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OCULINA GIS

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The Oculina GIS cd-rom contains information collected over the past 30 years regarding the habitat of the Experimental Oculina Research Reserve (EORR). On the cd-rom is the main directory (oculina) with the following: clelia_pdf, dive_data, shapefiles and oculina.apr. The *clelia_pdf* directory contains a PDF file for each dive from September 2001 (the Clelia dives). There are a total of 14 PDF files. The *dive_data* directory contains a directory (*pics_videos*) that stores the individual pictures (in gif format) and videos (in mpg format) for each dive track. The shapefiles directory contains all of the Arcview shapefiles (including historical information) for the project as well as individual shapefiles for the coordinates for the Clelia and ROV dives (*utm_clelia*).

Before beginning, copy the contents of the cd-rom onto your hard disk.. Keep the directory structure of the cd-rom the same on your computer (e.g. keep the oculina directory). To run the videos you must have Windows Media Player and Adobe Acrobat Reader installed on your computer.

A number of hotlinks have been setup to allow viewing of digital images, videos and .pdf files from each dive track. Therefore, the following paths must be used in order for the Arcview scripts to run correctly:

C:\Program Files\Windows Media Player\mplayer2.exe

and

C:\program files\adobe\acrobat 4.0\reader\acrord32.exe OR

D:\program files\adobe\acrobat 4.0\acrobat\acrobat.exe

Once you open Arcview you can load the oculina.apr.

Contained within the Arcview project are five basic views containing the georeferenced dive data from the September 2001 Sustainable Seas Expedition as well as historical information. The baseline habitat data were furnished by USGS (K. Scanlon, et al.).

Information regarding methodologies can be found at

<http://atlantic.er.usgs.gov/habitat/openfile/htm/arcview.htm>

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Explanation of Views

Each view contains the following Arcview shapefiles:

1) Florida coastline

2) Control area. Bottom type of the control and reserve area are classified into one of three categories. Type 1, high relief/high backscatter (coral reef). Type 2, low relief/high backscatter (close proximity to coral). Type 3, low relief/low backscatter (fine grain sediments).

3) Reserve area. (Classification same as above)

4) UTM grid. Displays coordinate from -78W to -81W longitude and 27N to 29N latitude. -80W is the Western boundary for the current reserve.

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5) OHAPC (main and satellite). Boundaries as defined by the most recent legislation in 2000 regarding the Oculina Habitat Area of Particular Concern.

Main Views:

1) 2001 Islands in the Stream Expedition- Contains separate themes for the highest quality photo and video available for each clelia dive. The “Restoration Sites” theme contains a database of the reef balls and discs that have been deployed within the EORR. The ‘fish_data’ theme contains a database of the fish surveys compiled by Jennifer Arcuri and a link to the associated pdf. file containing the overall description of the dive. There is a separate species attribute containing the following abundances:

S=single

F=few (2-10)

M=many (11-100)

A=abundant (>100)

To view the hotlinked pdf. documents, images and videos, the individual themes must be highlighted (Fish Data, Best Video Clip, or Best Photo). Next, the lightening bolt hotlinking tool is used. After activating the hotlink tool, click on a marker in the view to activate the appropriate image, once viewed, the window can be closed. Video images will automatically close at the end of the stream. The historic sites, 1978 transect, and Jeff’s Reef 1981 transect themes contain historic habitat information cataloged by John Reed of Harbor Branch Oceanographic Institute. You can access these data using any of the query tools provided in Arcview.

2) Clelia Dive Tracks- Contains separate themes for each clelia dive track (Clelia 606-621). Exact coordinates and comments from the ship’s log are included in the attribute table.

3) ROV Dive Tracks- Contains ROV dive tracks including all available information taken from ship’s log (PI’s comments, depth, location, etc.). Themes are labeled 9-1-6 to 9-5-pm, denoting date of mission.

4) NOS Bathymetry- Contains all available depth soundings compiled by National Ocean Services. Data was gathered through searches within the GEODAS database. Data is presented in feet below sea level.

5) Additional Photos/Videos- Contains five additional photos and five additional videos for each clelia dive during the expedition. Photo (1-5) and Video themes (Video1-5) can be accessed by following procedures listed above.

6) Multibeam Survey (Oct. 2002)- Contains 2 geotiff. files that provide high-resolution images of the relief throughout the area. The northern section contains data from transects that were performed within the satellite areas of the reserve. The southern section contains a more complete representation of the EORR. The shapefiles developed from previous sidescan sonar surveys (Scanlon, et al., 1999) have been outlined to facilitate analysis with the newer multibeam survey.

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7) Historical Data- Contains three sets of transect data compiled by John Reed of Harbor Branch Oceanographic Institute. Transects data contains observer comments, locations, and relief statistics.

IMPORTANT:

Although tested on multiple computers and operating systems (NT and Windows 98), the project may have problems with path names and path structures. Additionally, we have discovered that the hotlinking scripts can be rather unstable.

If you have trouble loading the project themes:

Reset the directory structure using either the manual method of updating the paths within the launching of Arcview, or you can update the paths using any text editor search and replace function. There is more detailed documentation and help on the esri.com web site.

If the hotlinking doesn't launch the videos or images (we have had no problems with PDF files):

Proper configuration of all video and/or image files maybe necessary to activate hotlinks. The following procedure will configure the proper drive links to facilitate hotlink usage:

- 1) highlight the theme (dive video, video1, etc.)
- 2) activate the attribute table
- 3) Under 'Table' click start editing
- 4) highlight 'video' field
- 5) Under 'Field' click calculate
- 6) in dialog box type "c:" (or whatever drive letter you are using)
- 7) select 'string' from Type options
- 8) double click "+" (will appear in dialog box)
- 9) double click Video field
- 10) click OK attribute table is now configured to your specifications

If you have any questions please contact Dr. Joanne Halls (hallsj@uncwil.edu)