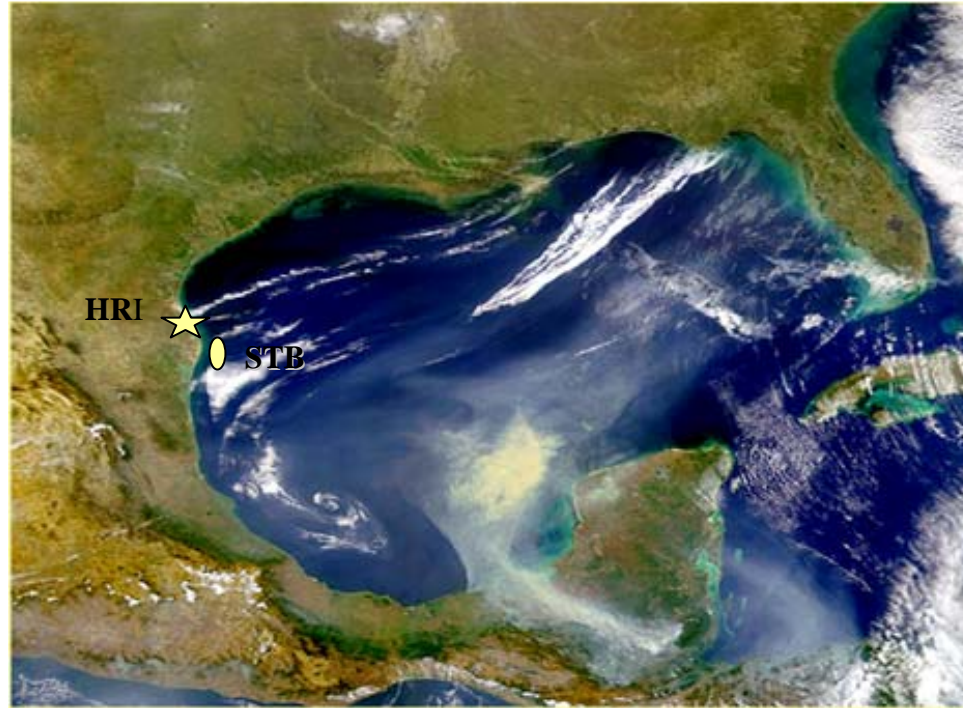


Recent Research on South Texas Topographic Features: Ecology



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Topographic highs and hard substrates rare on Gulf of Mexico continental shelves

Interest and biodiversity high (hotspots)

