

Data Management Plan

Data generation and nomenclature. We will use the new Raman system to collect six Raman spectra for each larval shell, with three spectra from the prodissoconch I region and three spectra from the prodissoconch II region, each at a different wavelength. Each spectra will be labeled with a unique number which will be associated with the individual shell number, the species name, the age of larvae (in days), the origin (e.g., hatchery name and address), the location of the sample on the shell, the wavelength of the laser, the date, time and location of spectrum generation, the microscope settings, and the name of the operator. This information will be used as metadata for each spectrum collected for the hundreds of larvae of the 20+ species in this study.

Data storage and maintenance. Spectra and associated metadata will be stored on a dedicated PC with copies on an external hard drive attached to the PC and on a back-up server in a different building from the PC. Back-up of data files to the external hard drive and networked server will occur every evening.

Database creation. We will create a database of spectra which will be formatted for inclusion into the freely-available integrated software system for processing Raman spectra (Reisner et al. 2011) implemented in MATLAB (The MathWorks, Natick, MA). The database will include the spectra as well as the associated metadata information (described above).

Database dissemination. We will share the database with other researchers by submitting it to the Biological and Chemical Oceanography Data Management Office (BCO-DMO, <http://bcodmo.org/>) at the end of the project. We will contact and work with BCO-DMO staff when developing the database to ensure that the formatting is compatible and easily incorporated into BCO-DMO.