



How to use the Ocean Biogeographic Information System (OBIS) website:

A self-directed study guide- **ACON mapper**

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OBIS is a web-portal designed for the study of marine biogeography and provides global access to authoritative marine species data. Geo-referenced data on marine organisms that have been vetted by authorities in the field are deposited in OBIS. You can search OBIS data by species, location, data set and/or higher taxonomic group, e.g. mammals or fish. In addition, you can map that data using three different mappers or you may download the data for analysis and examination on your own computer.

This self-study guide is designed to introduce you to the features of the ACON mapper on the OBIS portal. ACON (A CONtouring application) was developed by J. Black. More technical information on ACON can be obtained at <http://www.mar.dfo-mpo.gc.ca/science/acon/>

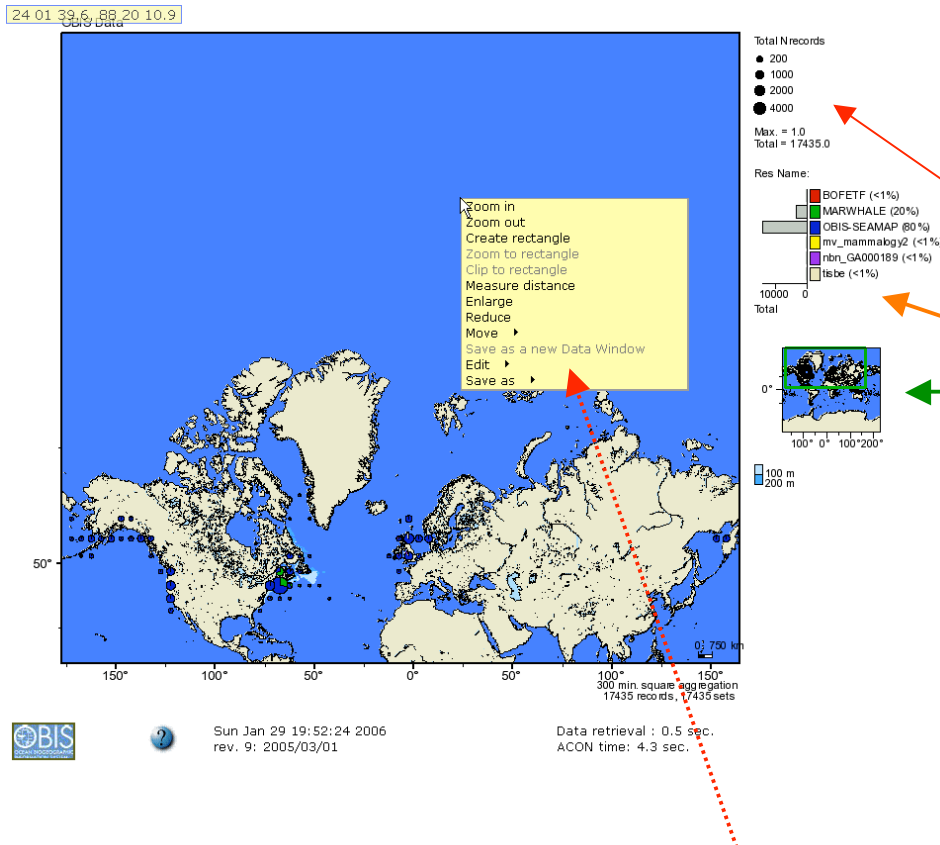
ACON mapper (A CONtouring application) is a mapping application that generates interactive maps of biodiversity data (at this writing 20 Feb. 2006 it is beta testing on the OBIS portal). The user can, on mouseover, show latitude and longitude, zoom, draw a rectangle, zoom to that rectangle and map it. Visual output typically includes scaled symbols (categorized by dataset), coastline overlays, and ancillary graphics. The web page output includes JavaScript to provide user interactivity. 'Hot links' for data sub-selection, alternate data groupings, various graphics formats (e.g. Pdf, jpg, Adobe Illustrator™), and multiple maps. Movies may be created by editing the map through an "Edit Map" form. The ACON mapper may also be the best OBIS mapper for mapping Arctic Ocean species, and at this time the only mapper which visualizes abundance data.