Connectivity unknown but suspected

Conservation needed

**“Islands in the Stream” concept proposed
(biotic stepping stones)**

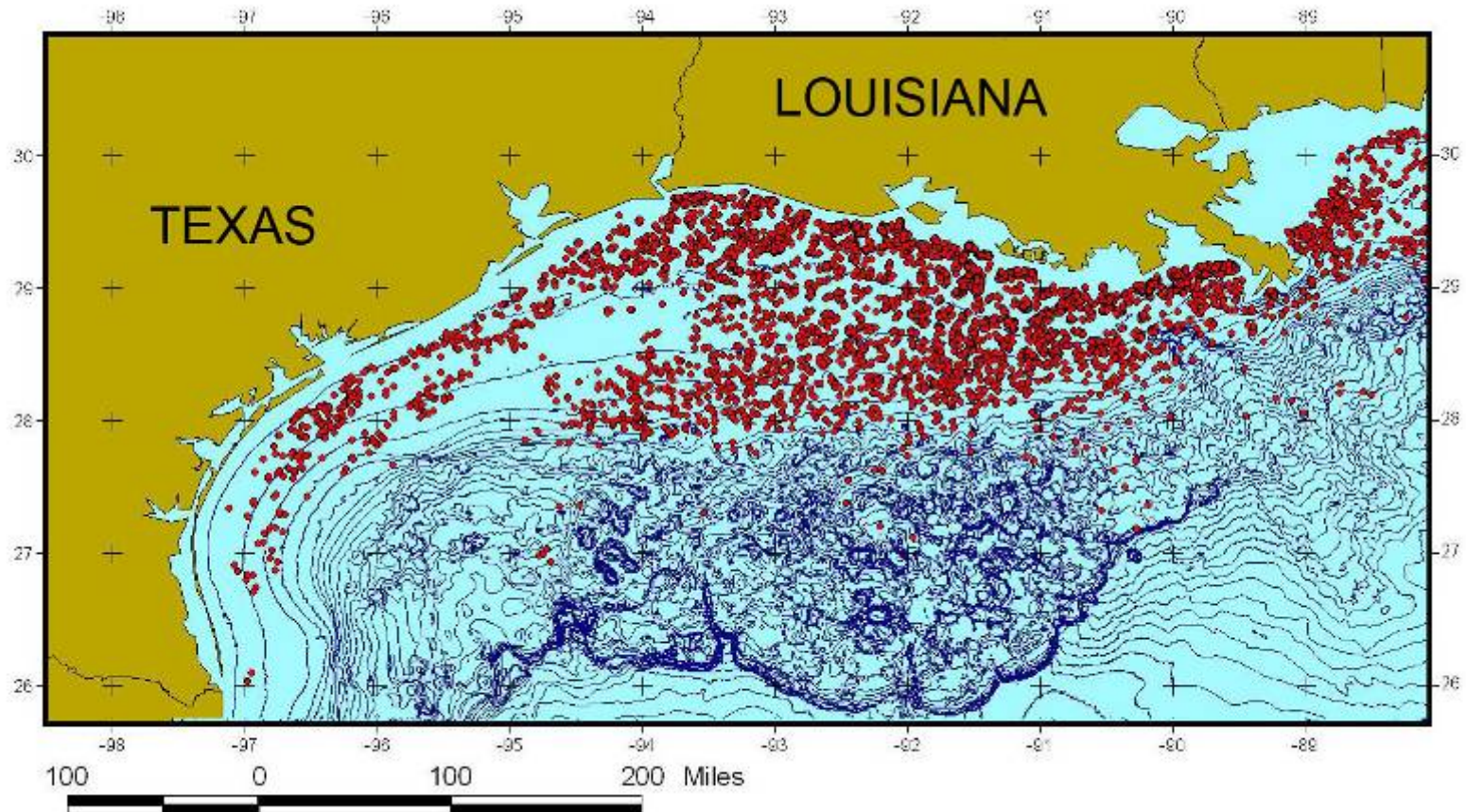
Gulf of Mexico Coral Reefs

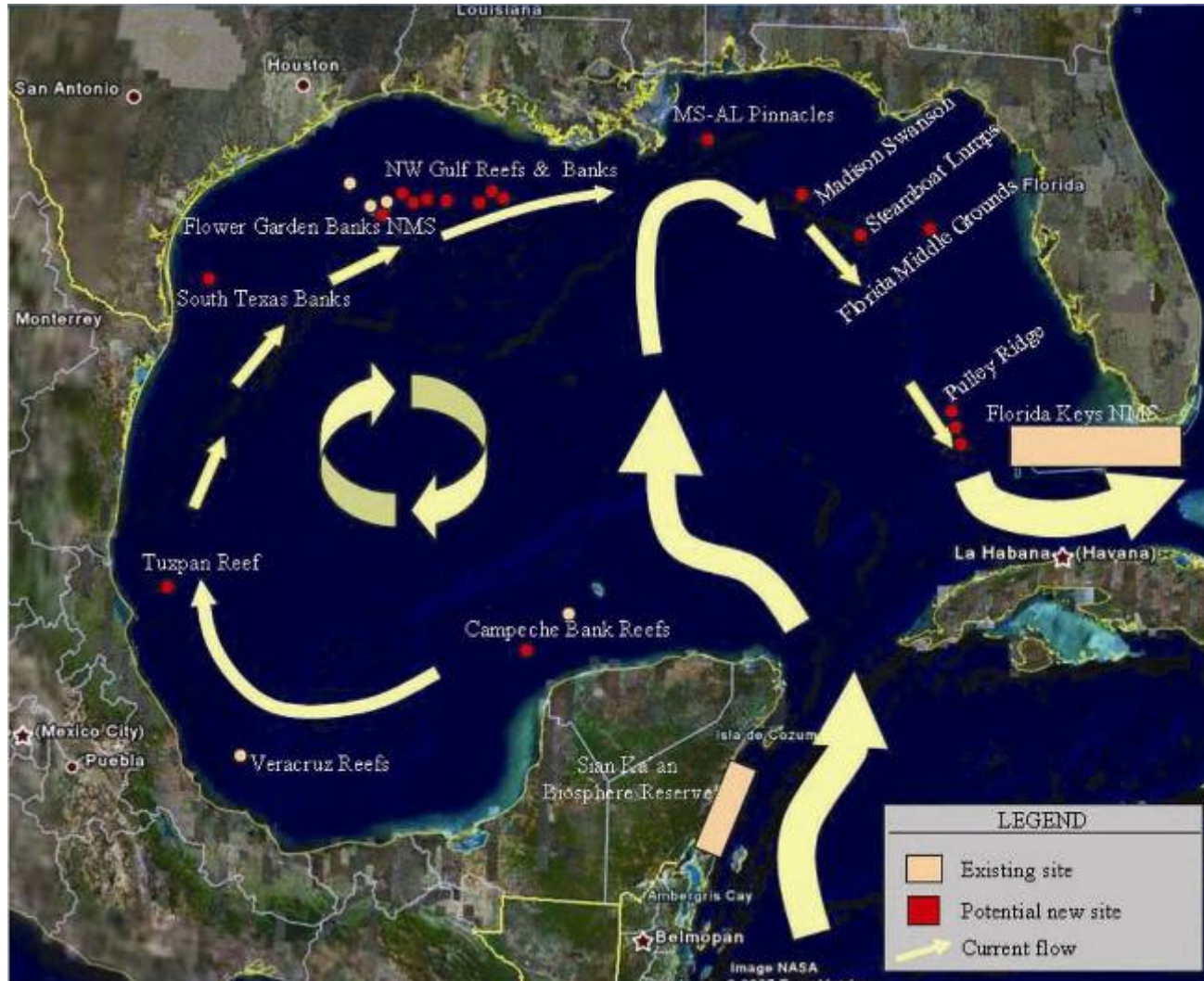


Gulf of Mexico Coral Reefs

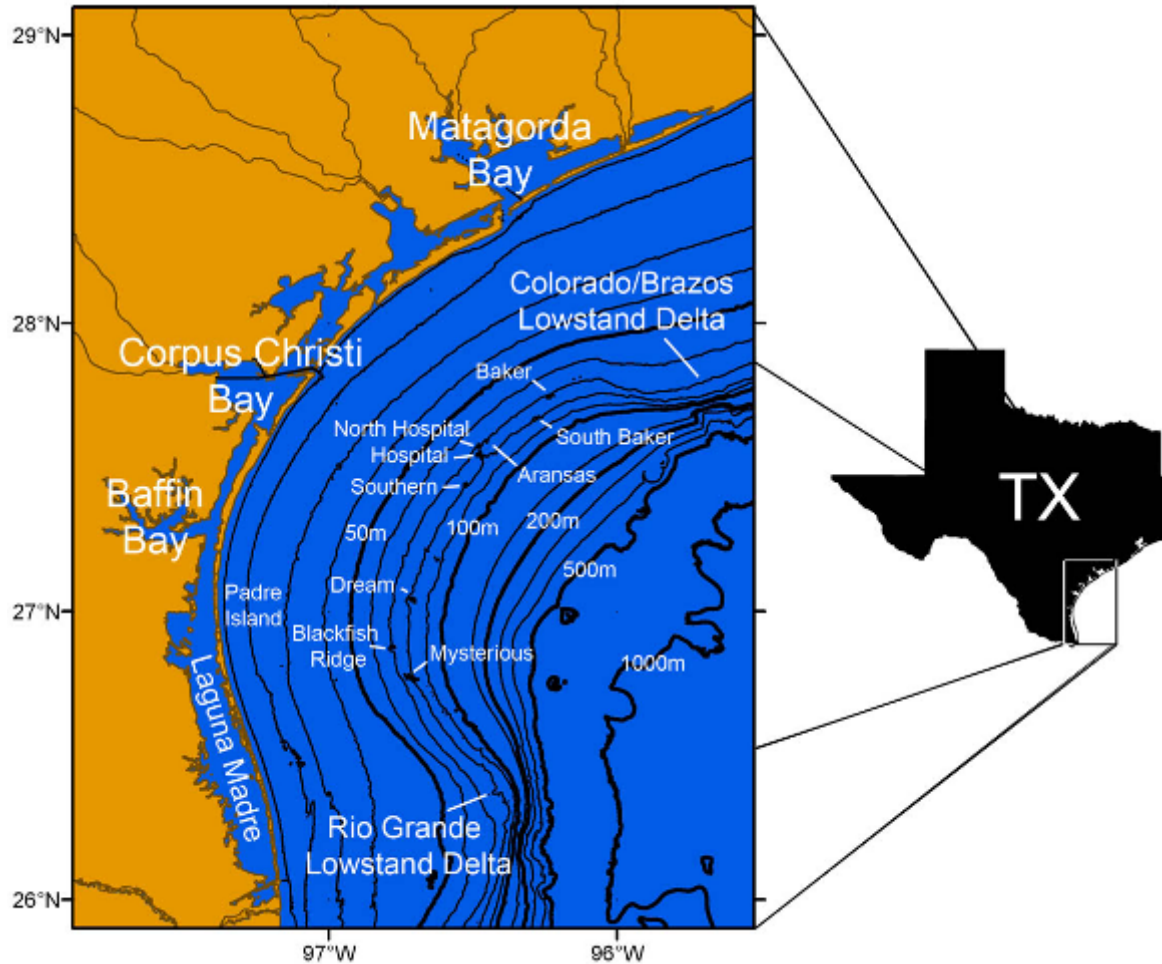


Gulf of Mexico Platforms





South Texas Banks



South Texas Banks

Mid-shelf topographic features, 1–22 m (3–72ft) relief

Relict coral reefs/coral algal reefs

- shallow reefs 12,000–18,000 years ago
- presently in 68 – 84 m (223–276ft) at base

Fauna with tropical affinity (Parker and Curray 1956)

- when water was warmer, shallower, and connected to West Indies/Caribbean
- fauna now (in some mollusks) smaller, more spinose

South Texas Banks Ecology

Depth, light, and nepheloid layer

Seasonal water masses

Antipatharian Zone (Bright & Rezak 1976)

Decrease in abundance and diversity at 70 m

High vs low relief

Recent Surveys (Fall 2008)



Tow Camera System
(created by D. Weaver)

Confirmed carbonate rocks
and reef-like structure

More species & diverse
tropical fish assemblage
than Rezak et al. (1985)

- 14 new fish records

Recent Images



Future Plans

Multibeam mapping of remaining banks

Compare fauna of banks in region, including Seven and One-half Fathom Reef

- Tunnell and Chaney (1970)
- Thayer et al. (1974)
- Felder and Chaney (1979)

Determine connectivity between southern Gulf coral reefs and northern Gulf banks (genetics?)

Question: Is fauna connected or relict?



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