Marine Invasive Species

National Park Service U.S. Department of the Interior

Natural Resource Stewardship and Science



Tubastraea coccinea

Orange cup coral, Daisy cup coral

Threat scores

- 1. Ecological impact
 - Since it is not known from the Gulf of Mexico other than on oil platforms, this represents a rapid range expansion following oil platform placements.
- 1. Invasive potential
 - The range expansion into the Gulf of Mexico is likely due to a preference of this species for artificial substrates, which may be rapidly colonized.
 - Potential for future distribution on oil tanker fouling communities.
 - insensitivity to angles of recruitment and its tolerance for different depths makes it an organism with great ecological tolerance, with a potential to colonize new areas and increase its current range in Brazil's coastal waters.
- 1. Geographic extent
 - Locally patchy
- 1. Management difficulty
 - No known controls in aquatic environment.

Geography and Habitat

- 1. Origin: Tubastraea coccinea and Mycetophyllia reesi were found to have ranges that extend throughout the Caribbean
- 1. First introduction: 1977
- 2. 1st seen in the western Gulf of Mexico off of Tuxpan, Mexico in 1977.
- 3. Marine, fouling communities

Invasion Pathways

- 1. Long-term disturbances that facilitate introduction
 - Accidental probable
 - Cause- Oil and gas platform installations in Gulf of Mexico
 - Oil and gas structures may act as vectors for the spread of invasive and exotic species.
- 1. Hull/Surface Fouling
 - Accidental probable
 - Cause- Hull Fouling
 - This coral has frequently been observed attached to ship's hulls (Cairns, 1994, 2000) and oil platforms (Fenner, 2001).
 - In Ilha Grande, Brazil, its distribution suggests that it was introduced to the region by ships or oil platforms, whereupon it rapidly

Non native locations

- 1. 43- Northern Gulf of Mexico
- 2. 70- Floridian
- 3. 152- Hawaiian Islands



Sources

- Molnar, Jennifer, et al. 2008. "Assessing the global threat of invasive species to marine biodiversity." *Frontiers in Ecology and the Environment*. 6 (9), pp. 485-492. http://conserveonline.org/workspaces/global.invasive.assessment 1.
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- http://nas.er.usgs.gov/XIMAGESERVERX/2010/20100309151008.jpg 2.