



Flower Garden Banks National Marine Sanctuary





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NWGOM Exploration and Characterization

12 Submersible Cruises

218 hours of dive time

177 ROV Surveys

10 Submersible Surveys

East Flower Garden Bank - 50 surveys

West Flower Garden Bank - 81 surveys

Stetson Bank - 13 surveys

Bright Bank - 3 survey

Alderdice Bank - 3 surveys

McGrail Bank - 20 surveys

Sonnier Bank - 1 survey

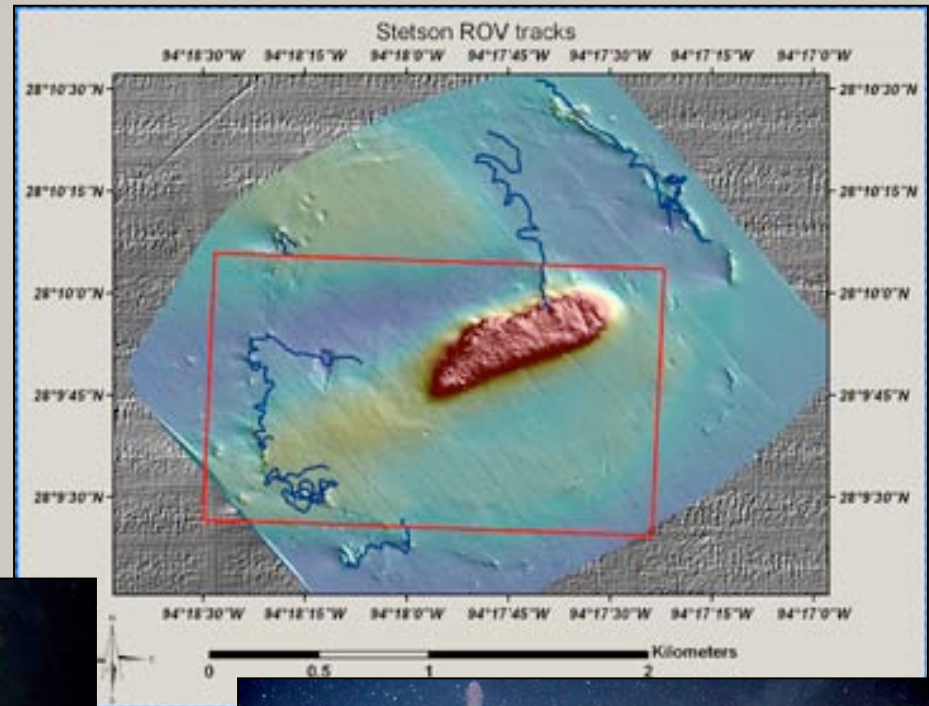
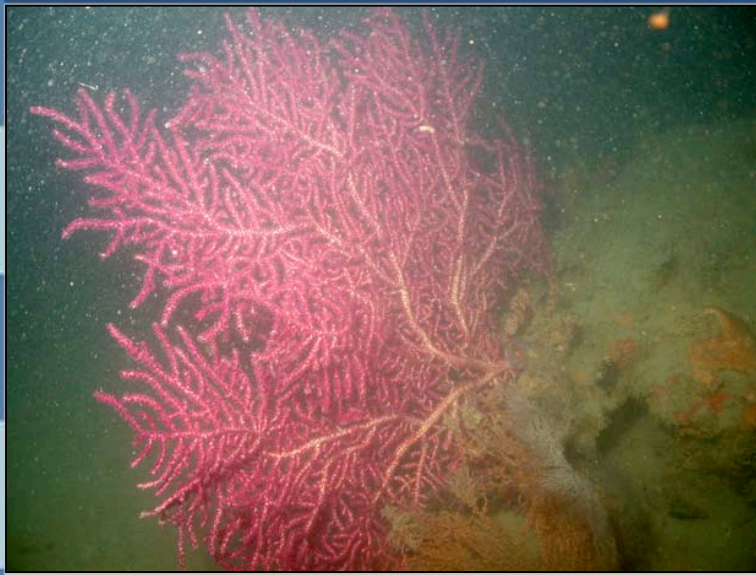
247 directed samples

8497 digital images



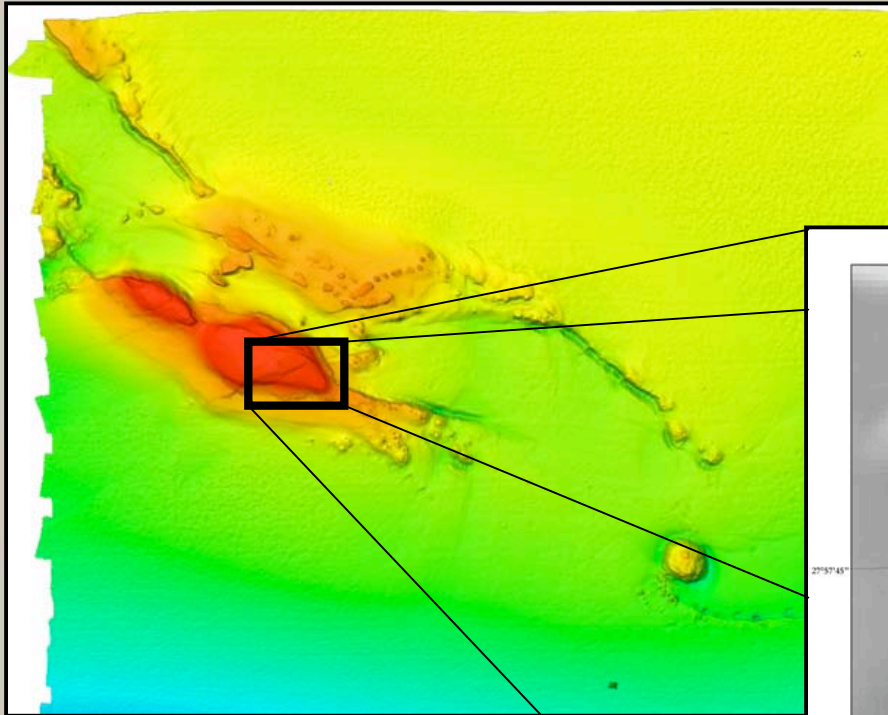


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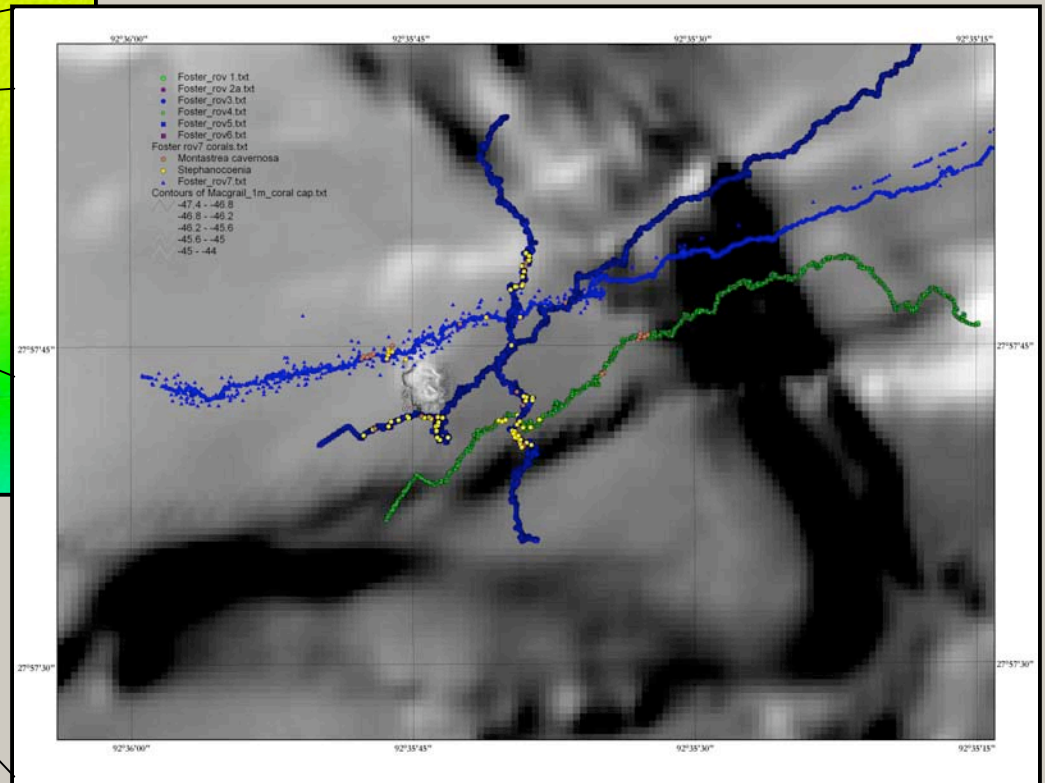




