Photos: FWC

A flamingo tongue snail (*Cyphoma gibbosum*) from Key Largo is a coral reef invertebrate.

Historical and modern patterns of invertebrate diversity on Florida coral reefs

Introduction:

Invertebrate species make up about 98 percent of the biodiversity identified in Florida, yet they make up less than seven percent of the species that have been designated as threatened or of special concern. The main explanation for this is their status is unknown. Assessing coral reef invertebrate community composition of the past and comparing it to the present gives insight into their current status. Specifically, it can be determined whether the number of reef species has changed and whether their ranges have changed over time by comparing recent data to historical data.

Objectives:

1. To compare data accumulated over 50 years to modern data and report the status and composition of coral reef invertebrate communities.
2. To identify species, which have declined over the years and may qualify for designation as Species of Greatest Conservation Need.
3. To preserve and protect previously collected specimens and data.
4. To provide historical and current baseline data for future biodiversity studies involving Florida coral reef ecosystems.

Approach:

Historical data and newly compiled data from previously collected specimens, in addition to new data collected from underwater surveys, will be analyzed to determine patterns of invertebrate diversity and possible changes in diversity and species ranges over time.

A cushion star (*Oreaster reticulatus*) is an invertebrate Species of Greatest Conservation Need.

Benefits:

This project will provide historical and current baseline data for future biodiversity studies, such as those exploring the effects of large scale disasters, including the recent Deepwater Horizon oil spill, and less extreme events, such as red tide blooms or the lionfish invasion. It may be used for future restoration guidelines and replacement efforts.

Location:

Coral reef areas

Contact:

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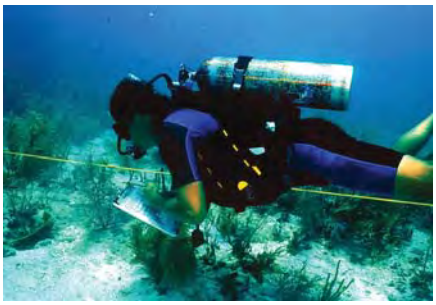

A researcher does an underwater survey to collect modern data.

Collection specimens are organized by taxon.

Researchers identify specimens and determine if those species qualify as Species of Greatest Conservation Need.

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