Features of ACON discussed here include:

- Basic features and Navigational tools
- Choices for data aggregation and display
- Choices and formats for data download and saving maps

ACON Mapper- Maps resulting from the number of observations grouped by data source
Including hot links for sub-selection, alternate groupings, and various
graphic formats and printing to your personal computer

ACON mapper (A CONtouring application) basic functions include aggregation of the data by abundance, visual identification by contributing data set, latitude and longitude, and zoom and pan functions.



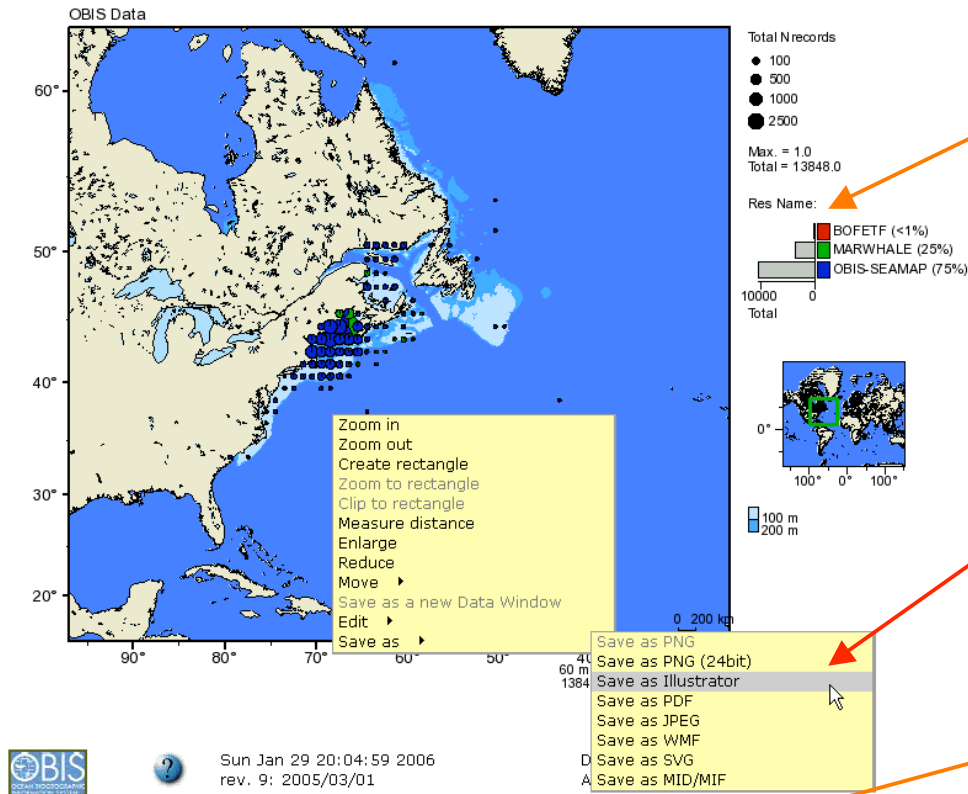
ACON map search of *P. phocena*, the harbor porpoise.

Features of ACON include abundance, shown in size of circle, color coding of data by contributing dataset, a thumbnail showing where on the earth the map shown is located.

Latitude and longitude are shown on mouseover to the upper left and marked on the map edges

The help button (?) is below the map

Other features of the ACON mapper are shown on left mouseclick on the map. These include zoom or pan the map, create a rectangle to subsample the data, to edit and to save the data or the map in various formats. The map on page 11 was created using the rectangle tool and 'zoom to rectangle'.