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McGrail Bank coral cap zone

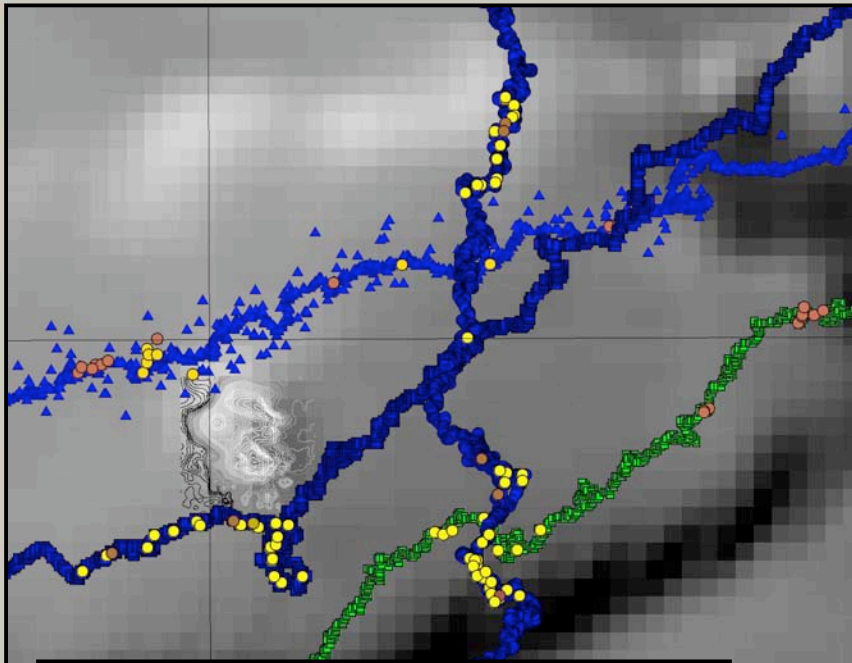


ROV and manned submersible tracks

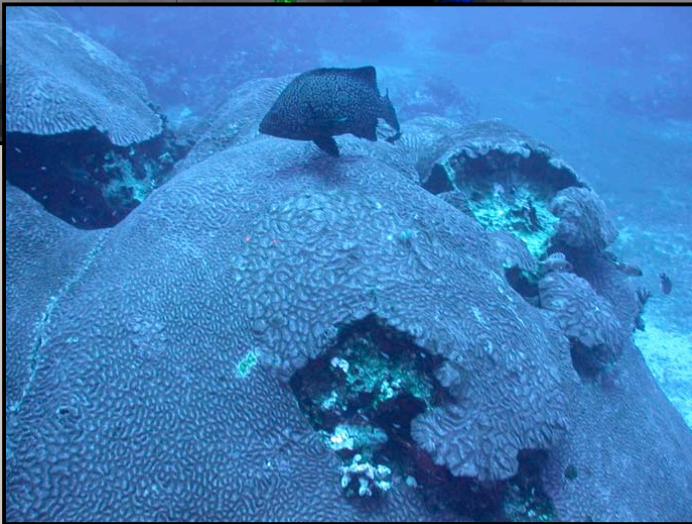




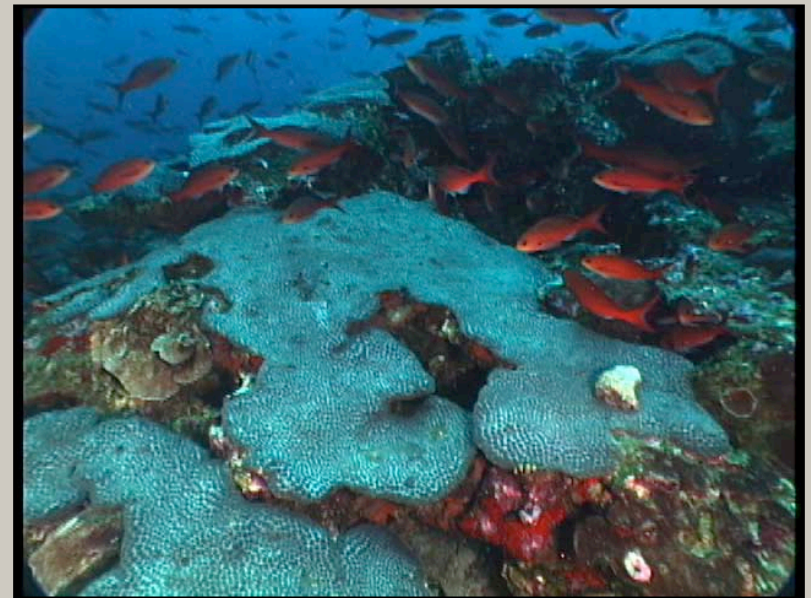
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● *Stephanocoenia intercepta* (2.5m x 1.5m)



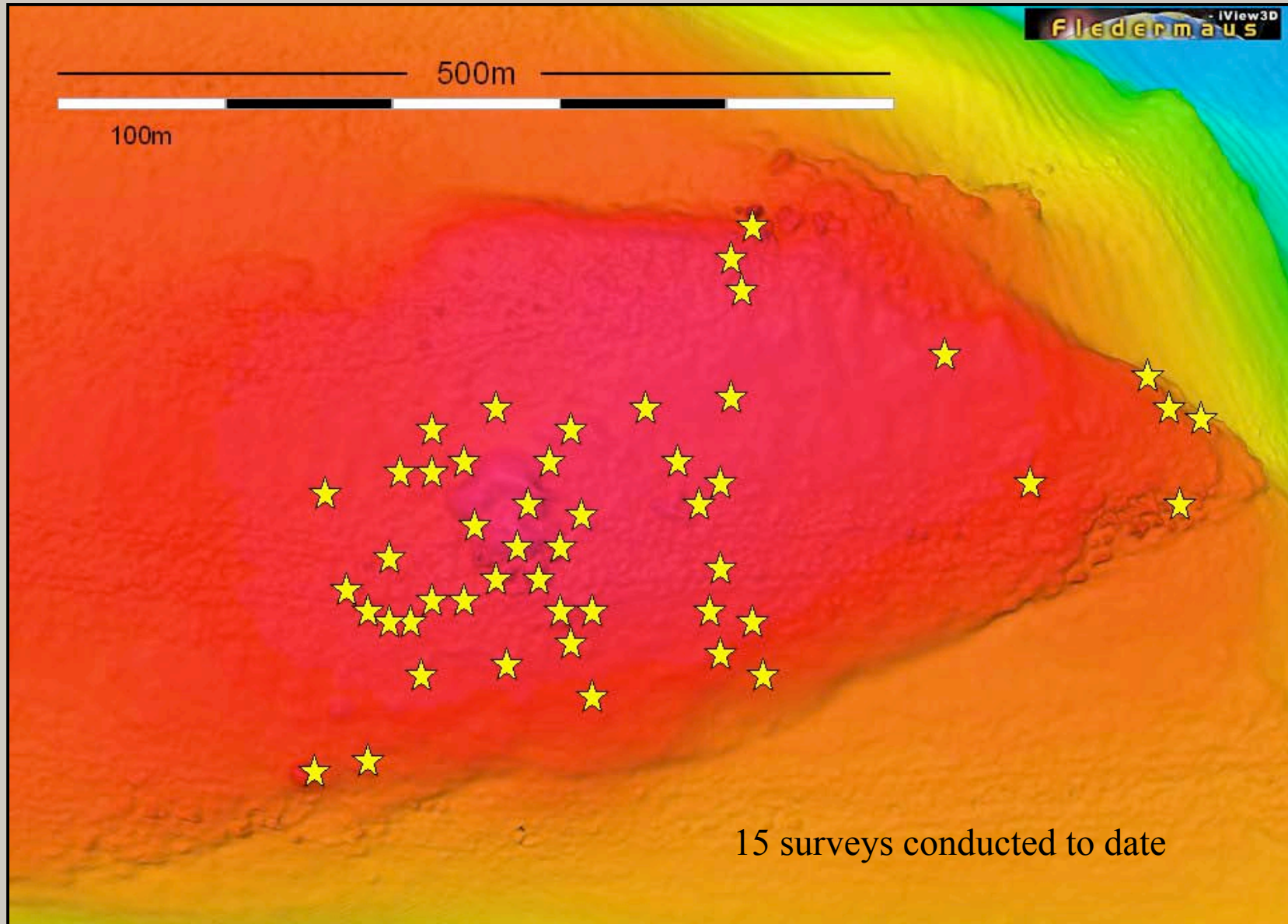
Colpophyllia natans (3m x 2m)



