For the second year in a row, the CCRI research team of Alina Szmant (Univ. North Carolina – Wilmington) and Ernesto Weil (UPR – Mayagüez) have successfully reared larvae of elkhorn coral (*Acropora palmata*). Elkhorn and staghorn corals were listed as threatened under the Endangered Species Act in May 2006. This year, large quantities of gamete bundles were collected from Tres Palmas off Rincon on Puerto Rico’s northwest coast. Tres Palmas was recently designated as a marine reserve specifically to help preserve its extensive stand of elkhorn coral. Spawning was recorded over three consecutive nights, starting on August 12, with massive spawning on August 13 and 14. Additionally, branches of Elkhorn coral collected from La Parguera on the southwest coast, successfully spawned in the laboratory. These larvae and those of other species were induced to settle on ceramic plates in experiments designed to understand the factors controlling habitat choice and early growth and survival of coral polyps. For elkhorn coral, this information, along with the already developed rearing methodology, are prerequisite if artificial rearing or habitat restoration are to be developed as options in the management toolbox for the recovery of this species.

On April 27, 2006 off Guayanilla, Puerto Rico, the 748-foot oil tanker M/T *Margara* ran aground on a bank reef of moderate vertical relief with significant coral and gorgonian cover. The initial grounding and later removal impacted 8,500 m², causing significant damage to the reef structure and community, including an unusually large thicket of *Acropora cervicornis*, recently listed as a threatened species. Immediate response to the incident was jointly led by the PR DNER Marine Resources Division and NOAA’s Damage Assessment, Remediation, and Restoration Program. Initial activities included damage assessment and emergency restoration activities targeted the stabilization of coral fragments to prevent further damage and seed regrowth. Additional restoration efforts to accelerate recovery are planned.

**CCRI Team Rears Acropora Larvae**

**Margara Grounding Damages Coral Reef Near Guayanilla, PR**

**NOAA Program Officers Awarded for Role in CCRI**

Drs. Michael Dowgiallo (right) and Felix Martinez (left) of NOAA’s Center for Sponsored Coastal Ocean Research received a 2006 NOAA Administrator’s Award for "Leadership in creating a Caribbean Coral Reef Institute (CCRI), which conducts strategic research for improved resource management of coral reefs." The Administrator's award is given annually in recognition of employees or groups who have made significant contributions to NOAA programs.
Spawning Failure in *Montastrea* Corals Follows 2005 Bleaching Event

The most catastrophic bleaching event in the northeastern Caribbean region occurred last September 2005, with the *Montastrea annularis* species complex being among the most impacted corals. Continued CCRI monitoring by Edwin Hernández (Univ. Puerto Rico – Río Piedras), reported nearly 100% of the *M. annularis* population suffered at least some partial colony mortality, many of them losing between 50 and 95% living tissue cover. Bleaching was followed by an epizootic outbreak of white plague, which resulted in even greater rates of mortality. In 2006, massive reproductive failure among Montastrea corals during mass spawning cycle was observed of Puerto Rico’s east coast in Culebra by Dr. Hernández and off the southwest coast in La Parguera by CCRI scientists Ernesto Weil (UPR – Mayagüez) and Alina Szmant (Univ. North Carolina – Wilmington). Drs. Szmant and Weil found that very few colonies produced egg bundles and these failed to fertilize in lab trials, while in other parts of the Caribbean where bleaching was absent, spawning activity appeared to be normal. Observations suggest that the stress of bleaching and disease caused significant starvation, leaving little energy for gamete production and leading to massive reproductive failure.

CCRI Sponsors New Projects

In 2005 CCRI initiated a Request-for-Proposal and scientific peer review process for soliciting and selecting new research projects. Four projects were selected and are now in progress.

- Development of software applications for assessing the effects of land disturbance on sediment yields. Carlos Ramos, Island Resources Foundation.
- Mapping red hind groupers at spawning aggregation sites with an AUV and long-term acoustic recorders in Puerto Rico. David Mann, Univ. South Florida
- Taking coastal mapping to a new level. Assessing habitat composition and water properties of shallow coastal ecosystems along the coast of Puerto Rico using hyperspectral remote sensing. James Goodman, Univ. Puerto Rico – Mayagüez
- Puerto Rican Coral Reefs Long-Term Ecological Monitoring Program. Edwin Hernández, Univ. Puerto Rico – Río Piedras

New CCRI website!

The official CCRI website is now on line at http://ccri.uprm.edu. The site contains reviews of the major threats facing local coral reefs, progress reports on CCRI-sponsored research, synopses of CCRI scientists and their research, resources and links relevant to coral reefs, plus news and announcements. In addition, there is an extensive photo gallery covering Puerto Rico’s coral reefs.