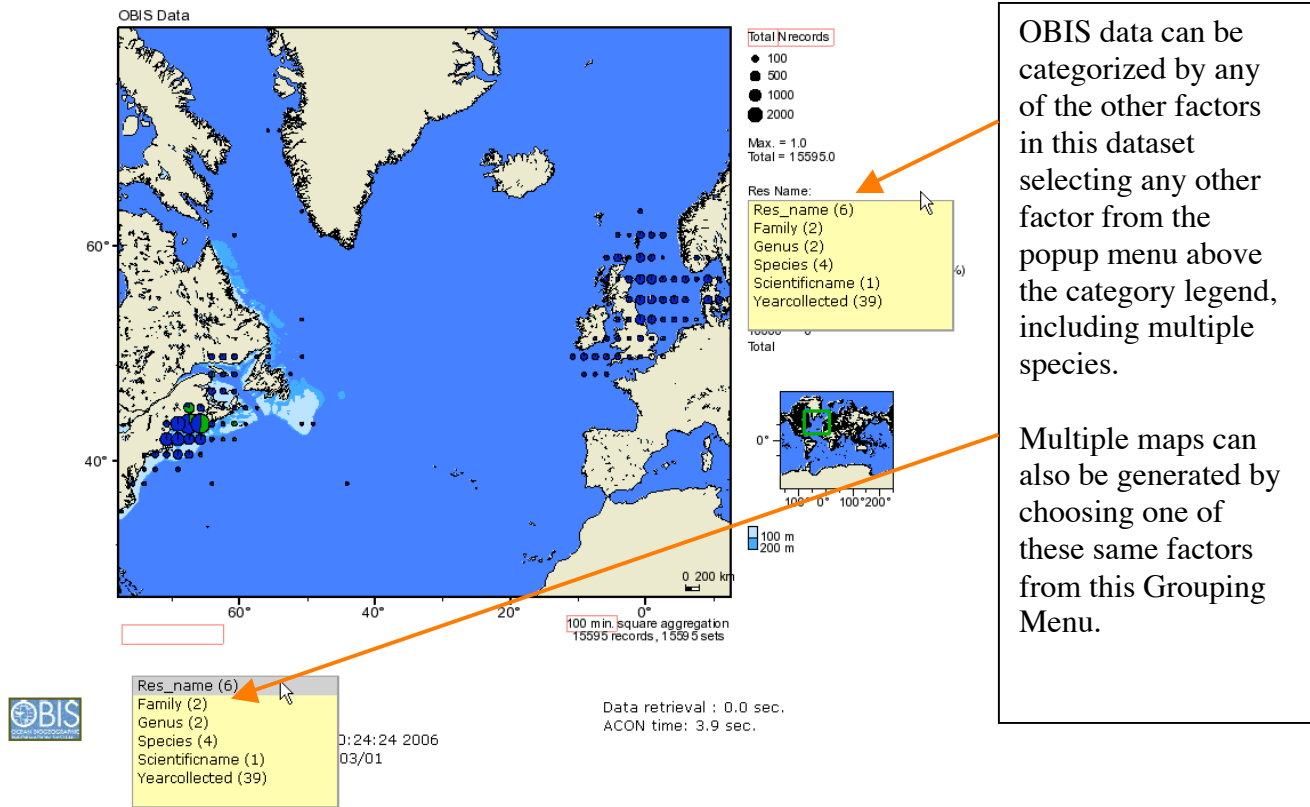
OBIS data can also be mapped by data source using the database links by clicking on the data legend colors.

After mouseclick on the map, the menu choices with arrows produce further choices. The various graphic programs for saving the map are shown here.

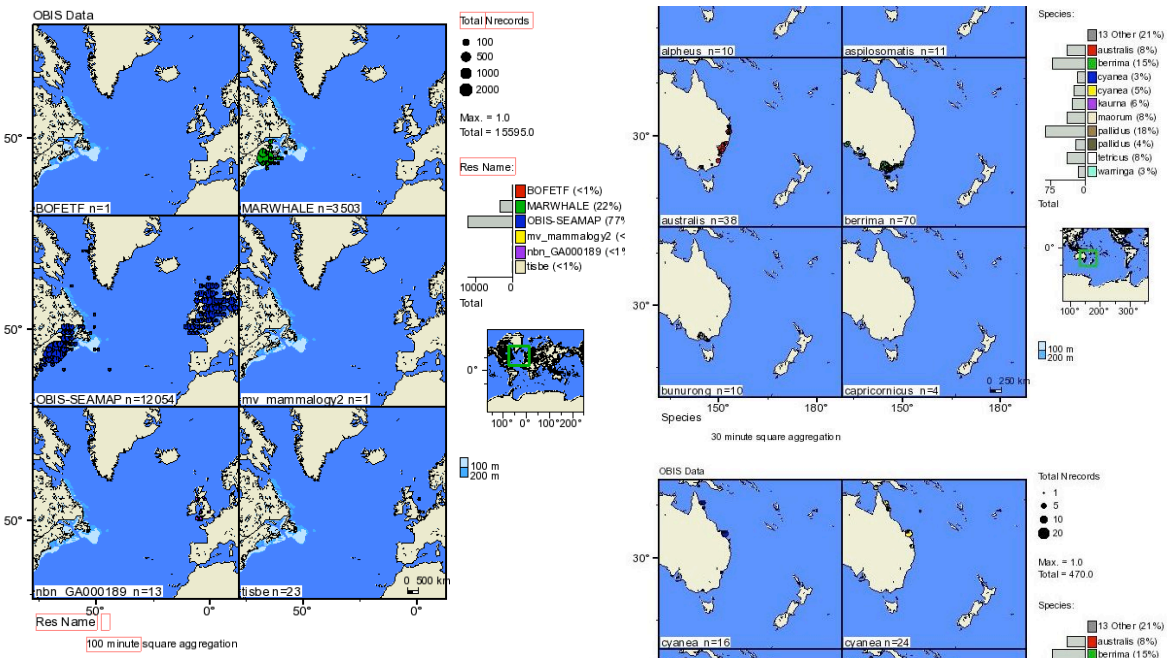
Select one and a screen like the one shown below is returned. Download the PDF, or Adobe Illustrator™ as shown below.