● *Montastraea cavernosa*



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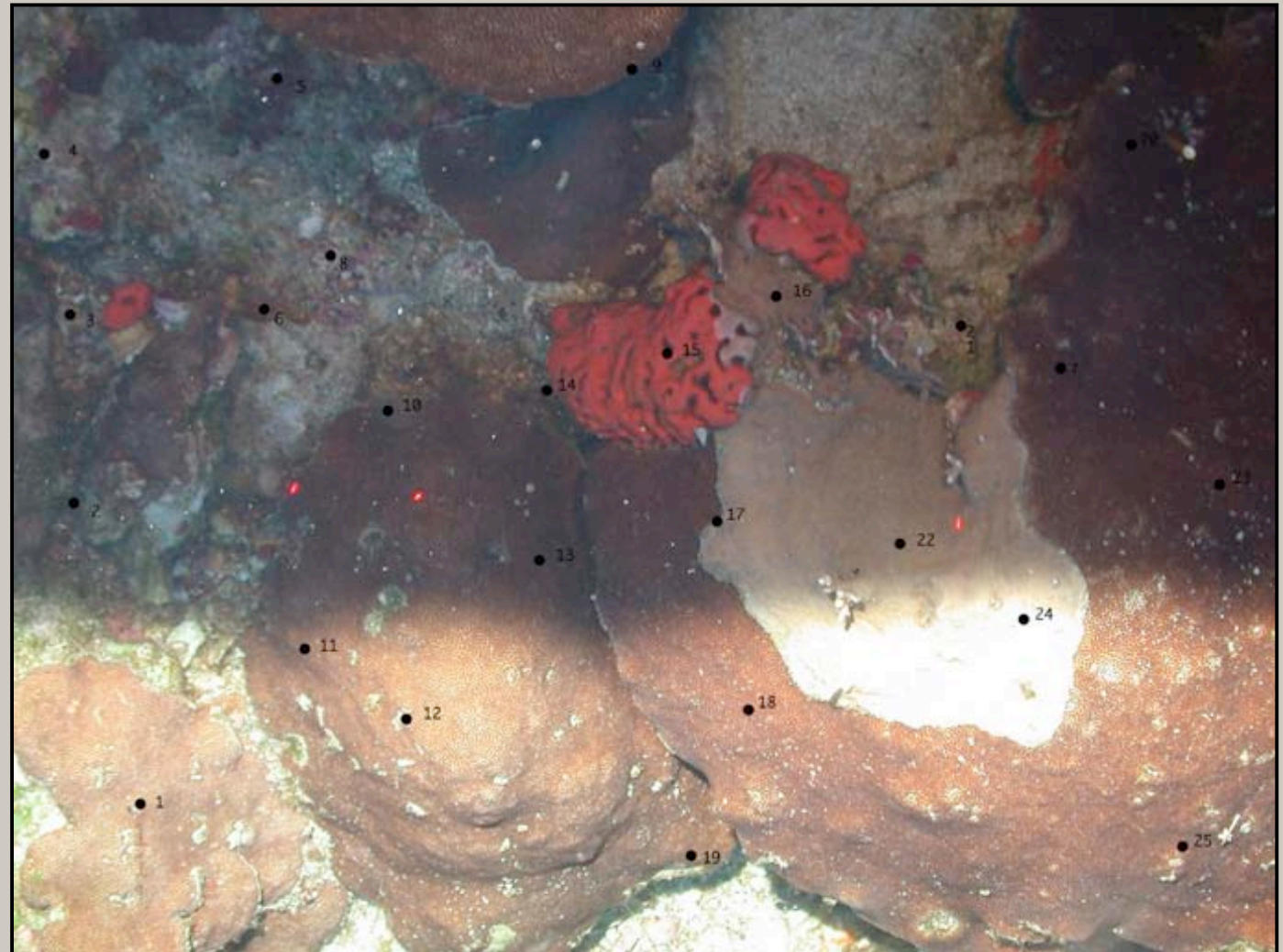




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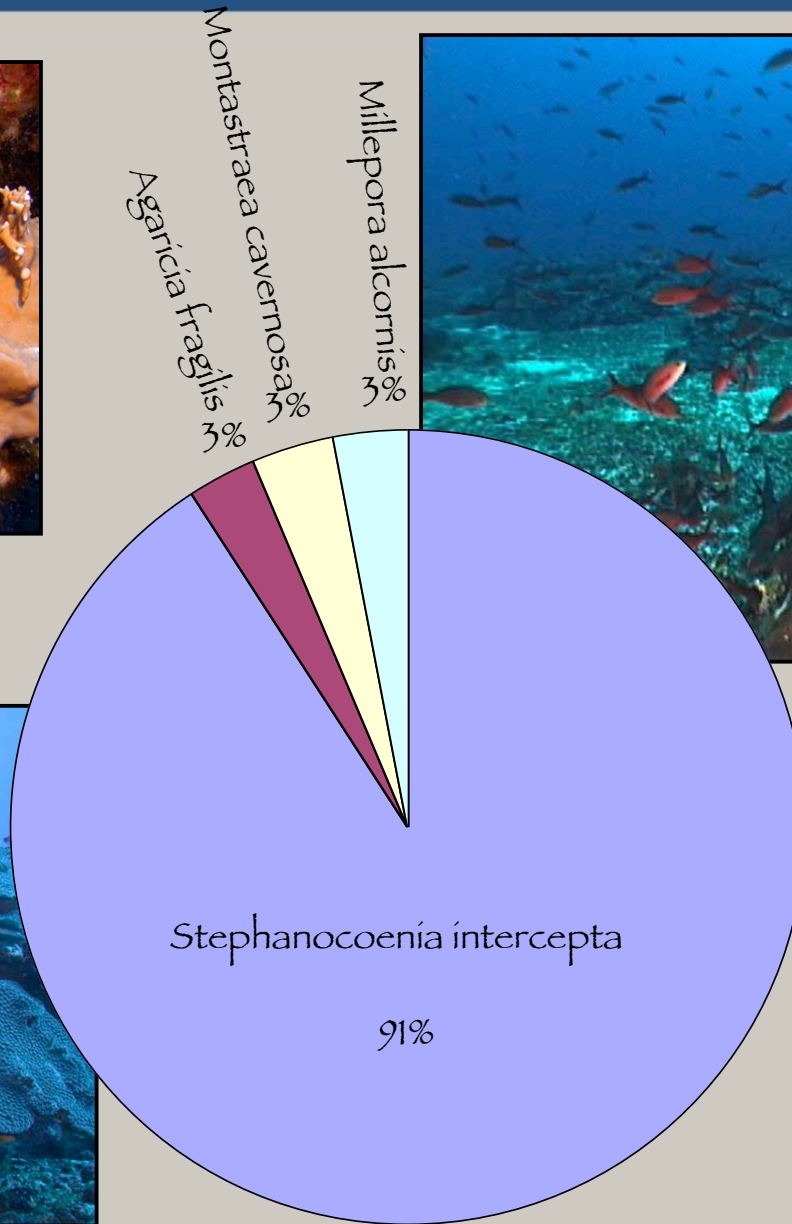
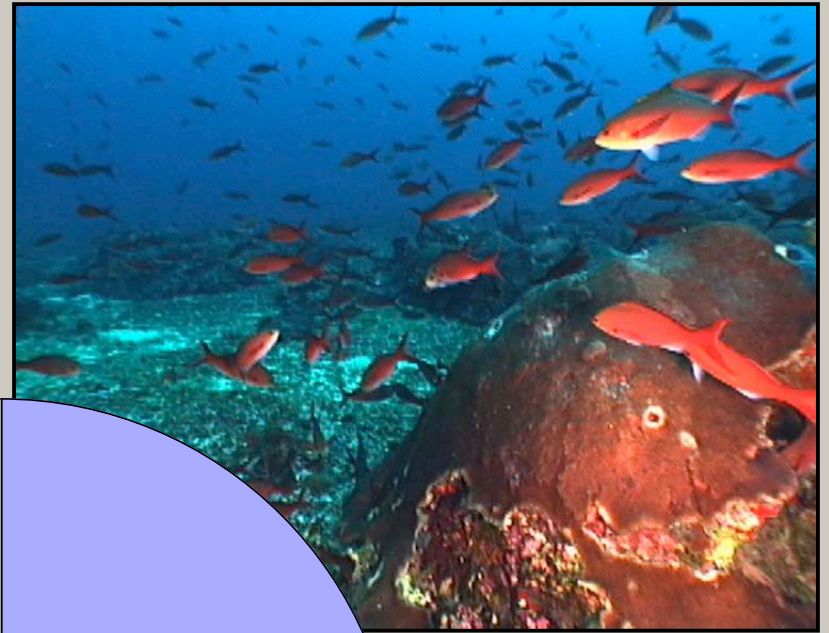


- 25 ROV stratified random photo transects
- 2 minute straight line transects
- Photos every 10 seconds
- 10 cm lasers
- 200 photographs
- 25 random points analyzed on each image using Adobe Photoshop
- Percent coverage and dominance assessed





