratory large predator in response to El Nino and climate change

NSF-OCE 1338973

Data Management Plan

Types of data

The project will collect and analyze the following data:

- Conductivity, temperature, dissolved oxygen and chlorophyll *a* (fluorescence) from CTDs
- Acoustic backscatter from the ship, profiler, and ROV
- Biological samples from jigging and net tows

Data and Metadata Standards

Data will be shared in Matlab MAT file format and/or as netCDF files. Data quality will be in accord with published uncertainty ranges for each instrument and within error bars for standard processing techniques.

Data access and sharing

All data collected under this program will be made available as per NSF guidelines within 2 years of collection via published manuscripts, publicly available final reports to NSF, and data archiving in appropriate databases.

CTD data will be archived at NODC. Data will also be made available by specific request to any colleague.

Biological data will be archived at Biological and Chemical Oceanography Data Management Office (BCO-DMO), including metadata and the location of all voucher specimens.

Recognizing that archiving acoustical data can result in gigabytes-to-terabytes of data, every effort will be made to archive the interpreted output and provide data and/or code to interested parties upon request. OSU maintains redundant servers for all raw and processed data and has a history of making these available to any colleague by request.

Data archiving and preservation

There are currently no established standards for archiving of data from many of the proposed sensors. Many of these sensors and thus data formats are being considered by the Ocean Observing Initiative team. We will work with them to ensure consistency in formatting and with BCO-DMO to evolve formats for data and metadata suitable for archiving data and synthesized information from the experiment. Ultimate archival formats will be determined in consultation with NODC and the BCO-DMO.

Voucher and type specimens will be archived as dictated by community standards and practices, as required by journals for publication, and as appropriate to support research results in the College of Earth, Ocean, and Atmospheric Sciences Biocuration Facility. Metadata for these samples will be provided at the time of curation.

Data use and publication

In addition to the standard terms of use for BCO-DMO, synthesized data (e.g. processed acoustic data) will need to go through basic quality control steps before being uploaded, stored, and shared with the general public. Users of synthesized data must have explicit written permission from the investigator who produced the data set prior to circulation of draft manuscripts or results that include the data. That permission should be requested at an early stage to allow opportunity for collaboration and participation in the analysis and publication process.