Download the [Adobe Illustrator file](#) (choose .ai extension when Saving the file)





Multiple maps per page may be generated or each map may be put on a separate page.



At left, the data is mapped by collection; at right *Octopus* species are mapped by species, multiple data pages are shown.

The Edit Map menu item will allow you to edit the map characteristics in more detail, although it may not work properly on all browsers.

Taxonomic Selection | Other Data Selection | Map Presentation | Output

Cascading taxonomic selection :

FAMILY (1) GENUS (1) SPECIES (1) SCIENTIFICNAME (1)

Phocoenidae Phocoena phocoena Phocoena phocoena

Submit *Only checked selection lists are used when retrieving data*

Edit Map option is a powerful tool to further refine your search and map a subset of the data.

Taxonomic Selection | Other Data Selection | Map Presentation | Output

RES_NAME (1) YEARCOLLECTED (10)

MARWHALE 1993
1997
1998
1999

Submit *Only checked selection lists are used when retrieving data*

There are 4 different menus to choose from, Taxonomic selection, Other data selection, Map presentation and Output. All of the choices are shown at left.

Taxonomic Selection | Other Data Selection | **Map Presentation** | Output

Multiple plots

RES_NAME
FAMILY
GENUS
SPECIES

Group interval 1
Step interval 1

Is a Julian date
 Has null records On separate pages

Colour B/W Data Window Data Legend
Automatic Locator Map
 Cumulative Discovery plot

Plot type Data Scale Aggregation Aggregate

Scaled symbols Automatic Automatic Avg

Map Projection Map Options Output format Style

Mercator (simple) North American Depth Contours PNG Normal

Grid
Grid (over land)

Submit *Only checked selection lists are used when retrieving data*

Map presentation menu gives more choices than the previous menu including the 'grid', and depth contours.

Output gives several choices shown at left including shapefiles.

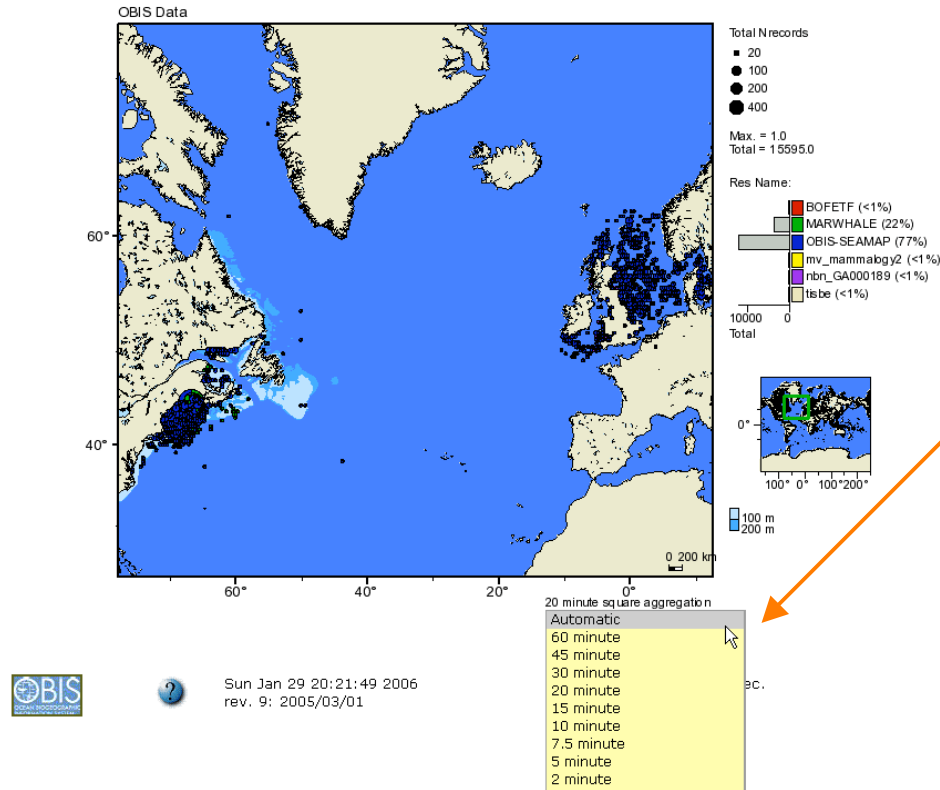
Taxonomic Selection | Other Data Selection | **Map Presentation** | **Output**