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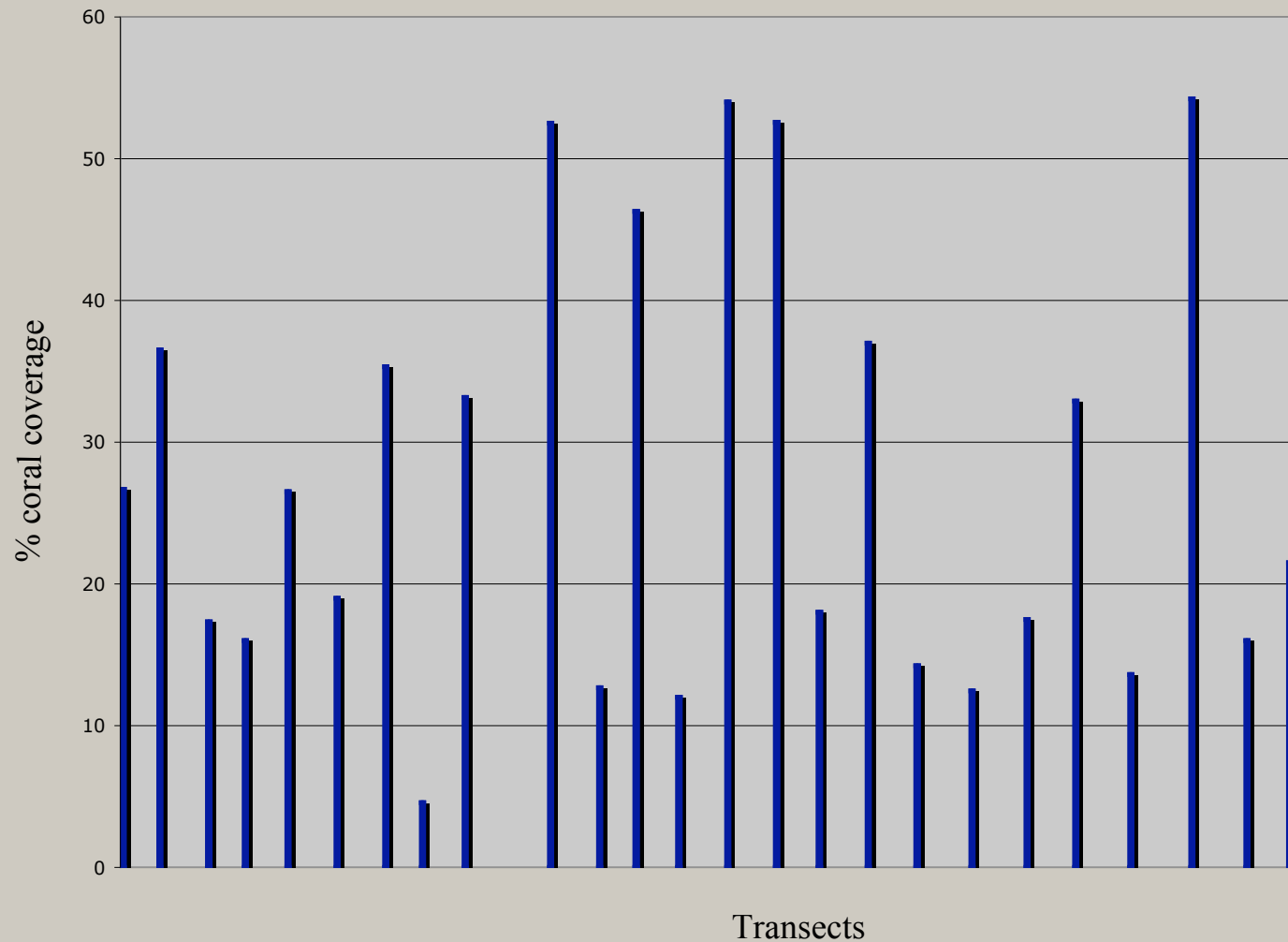


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Range: 4.6% - 54.2%

Average coral cover: 27.5%





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McGrail Bank: 27.7%

Higher coral coverage
than 11/16 of the major
Caribbean/Western
Atlantic coral reef areas

Akumal, Mexico	20.0%
Bahamas (Andros)	31.4%
Belize	21.1%
Bermuda	20.6%
Bonaire	46.5%
Cayman Islands	19.9%
Cuba	20.2%
Curacao	35.2%
Florida Keys	10.4%
Flower Garden Banks	57.8%
Netherlands Antilles	21.4%
St. Vincent Grenadines	34.3%
Turks and Caicos	14.3%
Veracruz, Mexico	20.4%
Virgin Islands	18.2%
Yucatan, Mexico	14.5%

Source: Lang, J.C. 2003, Atlantic and Gulf Rapid Reef Assessment (AGRAA)

