Accessing Data Through the BCO-DMO Website

The data collected by all of the US GLOBEC regional programs (and many other regional and global programs) are available on-line through the BCO-DMO website - to access, plot and download. As an example, below are instructions for accessing and plotting a data set from one US GLOBEC cruise.

Exploring the GLOBEC data using the MapServer
In the US GLOBEC program on Georges Bank, there were 31 broad-scale cruises to map the distribution and abundance of zooplankton and related environmental parameters such as temperature, salinity, chlorophyll, and nutrients. It is possible to get a first look at these data to see the cruise track for a cruise, the locations of stations where measurements were made, and what measurements were made. To answer the question "What was the distribution of the copepod *Calanus finmarchicus* in June 1999?", here are the steps needed to get the answer.

1) Go to "http://www.bco-dmo.org/".

2) Click on Geospatial Access in the left Data Access panel. A new page with the MapServer interface will appear.

3) On the top left side in the "Available program(s)" window scroll down to "U.S. GLOBEC (325)" and highlight the entry by clicking on it. This will result in a smaller set of projects and deployments in the boxes to the right.

4) In the middle box where it says "Available projects", click on "GB (155)". The resulting map display will focus in on all of the track-lines for cruises in the Georges Bank project. The cruise names will appear in the "Available deployments" listing.

5) In the "Available deployments" box scroll down to "AL9906" and click on it. This entry now will be the only one appearing in the "Visible deployments" window and in the "map" window only the image of this cruise track will show.

6) Click on the small, black and white "+" to the left of "AL9906" to see information about this cruise.

7) Click on the green colored 'plus' button next to "AL9906". The cruise track-line will be highlighted and a list of datasets available from this cruise will be displayed in the "Datasets" window below.

8) In the "Datasets" window, click on the "+" next to the "zoo_square_meter" entry (scroll down near the bottom of the list) and another window "Mapping options for zoo_square_meter" will appear.

9) At the top of this new window, scroll down to "*Calanus finmarchicus*" and highlight the entry by clicking on it, and then click the "scale it?" check box.

10) Click on the down arrow next to the "group by…", select "m2_c5" (the 5th copepodid stage), and click on the down arrow next to the "Narrow by net" and select "ALL", and finally click on the "Map it" button.

11) A series of station locations where this species was found should be displayed on the image with circles scaled according to abundance. By clicking on a circle, the abundance of the species under a square meter of sea surface will appear as "scaled total". One can make x-y plots from this box also (see next section).

To look at the vertical distribution of temperature at one of the stations on this cruise:

12) First 'close' the box covering part of the map. Next, uncheck the box associated with the *Calanus finmarchicus* display (in the "Mapped datasets" window) to hide the distribution plot on the ship's track. Then click on the "Available datasets" tab.

13) Click on the "+" next to the "ctd_hydrography" dataset entry.

14) Stations should appear as colored dots on the cruise track.

15) Click on one of the dots and a pop-up box will appear.

16) Click on the "X-axis" down arrow and select "temp" for temperature measurements.

17) Click on the "Y-axis" down arrow and select "press" for pressure measurements (comparable to depth).

18) Click on "view and get data". A plot of temperature versus pressure (depth) should appear in a separate window. The 'Tabular output' tab provides a list of the data values and the 'File output' tab allows you to download the data to your desktop.

Have fun exploring the data and do not be afraid to download data to do more analyses and plots on your own computer. In the future this graphical data access tool will continue to be improved and the specific steps listed above may change.