Show map

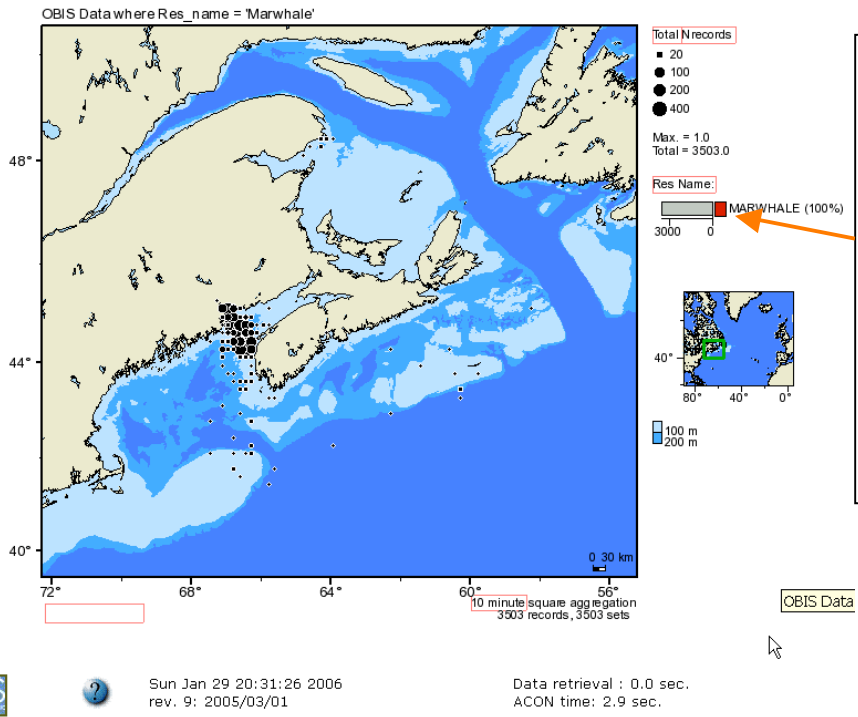
Show Raw Data
 Show Aggregated Data *using* Formatted table Tab-delimited file Zipped file
 Show Data Summary

Create Shape File Create an aggregated Shape File Create an aggregated KML File
 Show HREF