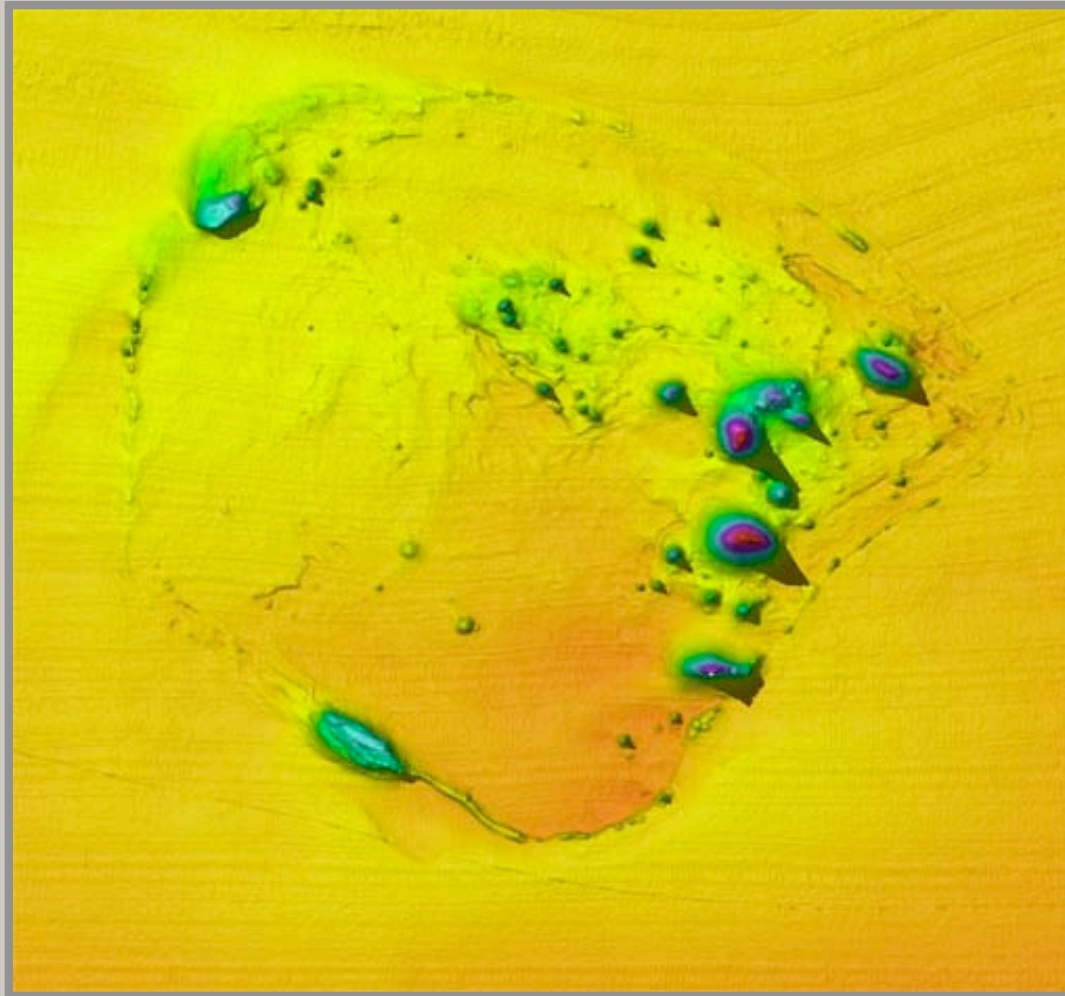


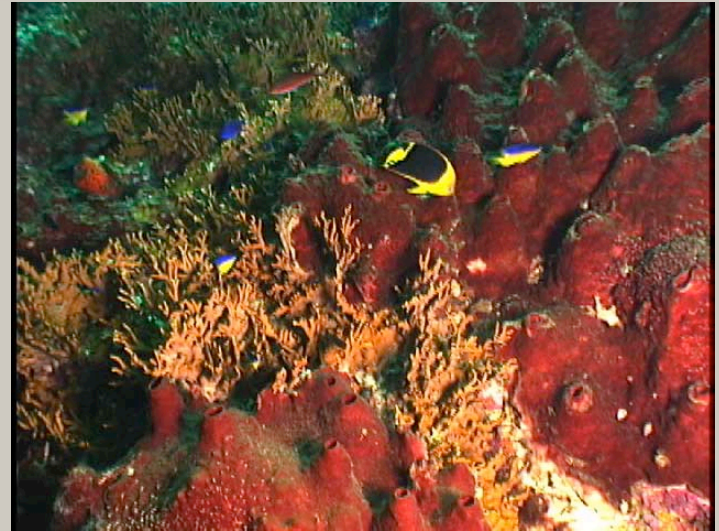
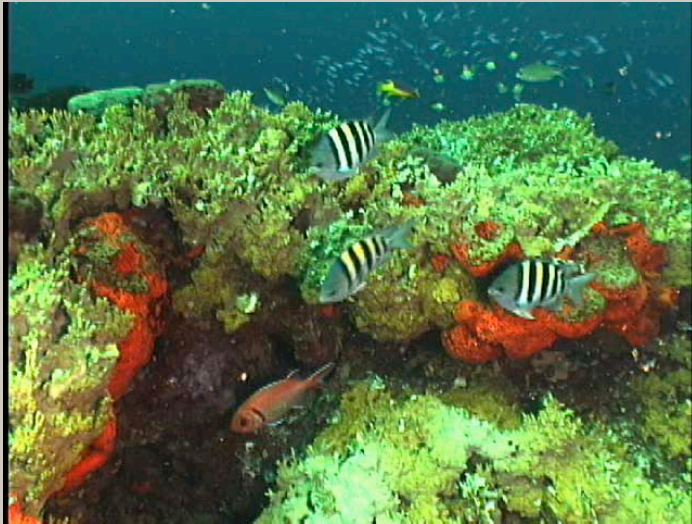
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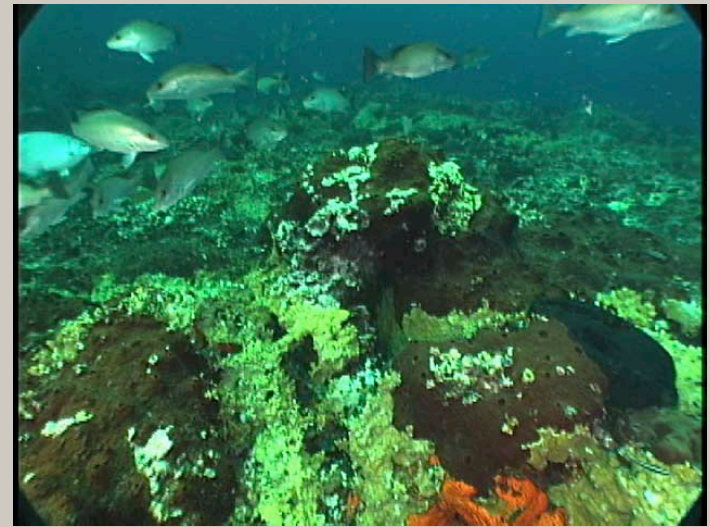


Sonnier Bank





Sonnier Bank - Coral Community

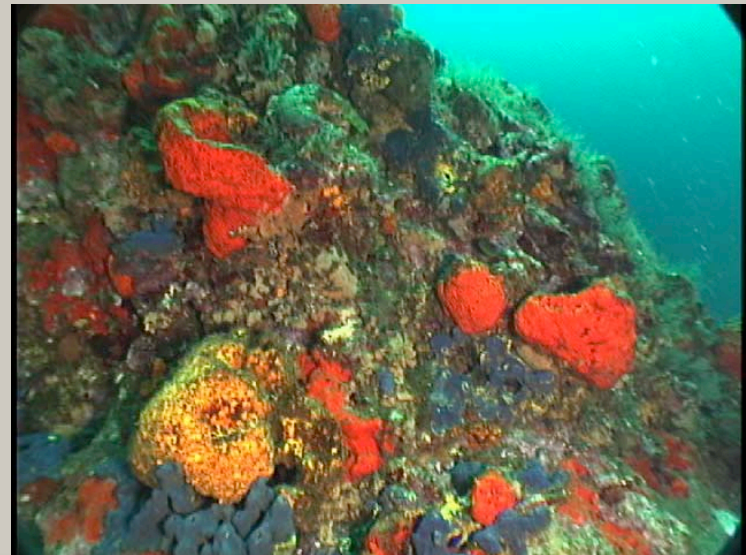




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Sonnier Bank - Coralline Algae dominated by sponges

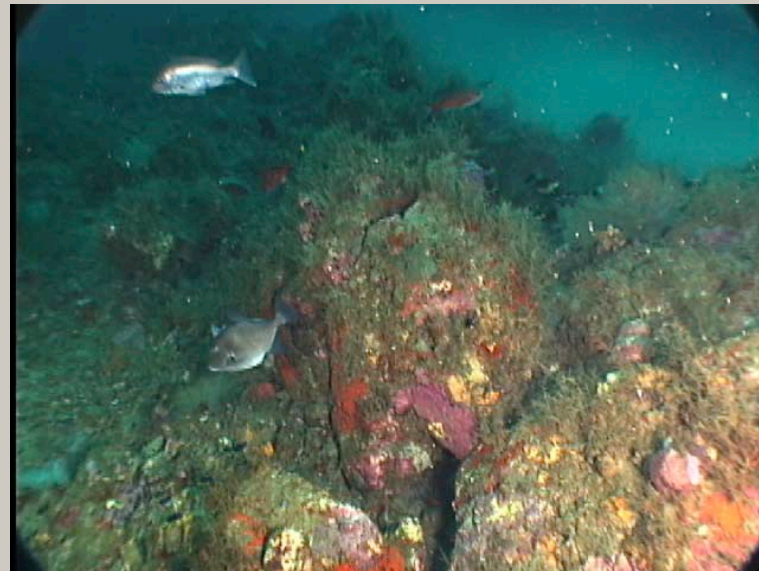
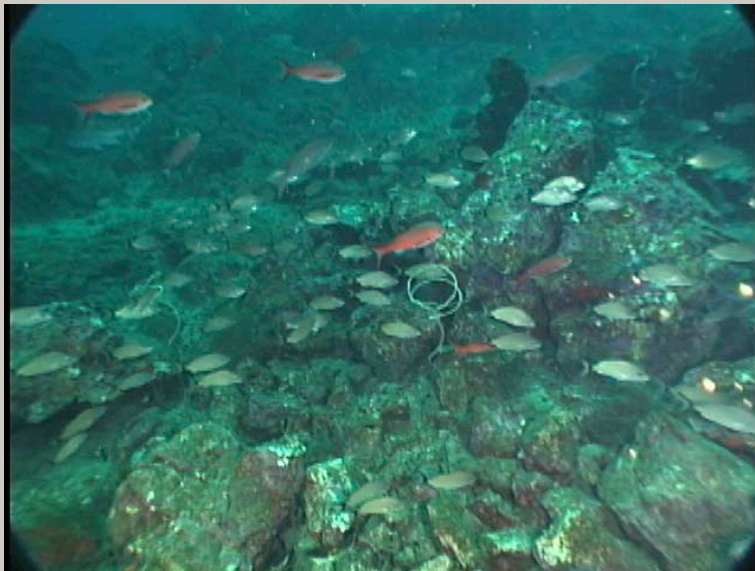




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Sonnier Bank - Deep Coral Zone

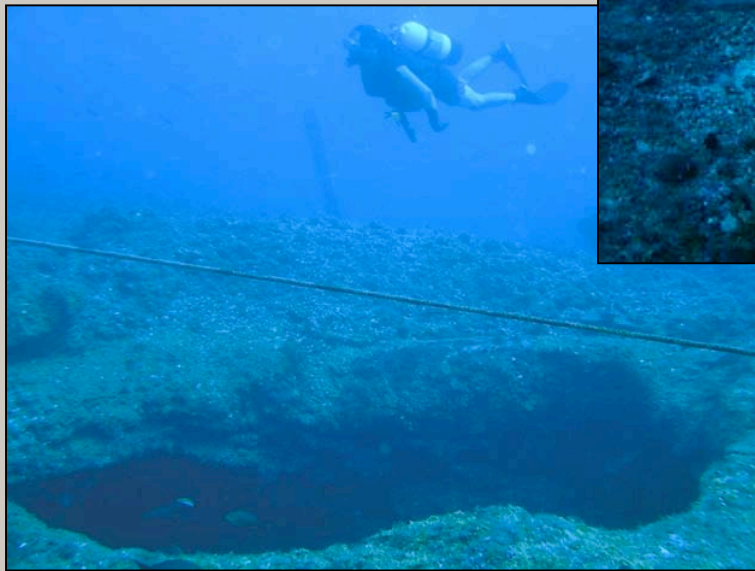
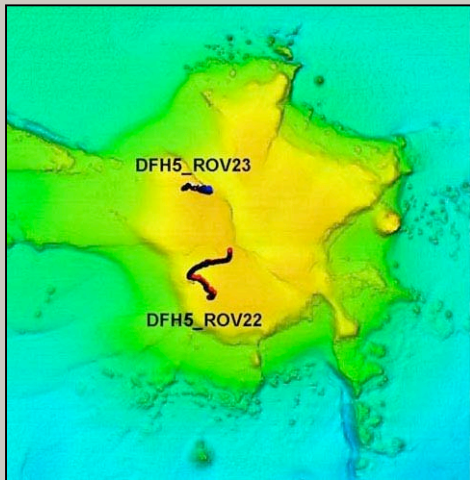




