

Gray's Reef National Marine Sanctuary

Fish Spawning

Management Issue

Gray's Reef National Marine Sanctuary (GRNMS or Sanctuary) is home to many important commercial and recreational fish species. Managers need to understand the reproductive life cycle and associated resource (including habitat) needs that are met in GRNMS in order to adequately protect those resources.

Description

Currently sanctuary managers do not know what fish species are spawning in the vicinity of Grays' Reef and how the resulting larvae might utilize GRNMS. Such information is required to ensure adequate protection for these important life history stages.



Photo of a larval fish belonging to the "stonefish" family. Photo credit: NOAA

Questions and Information Needs

- 1) What commercially, recreationally and ecologically (e.g., food chain) fish species are known to spawn inside the Sanctuary?
- 2) What habitat types are used for spawning activities?
- 3) What are the important habitats for larvae?
- 4) Are there important spawning areas that are particularly vulnerable and require special protection?
- 5) Are there "hotspot" areas for larvae that require special protection?

Scientific Approach and Actions

- Conduct passive acoustic surveys to identify spawning activity in the Sanctuary
- Collect habitat data for areas found to be utilized for spawning activities
- Literature search to investigate existing information on habitat needs for spawning and larval settlement
- Collect larval fishes and determine growth rates, diet and isotopic signatures

Potential Key Partners and Information Sources

Reef Environmental Education Foundation; NCCOS-CCEHBR; NOAA's National Centers for Coastal Ocean Science

Management Support Products

- Data collected will be used to complete reports and scientific publications
- Information will be used to develop outreach and education products that inform managers and the public about important spawning areas within the Sanctuary
- Researchers will present findings at meetings, workshops and scientific conferences

Planned Use of Products and Actions

- Managers will evaluate whether certain important spawning or larval settlement areas require further protection.

Updated: 5/1/2010

For More Information -- <http://www.sanctuaries.noaa.gov/science/assessment>

Program References

GRNMS Management Plan

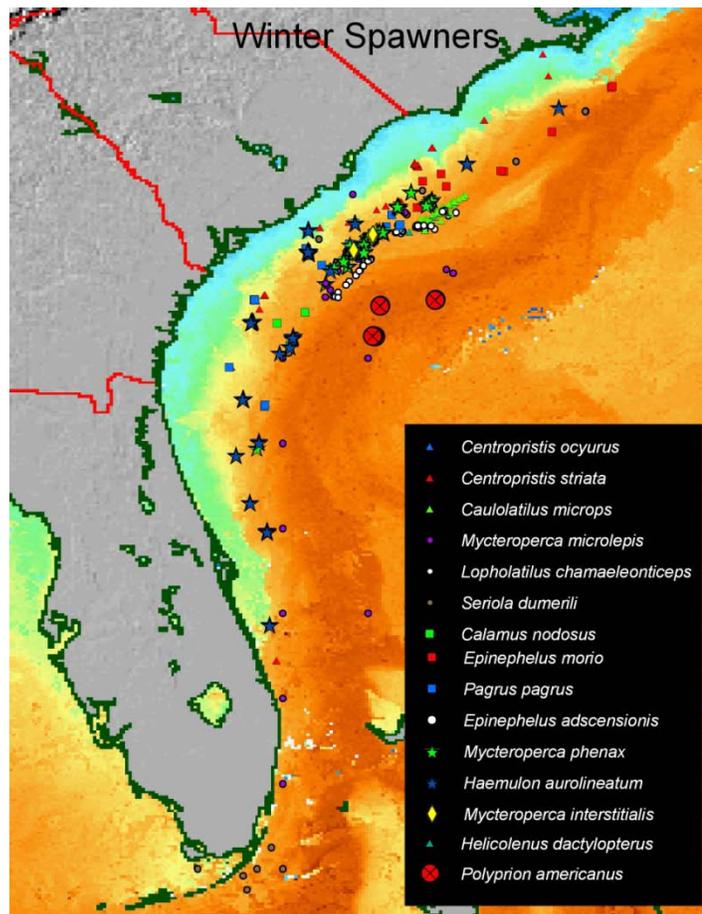
- Strategy RM-4: Maintain and Enhance Monitoring Programs
Activity A: Monitor the status and health of fish
- Strategy RM-2: Investigate Designation of a Marine Research Area
- Strategy RM-4: Maintain and Enhance Monitoring Programs
Activity A: Monitor the status and health of fish
Activity B: Design and implement an invertebrate monitoring program
Activity F: Expand and update socioeconomic assessment

GRNMS Condition Report

- Questions 12, 13 and 14

ONMS Performance Measures

- Number of sites in which living marine resources, based on long-term monitoring data, are being maintained or improved



Graphic indicating the known winter spawning locations for several fish species in the south Atlantic. Map credit: GRNMS

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