

BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

BOEM OCS Region: [Gulf of Mexico](#)

Planning Area: Central

Title: New Invasive Marine Species Colonizing Oil/Gas Platforms in the Northern Gulf of Mexico: Verification and Examination of Spread (GM-09-01-07)

Total Cost: \$339,549

Period of Performance: FY 2010-2012

Conducting Organization: Louisiana State University Coastal Marine Institute

BOEM Contact: [James Sinclair](#)

Description:

Background: Invasive species have become a major problem in the marine environment for decades. They are transported around the world by various means, including on ship's hulls and in ballast water. The Gulf of Mexico has experienced several invasions from the Indo-Pacific, one of which is the ahermatypic/azooxanthellate coral *Tubastraea coccinea*, which, over the past 60-70 yrs. has colonized sites from the Florida Keys to Brazil. It has also colonized oil and gas platforms in the northern Gulf of Mexico and occurs there in high abundances – up to hundreds of thousands of colonies per platform. A new closely related congener has now been observed on a platform in the northern GOM – *Tubastraea micranthus*. A total of 81 platforms, both standing production platforms and Rigs-to-Reefs structures surveyed on the continental shelf of the northern Gulf of Mexico between 2000 and 2009 by SCUBA and ROV have confirmed that *T. micranthus* only occurred on one platform. The site occurs at the cross-roads of two major safety fairways/shipping lanes. The introduction appears to be recent. The presence of a second *Tubastraea* species in the Gulf of Mexico raises concerns about its ability to spread and possibly out-compete native species in their natural habitats.

Objectives: This study will analyze the character of the *Tubastraea micranthus* invasion in the northern Gulf of Mexico by measuring abundance, depth distribution, geographic distribution, growth rates, and reproductive viability.

Methods: We will determine the abundance of this new invasive species at its known platform location and other platforms within a 20-km radius of it, to determine whether its populations have begun to spread through the region. Its depth distribution and depth limits will be determined using divers with still and video cameras and *via* ROV at depths > 37m. *Tubastraea micranthus* colony growth rates via asexual reproduction/budding and stolon production will be monitored. We will determine its reproductive viability in this new environment by examining reproductive state and planular development within the polyps.

Products: Final Synthesis Report, GIS, annotated bibliographic entries for relevant

publications, and at least one peer-reviewed publication.

Importance to BOEM: The data gathered through this study will provide information to BOEM and other government agencies regarding whether this species needs to be controlled or eradicated, and on what time scale.

Current Status: Awarded. Several field cruises have accomplished ROV surveys. Diving work and related sampling has not been done due to restrictions on diving related to the Deepwater Horizon spill and possible oil contamination in the region. An extension is being requested due to delays related to the Deepwater Horizon spill.

Final Report Due: April 2012

Publications: none

Affiliated WWW Sites: none

Revised date: March 2012

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