RUI: Collaborative Research: Linking physiological thermal thresholds to the distribution of lobster settlers and juveniles

NSF-OCE: 1948146 (ANNIS), 1947639 (RASHER), 1948108 (FREDERICH)

DATA MANAGEMENT PLAN

We are committed to making environmental and biological data available in as timely a fashion as possible, subject to the need to embargo some classes of data prior to publication and the limitations of existing data repositories. The following plan is based on our understanding of existing services, but data archives are expanding and new repositories are being developed. Consequently, we may modify our plans as more appropriate repositories become available. Proposed archiving and access plans are centered around the NSF-funded Biological and Chemical Oceanography Data Management Office (BCO-DMO) and are outlined by data type. In addition, we will make data available to the community post-publication through peer-reviewed journal articles, serving to alert the community to the existence of the data. If a more appropriate data portal develops, we will submit the pertinent data to that archive as well.

Hydrographic data from CTD surveys and bottom temperatures from temperature loggers. All CTD and temperature logger data will be archived with the BCO-DMO within 2 years of collection, with metadata posted within 90 days of collection. We will work with BCO-DMO to assure that the data and metadata will be submitted in a format acceptable to BCO-DMO.

Larval abundance data. Lobster larvae densities from neuston samples will be archived with BCO-DMO on the same time schedule as CTD data. We also reserve the right to embargo the biological data for a reasonable period of time to permit publication of the results. The larvae collected will be used in laboratory experiments to assess performance and oxygen consumption, or in physiological assays of thermal stress. In either case the physical samples will be altered or destroyed in the process and will not be available for archiving.

Settlement collector data. Lobster abundance and length frequency data and abundance of associated species will be archived with BCO-DMO on the same time schedule as CTD data. We also reserve the right to embargo the biological data for a reasonable period of time to permit publication of the results. There does not appear to be sufficient justification to incur the costs of archiving these specimens long term.

Laboratory performance of larval lobsters. Growth and development data and oxygen consumption data will be archived with BCO-DMO on the same time schedule as CTD data. We also reserve the right to embargo the biological data for a reasonable period of time to permit publication of the results.

Physiological assay data. All data generated will be saved and archived in standard data formats. Experimental metadata will be recorded in a lab notebook and later transferred into a Word document, or in an electronic lab journal (Benchling). Tissue samples will be stored for the long term at -80°C to maintain the integrity of these samples for future molecular and biochemical analyses. RNA samples will be stored at -80°C and supplemented with RNase inhibitors to reduce degradation and extend longevity. Data will be archived with BCO-DMO if possible, otherwise in the Dryad Digital repository. We reserve the right to embargo the data for a reasonable period of time to permit publication of the results.
Sequence data will be submitted to GenBank.

Curriculum products. Any curriculum materials and lesson plans developed through collaborations with iXplore will be archived on iXplore's (www.ixplorestem.org) and our lab's websites as well as by teachers using the products.