

Data Management Plan – Baco-Taylor and Roark Labs

Metadata

The metadata associated with the surveys (latitude, longitude, depth, etc.) will be submitted to Biological and Chemical Oceanography Data Management Office (BCO-DMO) as required by NSF OCE. These data will also be submitted to the Ocean Biogeographic Information System (OBIS) and to Seamounts Online <http://seamounts.sdsc.edu/> as soon as possible after each of the cruises. Once samples are identified, we will also provide species identifications, with collection locations, to each database. The data will also be stored locally in the PIs labs.

Video Data

Woods Hole Oceanographic Institution maintains a backup archive for all dives by all of its deep-submergence vehicles. Our labs will also create and maintain a second backup copy of all AUV and ROV photographic and video files before we begin analyses. The sample by site matrix generated from the video data and used for community structure analyses will be included as an appendix with publications.

Samples

The primary samples expected from the second cruise will be deep-sea corals and other megafauna. A database of collected specimens in the form of tables (Excel and text format files) will include information on Family, Genus, Species (when available), date of collection, latitude and longitude of collection, depth, and other environmental information such as temperature and substrate. All specimens will be photographed prior to analysis and the pictures stored in the same manner as the database. Both the sample data and photographs will also be made available to OBIS, Seamounts Online and BCO-DMO.

For specimens collected as small genetic subsamples rather than whole colonies, the subsamples will be stored and maintained at -80°C in the Baco-Taylor laboratory. For samples collected as whole colonies, our standard practice is to remove a small subsample for genetics and send the bulk of the specimen directly after the cruise to Stephen Cairns at the Smithsonian for curation and identification (See collaboration letter). Providing specimens to the Smithsonian allows access to the broader scientific community for phylogenetic and morphological studies focused on specific taxa. We will also share subsamples of our genetic samples not archived at the Smithsonian as investigators request.

Samples collected whole for aging will be dried and archived in the laboratory of Dr. Roark in the Geography Department at Texas A&M University. Currently more than 40 deep-sea coral specimens are archived in the laboratory. Excess samples that are not needed for geochemical, age and growth rate studies are made available for others researchers to utilize and incorporate into their research. Specimens have recently been shared with Dr. T. Hill, Dr. B. Williams, and Dr. M. Prokopenko as part of their NSF funded projects.

Genetic Data

We will be obtaining 3 types of genetic data from this work, DNA sequence data for 3 mitochondrial gene regions for specimens used for barcoding, genomic data from the Illumina run, and microsatellite allele size frequency data from the microsatellite work. All sequence data will be deposited in GenBank at the National Center for Biotechnology Information (NCBI). Coral barcoding data will also be added to the Cnidarian Barcoding database (<http://80.94.106.196/CnidBar/>), a developing international collaborative effort to collate Cnidarian barcoding sequences in one location. Microsatellite allele frequency data is generally included in publications of microsatellite data analyses as an appendix.

Biogeochemical, Aging, and Water Chemistry Data

Primary geochemical and aging data will be radiocarbon dates. All radiocarbon analyses will be conducted at the Center for Accelerator Mass Spectrometry, Lawrence Livermore National Laboratory, where results are stored electronically and where each analysis is assigned a unique numerical identifier. All radiocarbon will be reported with this unique identifier. All geochemical data (including radiocarbon data) collected during this project will be archived at the NOAA World Data Center for Paleoclimatology (National Climatic Data Center). In addition all geochemical data reported in journal articles will be reported in tabular form in either the primary text or in supplementary information.

Water chemistry data, primarily radiocarbon, nutrient data, and CTD profile data beyond the underway oceanographic shipboard data routinely transmitted to the National Oceanographic Data Center (NODC) via Rolling deck to Repository (R2R) will be provided to both the BCO-DMO and NODC.

All analytical results will be published in international peer reviewed journals and in presentations at scientific meetings in a timely fashion. Raw data will included in supplemental online materials where appropriate. Request for reprints will be honored in a timely manner