Benthic Habitats of the Florida Keys

New Mapping Products for Marine Ecosystems

This document summarizes a seven year cooperative effort between the National Ocean Service and the Florida Department of Environmental Protection's Florida Marine Research Institute to map the types and extent of benthic habitats within the Florida Keys. It also announces the availability and content of two products: an Atlas and CD-ROM.

Benthic habitats are places on or near the sea floor where aquatic organisms live. These beds of seagrass, areas of mud and sand, and coral reefs provide food and shelter to a rich array of animals. Together, they form the Florida Keys benthic habitat ecosystem.

The Florida Keys are the third largest barrier reef ecosystem in the world and the only barrier reef ecosystem in the United States. The preservation of this ecosystem, especially its coral reefs, is a National priority. This ecosystem is an attractive environment for many recreational, commercial and scientific activities, and is critical to the tourist economy of South Florida.

Precise mapping of benthic habitats is essential for developing management strategies that balance the protection of these habitats with their use. Accurate maps of these areas enable resource managers to make informed decisions about the use and protection of the resources.

Information Content

The benthic habitats of the Florida Keys were mapped from a series of 450 aerial photographs. Ecologists outlined the boundaries of specific habitat types by interpreting

A map showing benthic habitats near Big Pine Key, Florida. Habitats were classified into 24 different types by marine ecologists. Their boundaries were then georeferenced and incorporated into a geographic information system.

Cover of the Benthic Habitats of the Florida Keys Atlas.

color patterns on the photographs. Benthic habitats were classified into four major categories—corals, seagrasses, hardbottom, and bare substrate—and 24 subcategories, such as sparse seagrass and patch reef. Habitat boundaries were georeferenced and digitized to create computer maps. These digital data were then incorporated into a geographic information system for direct electronic mapping.

A Series of Products

The *Benthic Habitats of the Florida Keys* Atlas is a major product of the benthic habitats mapping project. It contains 32 full-color plates showing the distribution of benthic habitats in the Florida Keys, accompanied by descriptions of bottom habitats. The Atlas also includes extended descriptions of the physical environments, human activities, and environmental concerns of the Florida Keys ecosystem.

A CD-ROM is another major product of the benthic habitats mapping project. Its purpose is to distribute the digital benthic habitat data. The files are provided in multiple formats to encourage immediate use in geographic information systems, desktop mapping software, and simple spreadsheets. The CD-ROM also includes a map viewer, full data documentation, and an electronic version of this document.

Maps and spreadsheets may be viewed directly through the ArcView™ Data Publisher application provided on the CD-ROM. Special buttons and menus in the application enable a user to select and view the maps and portray different information on them. An area of interest may be selected either from a list or by drawing a box on the screen using the cursor. Users may then overlay their own geographic data on the maps. The Data Publisher is also an ArcView™ 2.1 application which allows unlimited map and data display, browsing, querying and printing capabilities.

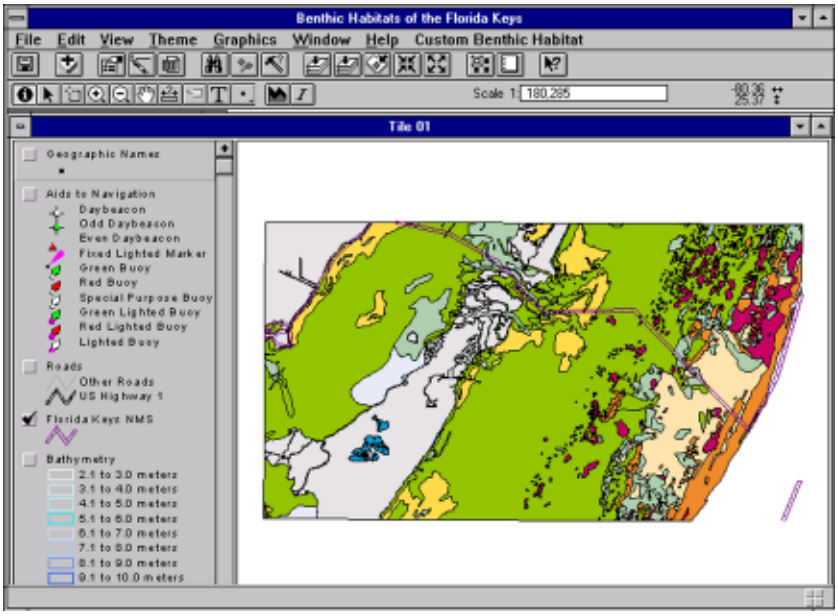
To learn more about the *Benthic Habitats of the Florida Keys* mapping project or to receive a free CD-ROM, contact either:

Steve Rohmann
NOAA, Room 9650
1305 East-West Highway
Silver Spring, MD 20910
301/713-3000x137
steve.rohmann@noaa.gov

or

Christopher Friel
Florida Marine Research Institute
100 Eighth Avenue, S.E.
St. Petersburg, FL 33701
813/896-8626
friel_c@epic7.dep.state.fl.us

To request a copy of the *Benthic Habitats of the Florida Keys* Atlas, contact Christopher Friel at the Florida Marine Research Institute.



ArcView™ Data Publisher provides direct map viewing and tools to zoom and query data for Windows™ users.