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Bright Bank

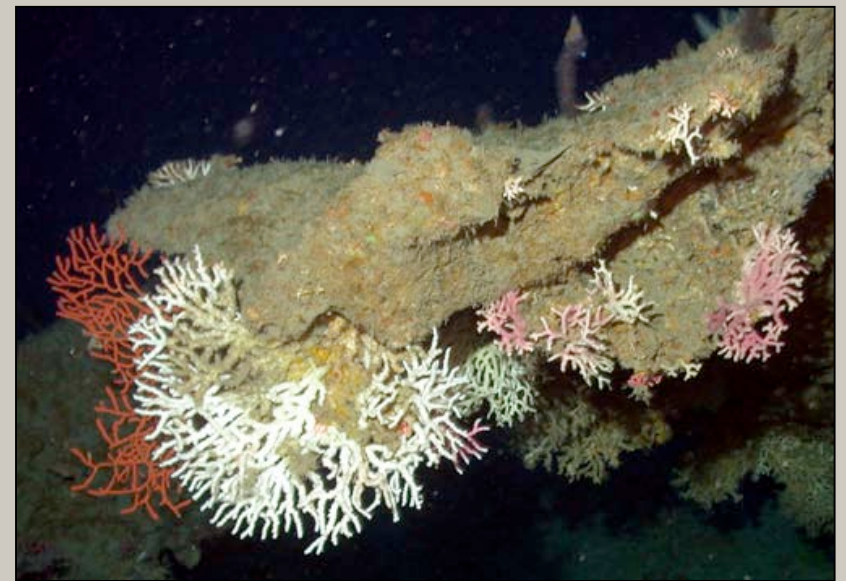
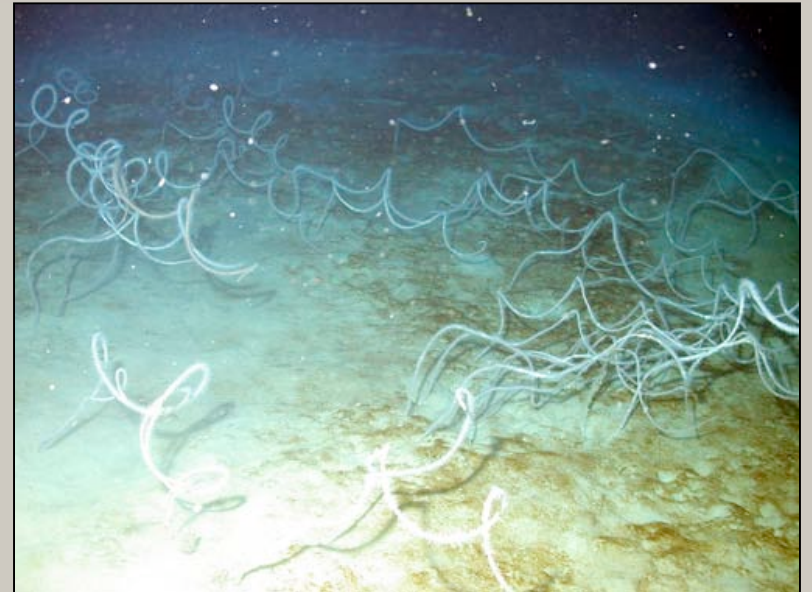




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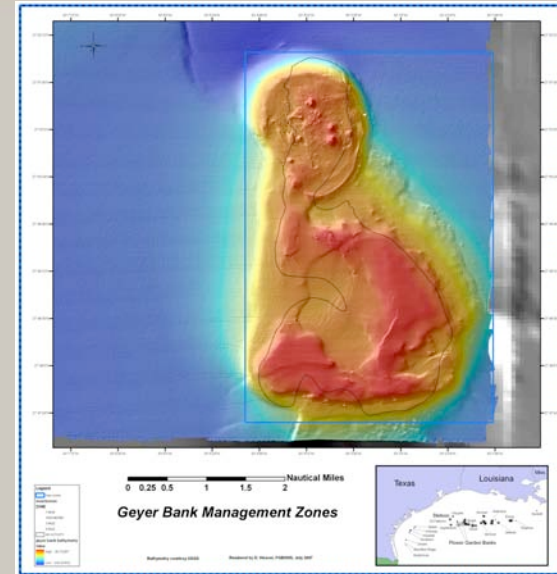


Bright Bank



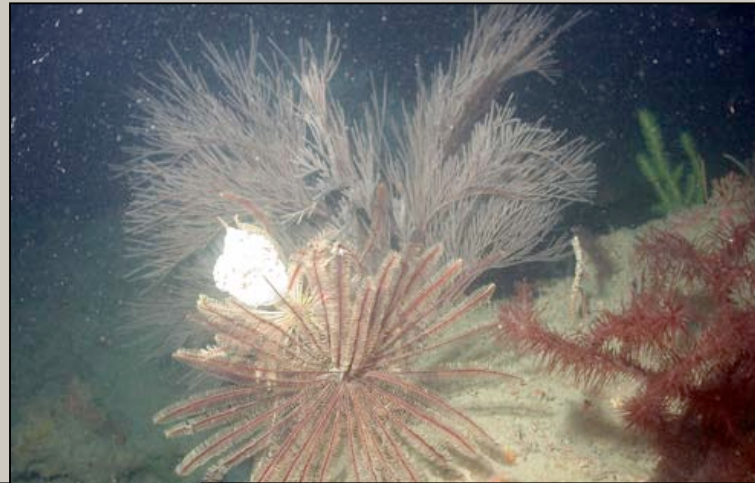
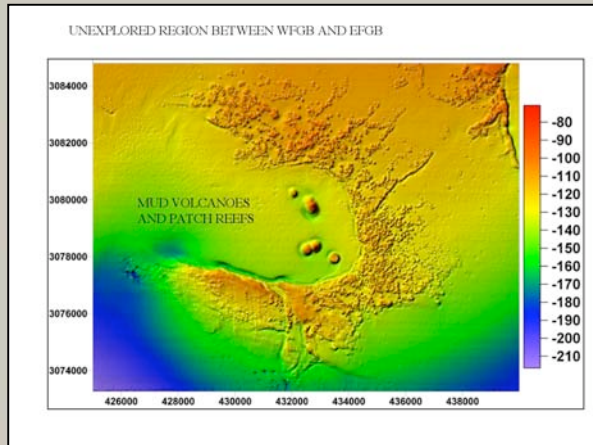


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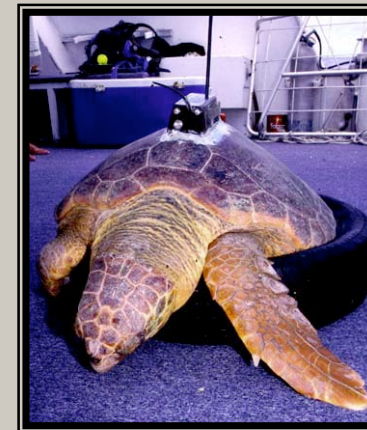
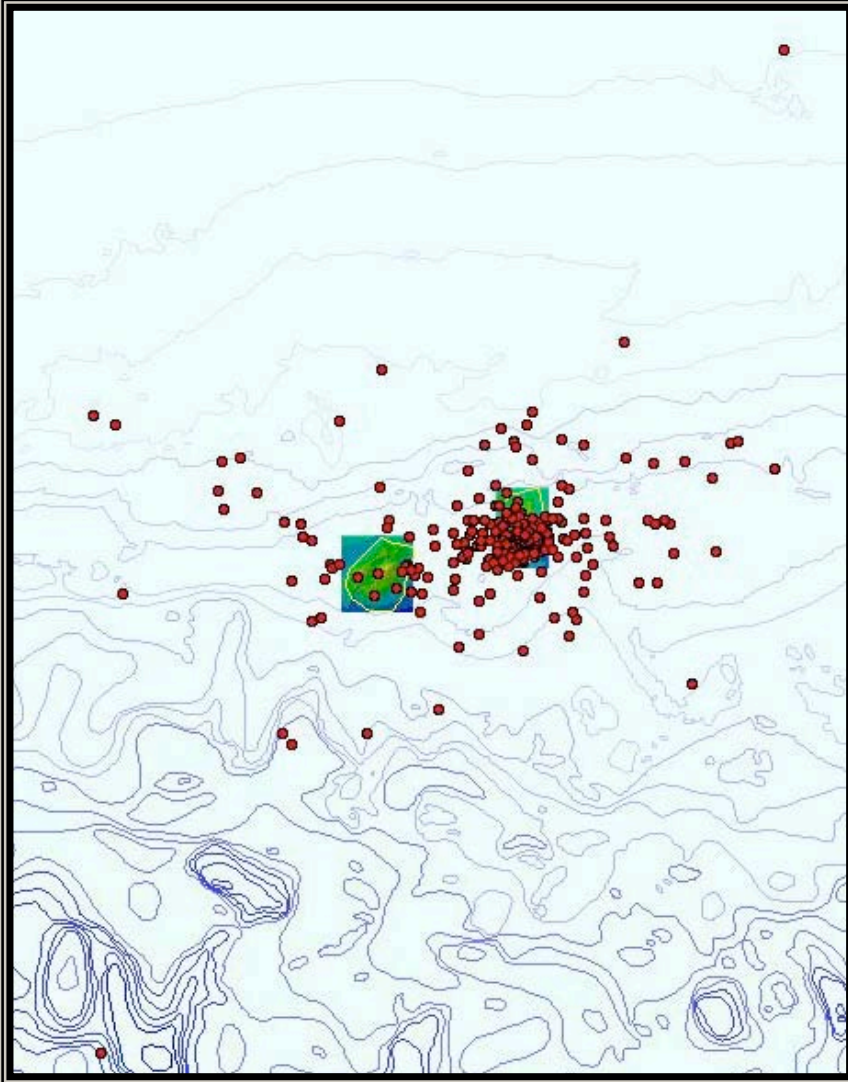


