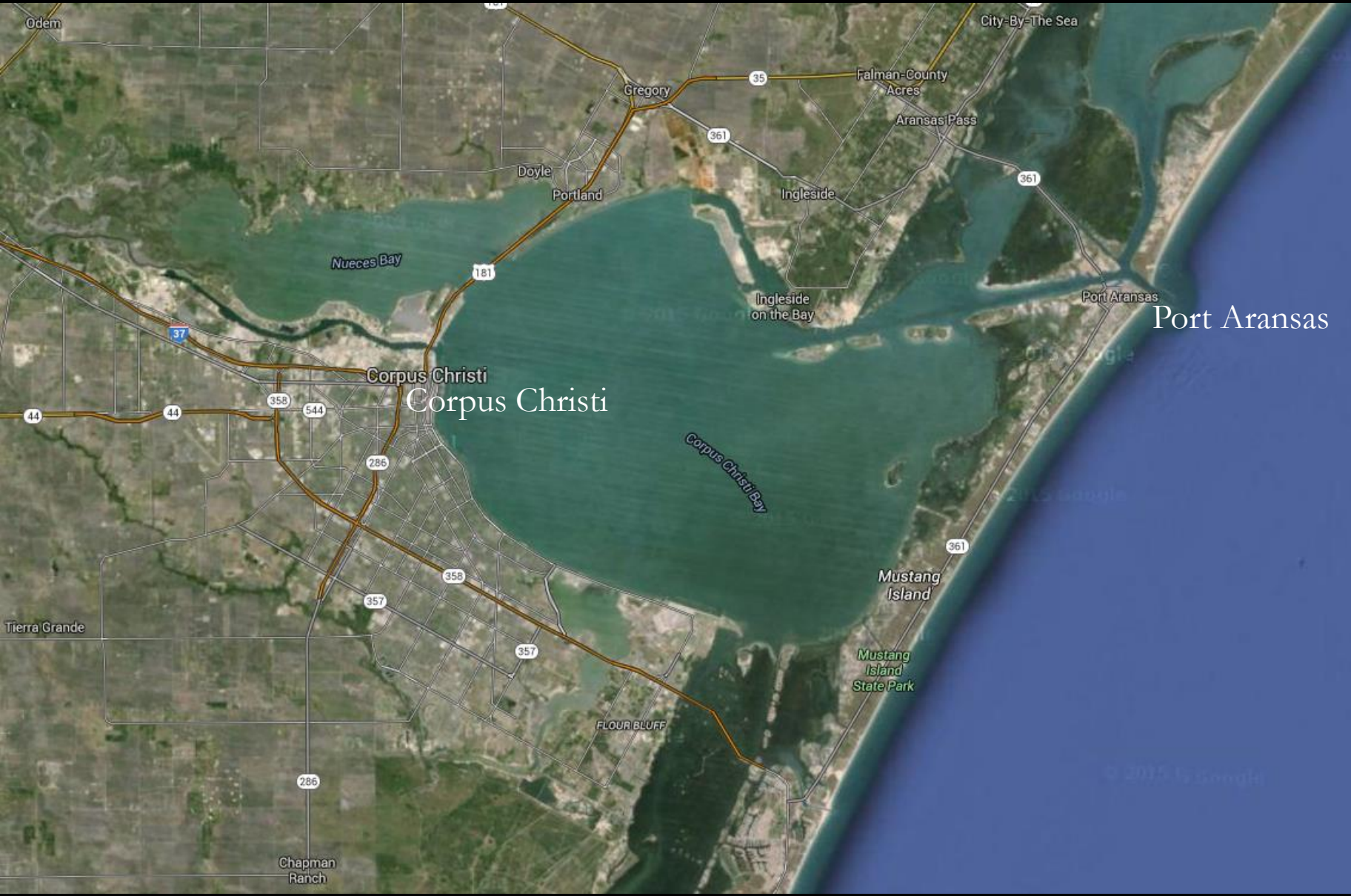


*The University of Texas at Austin Marine Science Institute  
Port Aransas*



*UTMSI Discovery Starts Here*



Corpus Christi

Port Aransas

© 2015 Google



361

Inner Basin

Humble Basin

Roberts Point Park

Gline Point

Ferry Landing

W Cotter Ave

University of Texas Marine Science Institute

Port Aransas

N Alister St

Community Park

Cut-Off Rd

S Alister St

Port Aransas High School

IB Magee Beach Park

Aransas

W Avenue

marine research | education | public outreach

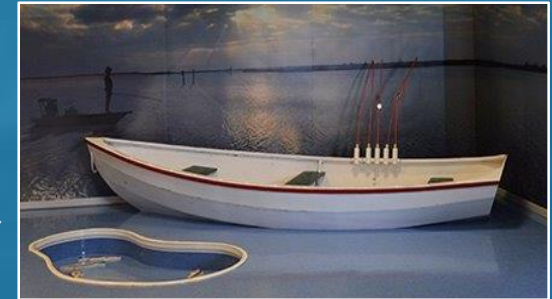




# UTMSI Facilities

**77 Acre Campus on two sites:  
Main Campus on Channel View Dr. & Cotter St.  
and Fisheries and Mariculture Laboratory on Port Street**

- ~150,000 sf research laboratories, classrooms, meeting, physical plant and administration space
- Marine Science Education Center
- Bay Education Center in Rockport
- Dormitories (cap. 70)
- Cafeteria
- Marina - R/V Katy & Small Boat Fleet
- Estuarine Research Center HQ of Mission-Aransas National Research Reserve
- Conservation Easement at Fennessey Ranch, Refugio



