

## **SUPPLEMENTARY DOCUMENTATION: DATA MANAGEMENT PLAN**

### **Overview.**

This project uses existing samples from cruises of opportunity on the East Pacific Rise in 2006, 2007, 2008, and 2013 (Atlantis/Alvin), and 2010 (Atalante/Nautile). The data products will be species abundances of larvae from sediment traps and invertebrate colonists from deep-sea colonization experiments. PI Mullineaux has routinely deposited NSF-supported field results (sample lists, metadata, data) in the Ridge2000 data portal hosted by Marine Geoscience Data System (MGDS) at Lamont-Doherty Earth Observatory of Columbia University (<http://www.marine-geo.org/portals/ridge2000/>). She plans to continue doing so with field data and analyses from this proposed project. This approach ensures that the data will be maintained and accessible after the end of the project and avoids risk of loss. The biological samples and measurements collected on Atlantis cruises for this proposed project are posted in the MGDS. We are collaborating with colleagues from CNRS in France, who will be providing vent fluid chemical analyses. Those data will be included in publications and entered in MGDS at that time. If new species are uncovered in genetic analyses, molecular genetic data will be entered into Genbank. Mullineaux has also contacted BCO-DMO project personnel about using their data system, and plans to link to the MGDS metadata and ecological data (species abundances) from there.

### **Data Description.**

The types of data we will produce are species abundances from sediment trap and colonization samples.

### **Existing data/samples.**

Existing data and samples include sediment trap samples and colonization samples from cruises of opportunity. The biological samples are listed in Table 1 in proposal; metadata are posted in MGDS through Ridge2000 portal (<http://www.marine-geo.org/portals/ridge2000/>) associated with Mullineaux. A description of some of the data, including cruise reports that describe sample collections from 2006 - 2007, preliminary results, and publications is on the web at [www.whoi.edu/projects/LADDER/](http://www.whoi.edu/projects/LADDER/).

### **Data Analysis.**

Standard ecological analyses will be conducted on field biological samples (species identification, species abundance and diversity, MANOVA, ANOVA, correlations, multidimensional scaling, factor analysis, regression).

### **Data Sharing and Data Policy Compliance.**

We will make data available to the community in accordance with guidelines from the NSF Biological Oceanography program and Ridge2000 program. Metadata for samples to be used in this project have already been posted in MGDS. Some of our data sets and collections require lengthy analytical and/or processing procedures, and will be submitted as they are completed.

For instance, biological data will be posted in MGDS when species identifications have been confirmed by experts. Data and results will be published in peer-reviewed journals.

**Data Products – Species Abundance**

1) Species abundances from sediment trap samples (189 samples available, all planned for analysis). These data will be organized in 2-d data matrices, typically as numbers of individuals of each species in each sample. Associated metadata include collection date, geographic location, depth, and height above bottom.

2) Species abundances from colonization surfaces (116 samples available; 78 planned for analysis). These data will be organized in 2-d data matrices, typically as numbers of individuals of each species in each sample. Associated metadata include collection date, geographic location, depth, and vent fluid temperature.

Intended Repository: MGDS and BCO-DMO