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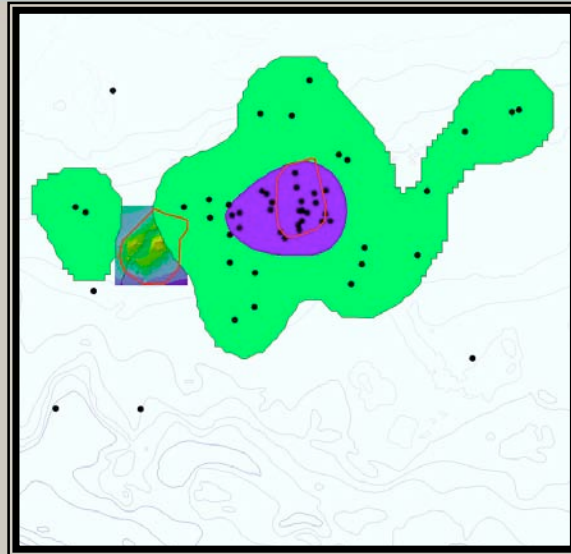
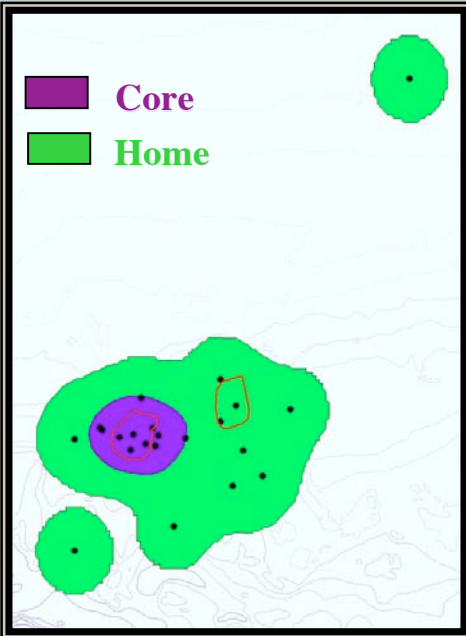


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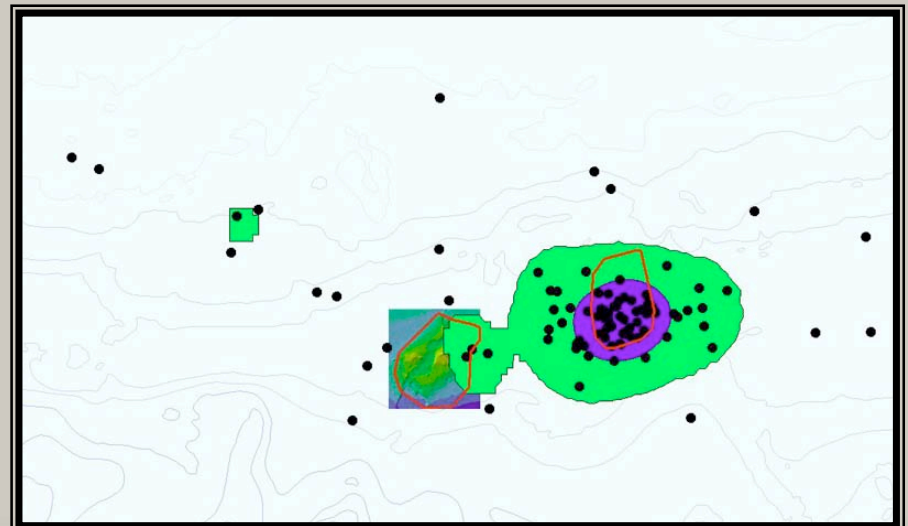
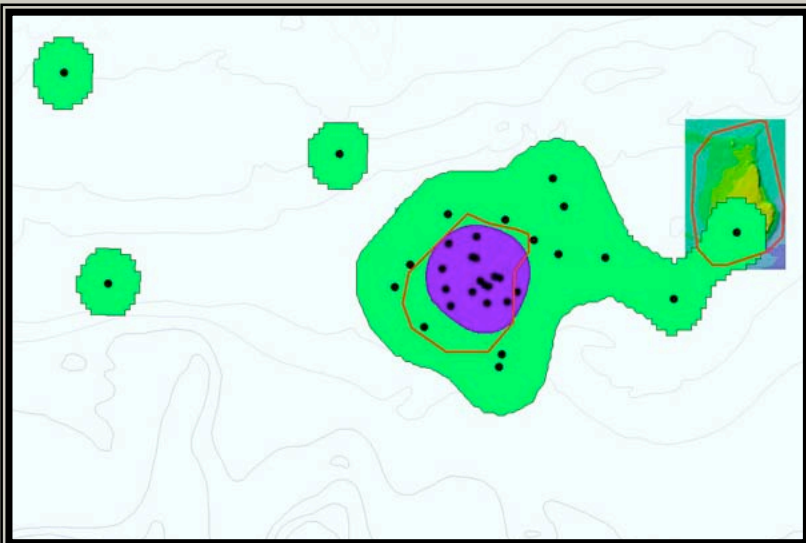
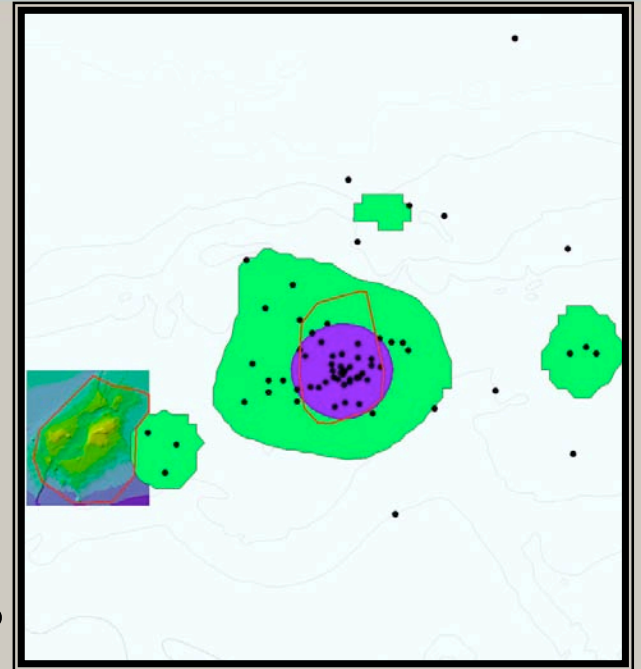


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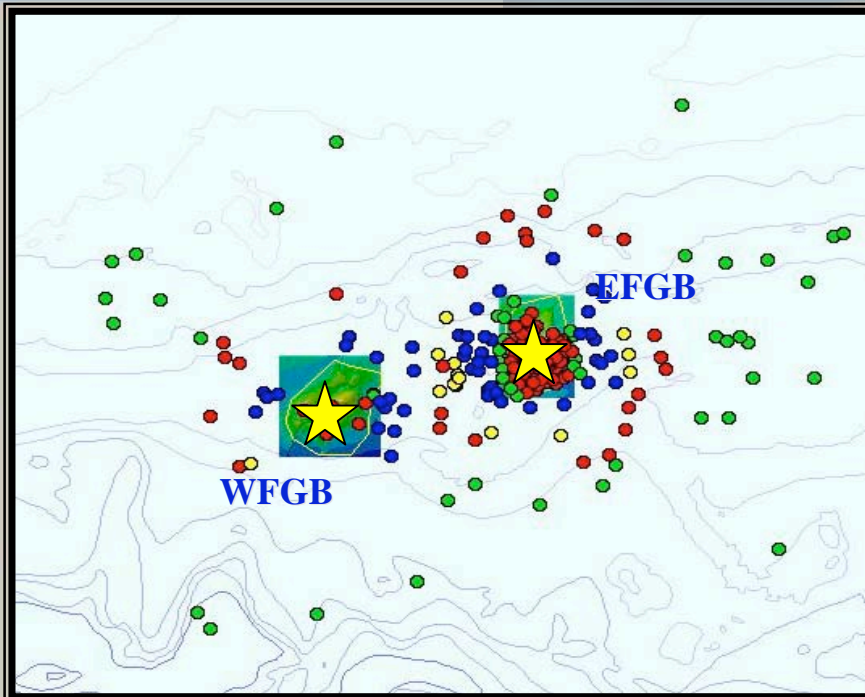
Core: 50%

Home: 95%





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Zones:

- **FGBNMS**
- **FGBNMS - 1km**
- **1km - 5km**
- **5km - 6.44km**
- **6.44km - 10km**
- **10km - 30km**
- **30km+**

Location Fix
Proximity
Relationship -
measure distance
from point to
closest sanctuary
boundary (i.e.
protected area)

What percentage of ranges are protected with current Sanctuary boundaries?

