

4.4.2 – ATBI and the DLIA Mini Grant Program

Discover life in America, Inc. (DLIA) is a partner with the Park in the completion of the All Taxa Biodiversity Inventory (ATBI). With support from several sources including the Park, DLIA publishes a call for proposals each year for small scientific projects. The proposals are evaluated independently by a panel of outside scientists for funding. Applicants are informed of data management necessities before funding. The mini-grants, as funded, are expected to leverage much greater resources. DLIA staff coordinate and check incoming data for quality. Final payment is held, until data quality and completeness is certified which is done by e-mail from Data Manager to the Chair of the DLIA Science Committee.

The ATBI database is an example of a complex database derived from the NRDT and aimed at a multi-user environment, in order to record specimen and collection information as well as species taxonomy needed for biodiversity inventories as contributed to by numerous projects towards the common goal. Varying data needs depending on the group of organisms are accommodated in this overarching database around a large common core. Metadata for this composite master database are provided at two levels: the master database itself and for all contributing projects at their level, following their own protocols. While the master database is still in interim status, being handled by semi-automated routines and Microsoft Access (instead of a server database platform), the ATBI desktop database has a quite sophisticated user interface making data entry as convenient as possible by supporting different tracks depending on work layout and data entry scenario. This desktop database serves as a replica of the master for data distribution and entry. Its user interface is a stand-alone Windows application. This means a software installation has to be run, before the program can be used. But because of that arrangement, the interface program works with the ATBI data *.mdb-file on any Windows computer, whether the computer has MS Access installed or not, which is of interest to cooperators who may not have a license for MS Access.

4.4.2.1 - GRSM Policy on ATBI Data Submissions

As a general policy, all natural resource inventory and monitoring data should be stored in a relational Microsoft Access database following the Natural Resource Database Template (NRDT), a standard developed by the National Park Service. For ATBI data, ***we strongly recommend using the ATBI desktop database***, which is a modification of the NRDT template specifically developed for the ATBI at this Park and comes with a user-friendly interface for entering data. One option of the provided data entry routine looks and feels very much like a spreadsheet for convenience, but still ensures that data are appended by observing stringent data integrity rules.

In case that policy poses problems of any kind or that data already have been entered for another purpose into a different database, the Data Manager of the Park should be contacted in advance of fieldwork, so that a solution can be worked out and agreed upon. Usually, a commonly accepted data interchange format will be fine. The critical issue is data quality and consistency, as is typically ensured by referential integrity in relational databases, but cannot be guaranteed in free-form spreadsheets. As a general guideline, for quality-checked, consistent data in almost any

electronic format, some reasonably efficient solution can be worked out. **Hence, free-form spreadsheets will not be accepted without prior approval by Data Manager.** Contacting Data Manager early is the easiest way to avoid many different problems later on.

Refer to Appendix 4h for a flowchart interpreting this policy.

Appendix 4h

Flow chart for ATBI data submissions

Start here to determine format requirements for ATBI data submissions



Normal Case: Use ATBI desktop database. This will ensure minimum hassle in data quality check and resulting back questions. Appending to master database is straightforward. GRSM and DLIA are responsible for providing technical support, and if unforeseen problems arise that make data entry difficult, Data Manager needs to make every effort to resolve those. Introductory training for using the database should be available to everyone interested.



Case: Data available in another database. Use commonly recognized data interchange format in ASCII, or send a copy of the entire database file, if format can be handled by GRSM. Check with Data Manager about that. Typically this case applies to NSF grantees who do collections all over the world and maintain their own database. **Explanation:** It would be unreasonable to ask entering their data twice. But if some required fields for GRSM, such as coordinates, do not match, something will need to be done about that.



Otherwise: Make arrangements with Data Manager to use any other format. This case can apply to specialists who may not have used computer software before except, say, typing documents in WordPerfect. If the number of data records is small and data entry done carefully, that will not be a significant problem. Other scenarios need to be considered on a case-by-case basis.

The second case will always cause some legitimate work for data managers and technicians. The normal case assumes availability of training and technical support for the ATBI desktop database.