

## **Appendix III: Other Database Activities**

### **A. Ocean Biogeographic Information System (OBIS)**

The Ocean Biogeographic Information System (OBIS) is a nascent community effort to develop a database of global marine animal and plant distributions. OBIS allows participants to develop distributed databases and serve their own data. This may be a particularly appropriate venue to provide certain classes of biological data and PIs may benefit from data management tools being developed as part of this program. This may also provide an alternative way for PIs to conveniently comply with data sharing requirements, particularly for data that is not now being accepted by NODC or other National Data Centers.

Further information on OBIS is available at <http://marine.rutgers.edu/OBIS/>.

### **B. The National Center for Biotechnology Information (NCBI)**

The National Center for Biotechnology Information (NCBI) is a facility of the National Institutes of Health (NIH) that hosts GenBank and other molecular databases. Additional information is available at: <http://www.ncbi.nlm.nih.gov/>.

### **C. RIDGE Multibeam Synthesis**

The RIDGE Multibeam Synthesis accepts multibeam bathymetry and amplitude data from the world's ocean basins. Although mid-ocean ridges are the focus of the synthesis, datasets from other settings will be incorporated. The synthesis also accepts side-scan sonar data and derived data products such as magnetic and gravity anomaly grids. Data submitted prior to the two-year proprietary hold period are incorporated into the database with password-only access.

Access and information are available at <http://ocean-ridge.ldeo.columbia.edu/>. Investigators wishing to contribute data should contact S. Carbotte, W.B.F. Ryan, S. O'Hara or B. Arko at Lamont-Doherty Earth Observatory (LDEO) for information and assistance on how to submit data.

### **D. The Petrological Database of the Ocean Floor (PetDB)**

PetDB is a web-based data management system for geochemical and petrological sample-based data. In its current application, PetDB contains and provides on-line access to data for sub-oceanic igneous and metamorphic rocks generated at mid-ocean ridges including back-arc basins, young seamounts, and old oceanic crust.

The chemical data that are currently stored in the database comprise major oxides, trace elements, radiogenic and stable isotopes, and analytical age determinations measured on whole rock samples, volcanic glasses, minerals, and melt inclusions. A wide range of supplementary information (metadata) describes samples (e.g. by rock type, texture, age, modal composition, alteration), sample locations (e.g. by geographical coordinates, location names, tectonic setting),

sampling process (e.g. by technique, date, cruise), archive, analytical procedures (e.g. by method, precision, standard measurements), and the source of the data (reference, author(s)). These metadata are not only essential for selecting, sorting, and evaluating data properly, but they are fundamental for current and future integration with other data types, especially geospatial data, and interoperability with other databases.

PetDB's web interface allows users to select data of their choice using a large variety of search criteria such as location, rock type, and reference. Users can view these data and download them in customized data tables. Summaries of all published data for individual samples can be obtained as all samples in the database can be uniquely identified.

Data entry is currently based on flat file forms (spreadsheets) from which information is uploaded into the database. The use of these forms is not required for data submission. For data to be included in PetDB, a set of mandatory metadata such as geographical coordinates for the sample location, rock type, sampling cruise or date and PI (essential to assign unique sample identifiers), units for the analytical values, and analytical method need to be provided. Complete sets of other metadata are strongly encouraged.

Contact information:

Home page: <http://petdb.ldeo.columbia.edu/petdb>

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