Core: 72.28%

Home: 44.05%

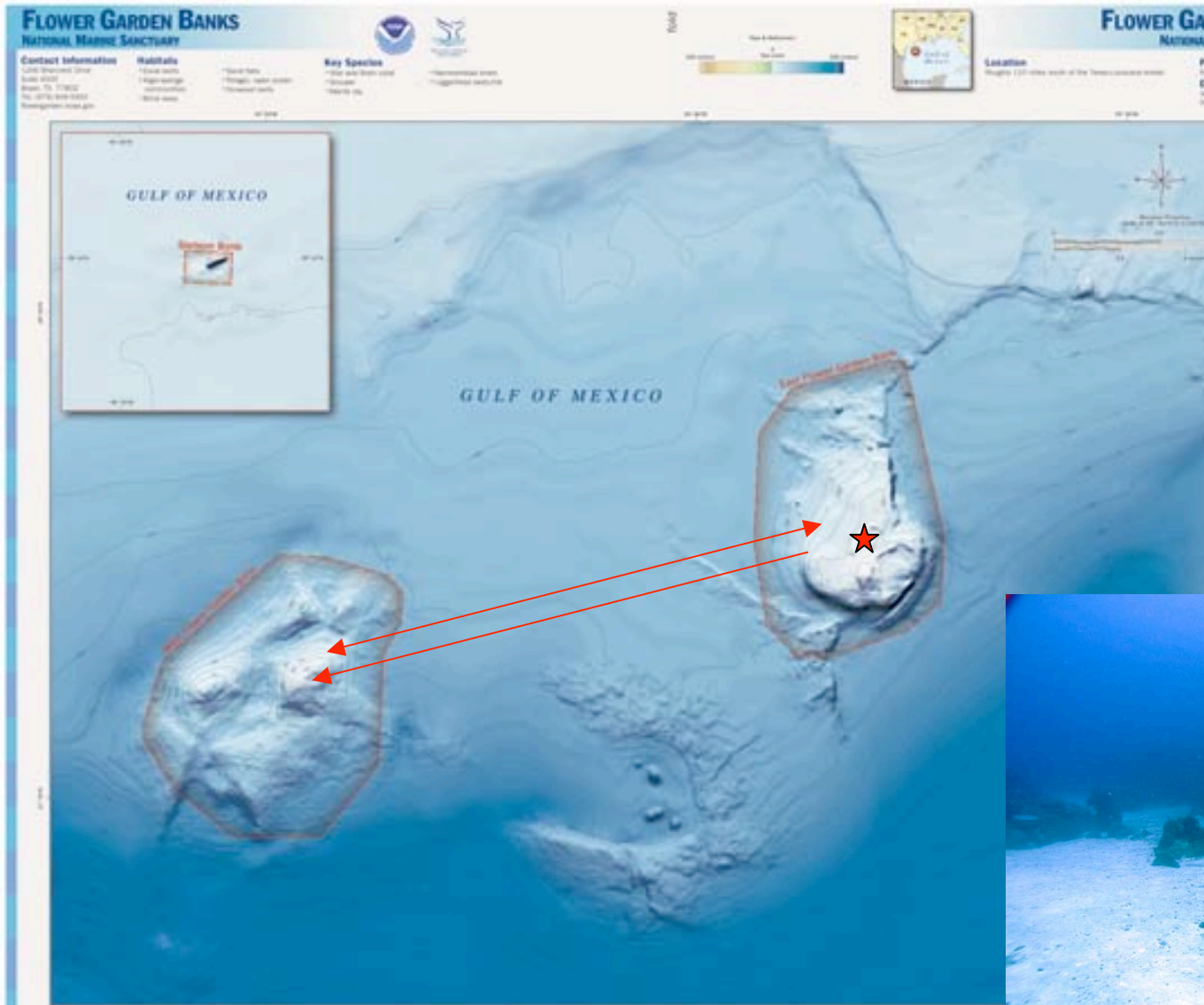
What percentage of ranges are protected if there was a buffer zone extending to MMS 4 mile zone (6.44km)?

Core: 97.18% (Increase by 24.9%)

Home: 80.91% (Increase by 36.86%)



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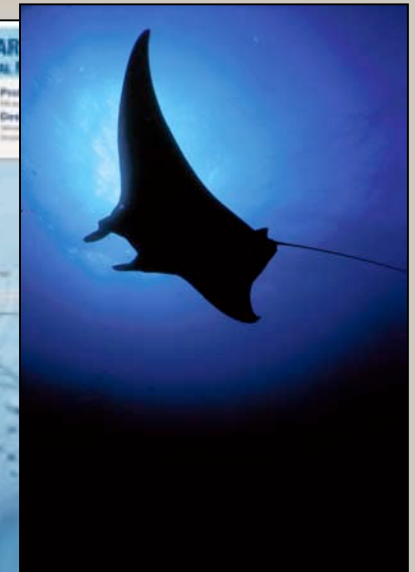
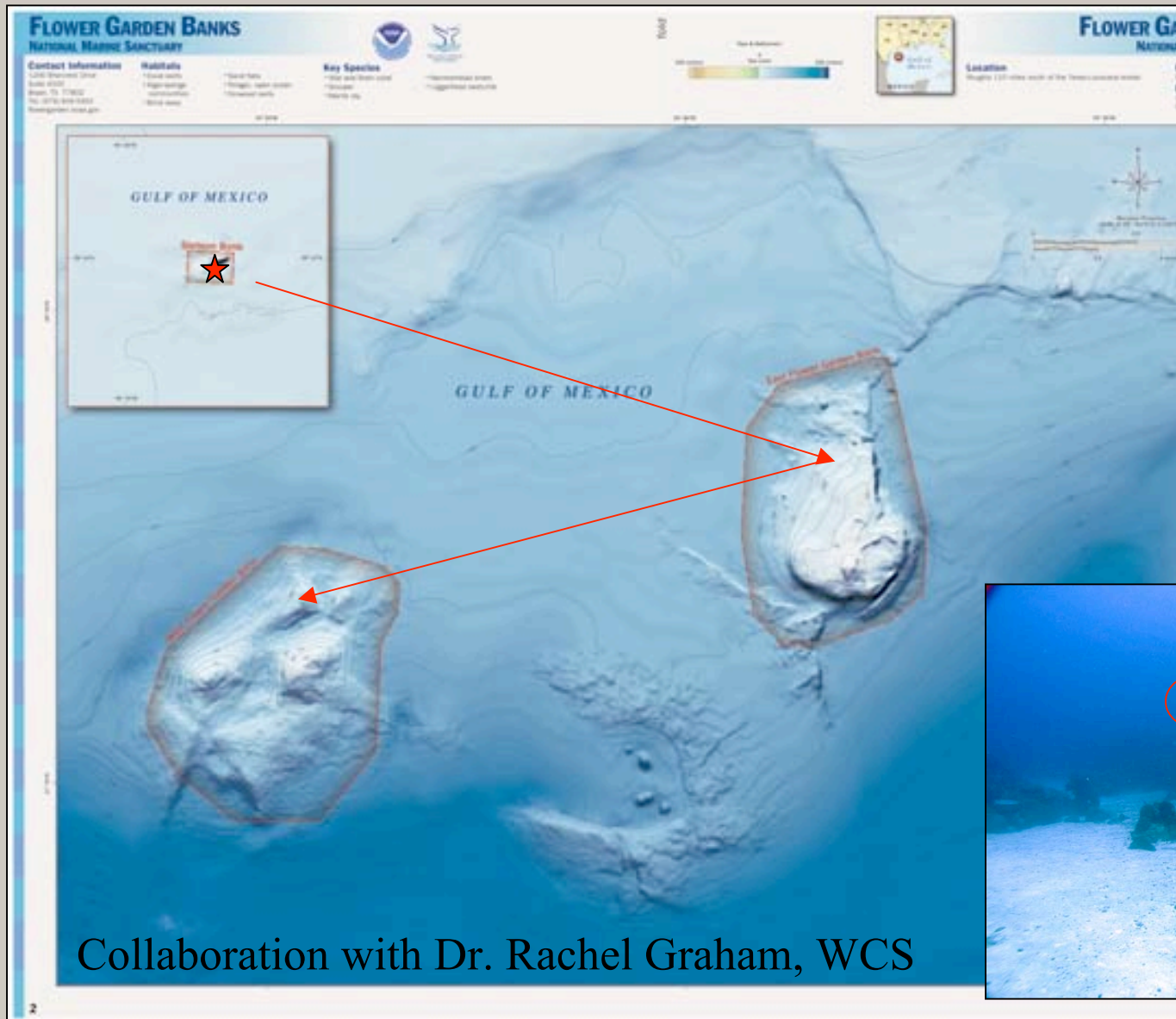


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