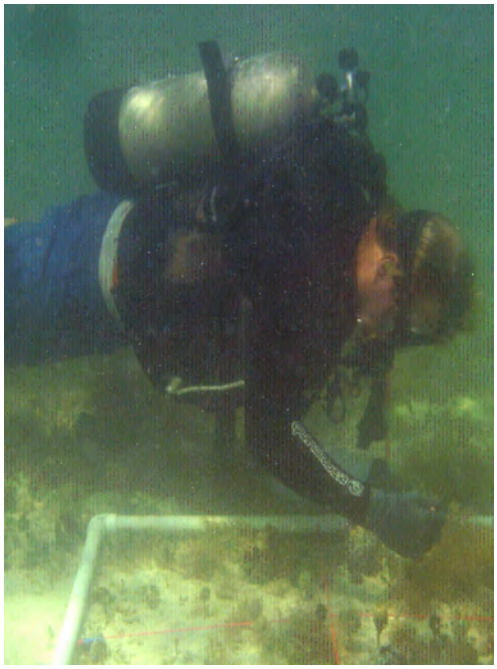

Community structure in the nearshore hard-bottom habitat of the Florida Keys

Introduction:
Nearshore hard-bottom habitat represents approximately one-third of the marine ecosystem surrounding the Florida Keys. Sessile sponges, octocorals, and scleractinian corals are the living structure of this habitat and create homes for a myriad of common fish and motile invertebrates, many of which are juveniles. However, the abundance and distribution of both the sessile and the motile fauna are poorly documented. Sadly, it is clear to even the most casual observer that the community has diminished in recent decades.

Objectives:

1. Assess the species diversity and abundance of the nearshore hard-bottom flora and fauna.
2. Identify relationships between the quality of the habitat and motile fauna diversity and abundance.
3. Develop a baseline to compare any future changes in the ecosystem.

Approach:
We utilize SCUBA to visually survey the sessile fauna, algae, fish and motile invertebrates (lobsters, crabs, conch, and others) from Key Largo to the Marquesas Keys over a range of low to high quality habitats. We also use advanced analytical techniques to evaluate community structure and identify the critical components required for ecosystem function.

Benefits:
Initial results indicate that areas with high densities of sessile fauna support drastically more fish and motile invertebrates. This has important management implications as relatively small high-quality hard-bottom areas may be critically important for a wide range of species. This baseline data allows both resource managers and the citizens of Florida to move from conjecture about the condition and changes in our nearshore environment to substantive measurements. We are now in a position to better evaluate the effects of projects like the multimillion dollar Everglades water restoration and local sewage treatment.

Location:
The Florida Keys

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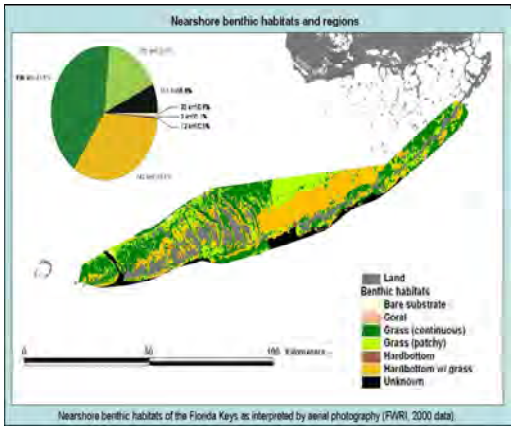

Nearshore benthic habitats of the Florida Keys as interpreted by aerial photography (FWRI, 2000 data).

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