

DATA MANAGEMENT PLAN

Data management will be coordinated by PI Baker and will be carried out by all project participants. The plan encompasses four areas: (1) types of data and samples, (2) standards for data and metadata format and content, (3) policies for data/sample access and sharing; (4) policies for re-use, re-distribution and production of derivatives; (5) plans for archiving data and samples.

1. Types of samples and data:

Samples: This project will generate preserved coral biopsies (tissue lysates preserved in 1% SDS and stored at room temperature) and associated DNA samples (in TE, stored short-term at -20°C, or long-term at -80°C). All such samples will be archived in the PI's laboratory. The PI has successfully maintained a collection of similar samples that dates back >18 years. In some cases, the original DNA sample may be used up in our planned analysis, in which case DNA must be re-extracted from the tissue lysate. We will make every effort to provide the original DNA samples to interested researchers, but in cases where the original DNA extraction has been exhausted, we reserve the right to provide a subsample of the tissue lysate to interested researchers who can extract DNA using their own protocols.

Data and metadata: Data for this project include symbiont:host cell ratios for these samples using a variety of *Symbiodinium* clade-specific probes. In addition, data may also include the results of ITS2 genotyping using Denaturing Gradient Gel Electrophoresis (DGGE), well as subsequent analyses which we may undertake to better characterize *Symbiodinium* (such as partial sequences of the *psbA* minicircle noncoding region). In addition, each sample will be accompanied by metadata that include Sample ID, Coral species, and (where appropriate) Collection site, Collection depth, Collection date, Colony condition, and Experimental notes (such as Experimental timepoint). Additional data, such as environmental data collected by dataloggers during experiments or field deployments, may also accompany samples.

2. Standards for data and metadata format and content:

Data and metadata will be maintained in spreadsheet format and submitted to BCO-DMO as files in Microsoft Excel.

3. Policy for data/sample access and sharing:

We will follow standard BCO-DMO policies for access and sharing of data and samples. Data, samples, and other supporting information collected under this project will be made available within two years from date of collection.

We encourage the following practices for use of our data and/or samples: 1) The user of data agrees to contact the PI prior to publishing, and where appropriate, users whose projects are dependent on this data are encouraged to consider collaboration and/or co-authorship with member(s) of the PI's team; 2) the user agrees to cite our project in all publications that use our data by including the following statement in the Acknowledgments using this statement: "Data/samples were provided by A. Baker as part of BIO-OCE [AWARD NUMBER], funded by the US National Science Foundation"; 3) the user agrees to supply the PI with the full citation of any publication using this data for award reporting to NSF.

4. Policy for re-use, re-distribution and derivatives:

We will follow BCO-DMO policies for re-use, re-distribution and the production of derivatives (e.g., meta-analyses of *Symbiodinium* distribution), and encourage users to follow the same recommendations outlined in (3), above, regarding acknowledgment and/or collaboration.

5. Plans for archiving samples and data:

Samples: Coral samples are typically collected as skeletal fragments (most samples <1cm²) with associated tissue, or as microsample tissue biopsies. We typically digest these samples *in situ* using 1% SDS and Proteinase K to produce a tissue lysate that is relatively stable at room temperature.

Small aliquots of this lysate are then removed for DNA extraction on an as-needed basis. We retain archived lysates (consisting of SDS-lysed tissue and a small piece of skeleton) that are stable long-term (>18 years) at room temperature. These archives will be made available within 2 years from collection.

Because corals are listed under Appendix II of the Convention on International Trade in Endangered Species (CITES) we are obliged to ensure that all samples comply with CITES regulations when shipped internationally. The University of Miami is registered as a scientific institution with the CITES secretariat (Code: US 138-A) which greatly facilitates the exchange of samples between other scientific institutions worldwide.

Data and metadata: Metadata for all samples will be made available through the Biological and Chemical Oceanography Data Management Office (BCO-DMO) within two years from the date of collection. Datasets will be freely available for scholarly use by the academic and scientific community following BCO-DMO's terms of use at <http://www.bco-dmo.org/terms-use>.

In addition, novel DNA sequences obtained by this project will be deposited on Genbank www.ncbi.nlm.nih.gov/genbank/. Accession numbers will be reported in publications as well as in the metadata maintained by BCO-DMO.