Submit *Only checked selection lists are used when retrieving data*

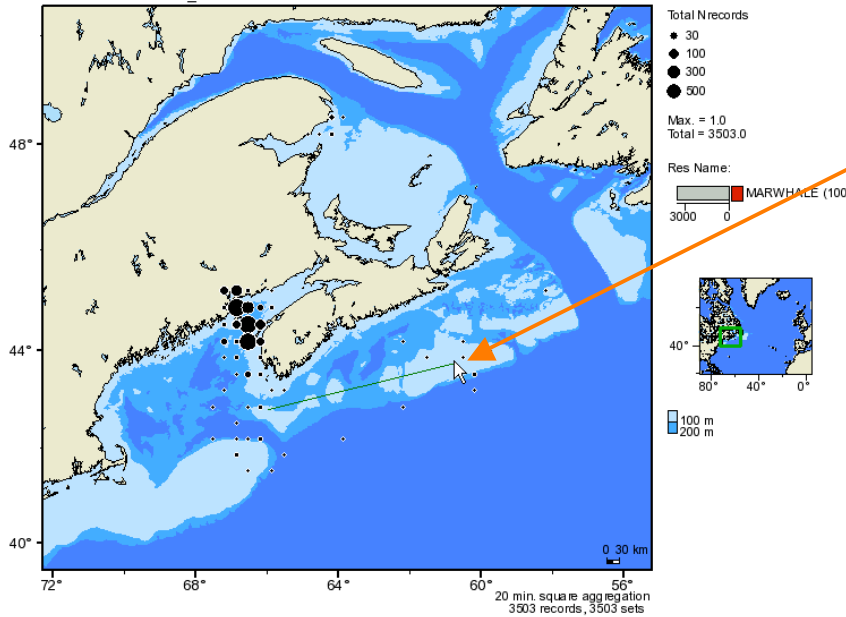


Data can also be mapped with different degrees of accuracy. Shown here is a subset of the data above mapped at 20 minute aggregations.



Here the data is mapped at the Automatic aggregation and from only one data source, Marwhale. Red rectangles appearing on mouseover indicate choices or further information (these may not appear properly on all browsers).

439.47 km, bearing 74.3 Deg. FROM -65 59 08.6, 42 50 59 TO -60 43 25 , 43 47 42.2

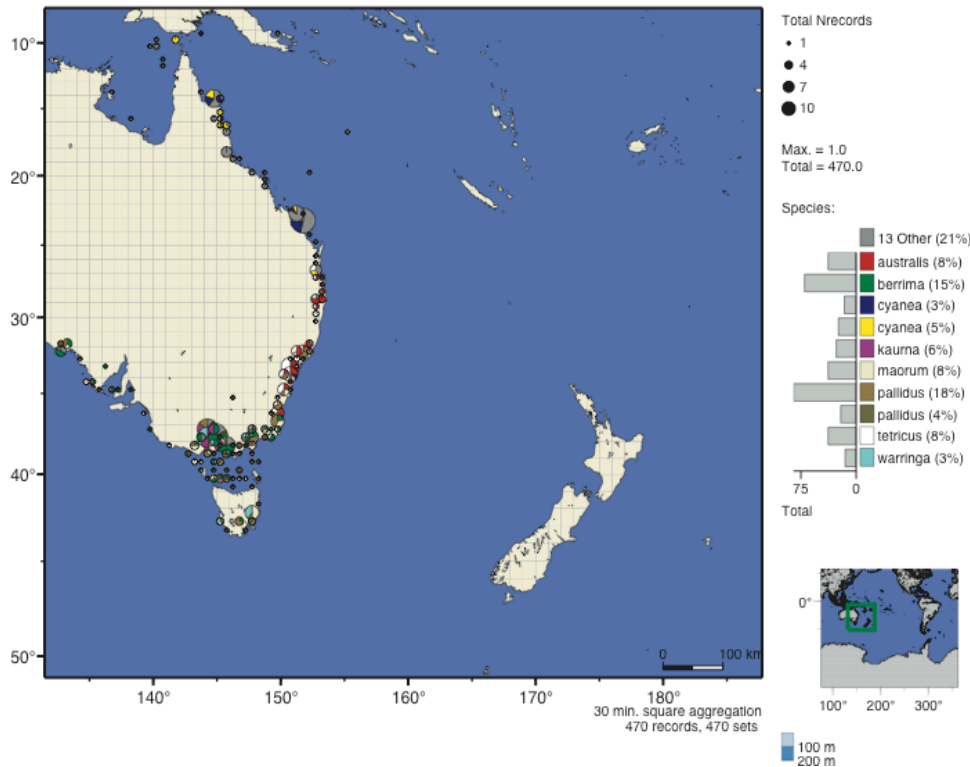


With the ' ' menu, the user can measure Great Circle distances between 2 selected points.



Sun Jan 29 20:25:13 2006
 rev. 9: 2005/03/01

Data retrieval : 0.0 sec.
 ACON time: 2.9 sec.



Multiple species may be mapped using ACON mapper.

Use the popup menu above and select species. The search to the left was on genus *Octopus*.

To generate the search that the map above was derived from, *Octopus* was searched from the advanced search page.