# ----- ORGANIZATION -----

*University of Texas at Austin  
College of Natural Sciences*



12 Departments  
1 School  
1 Division  
26 Centers/Institutes

*Marine Science Institute at Port Aransas*

Education and Research:

*Department of  
Marine  
Science*

*National Estuarine  
Research  
Reserve*

*Fisheries &  
Mariculture  
Laboratory*

*Center for Coastal  
Ocean Health &  
Sustainability\**

Public Outreach and Ocean Literacy:

*Marine  
Science  
Education  
Center*

*Estuary Explorium*

*Bay Education Center  
at Rockport*

*Fennessey Ranch  
3300 Acres*

Response:

**Marine Animal  
Rehabilitation Keep &  
GLO Oiled Wildlife  
Facility**



# Faculty, Students & Staff

|    |                                    |
|----|------------------------------------|
| 14 | Faculty                            |
| 2  | Emeriti                            |
| 3  | Adjunct                            |
| 14 | Research Fellows & Associates      |
| 8  | Postdoctoral Scholars              |
| 30 | Graduate Students (15 MS : 15 PhD) |
| 12 | K12 > Adult Marine Educators       |

~500 Undergraduate students Introduced to Marine Science in Austin  
~70 Enroll in undergraduate Marine & Freshwater Science





*The University of Texas Marine Science Institute is a center for higher education and research with global reach*

*From tropical seas to polar oceans our faculty and students expand our understanding of marine ecosystem structure and function, fisheries, organismal biology, and biogeochemical cycles*

*leading the way to discoveries that define the interdependency of land and sea, civilization and nature, for resources, health and well-being.*



# UTMSI Research Spans the Globe



# Graduate Studies Curriculum

Marine Science is an interdisciplinary field of study which requires an integrated understanding of how biology, physics, chemistry and geology come together to explain the nature of coastal and blue water oceans



# UTMSI Discovery Starts Here

Faculty Scientists and Future Scientists from the Arctic and Antarctic



Beaufort & Chukchi Seas, Arctic



McMurdo Sound, Antarctica

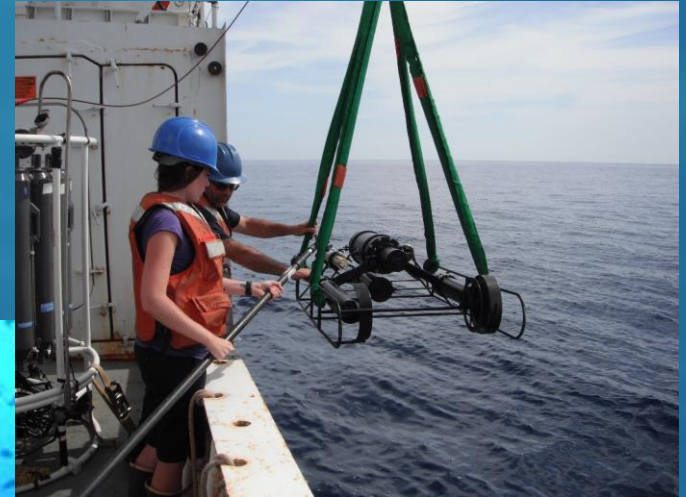


# Discovery Starts Here

to the Gulf of Mexico and Tropic Seas



Cedar Bayou Pass



Gulf of Mexico Wave Glider



Sea of Cortez



Akumal Mexico



Snapper Spawning Aggregation

Climate Change and Upwelling-Current & Future Responses of the California & Benguela Ecosystem

Influence of sea ice on ecosystem shifts in Arctic Seas

Resolving microbial biogeochemical interactions on algal cell surfaces

Dynamics of dissolved inorganic carbon and dissolved oxygen following natural or manmade petroleum carbon release into marine environments

Dispersion Research on Oil: Physics and Plankton Studies (DROPPS II)

Chukchi Sea offshore monitoring in drilling area (COMIDA) Hanna Shoal Ecosystem Study

A long-term seagrass monitoring program for upper laguna madre, padre island national seashore

Arctic kelp communities in the Beaufort Sea: Sentinels of long-term change

Animida III Beaufort Sea Ecosystem Study

Tracking long term trends in Seagrass cover and condition in Texas Coastal Waters

Inventory of Gulf of Mexico ecosystem indicators using an ecological resilience framework

A seagrass monitoring program for Corpus Christi Bay and the Upper Laguna Madre

ECOHAB: CIGUAHAB: Ciguatera investigations in the greater Caribbean region: ecophysiology, population connectivity, forecasting and toxigenesis

Collaborative Research: Alexandrium Blooms Toxins

REU Site: REU in Subtropical Marine Ecosystems

Cooperative Monitoring for spawning aggregations in the Gulf of Mexico: An Assessment of Existing Information, Data Gaps and Research Priorities

Combining Passive- and Active-Acoustic sampling to assess the effects of boat noise and fishing activities on the distribution, abundance and behavior of spawn

Cooperative Research with recreational anglers to map spawning habitat of spotted sea trout in the Mission- Aransas National Estuarine Research Reserve (MANERR)

Ocean Acidification: Implications for respiratory gas exchange and acid-base balance in estuarine fish

Relationships of effects of cardiac outcomes in fish for validation of ecological risk (RECOVER)

Collaborative Research: Geomagnetic Navigation by Weddell Seals beneath Antarctic ice

Effect of light spectrum and light intensity on growth and survival of red drum larvae through first feeding

Refining pigfish fingerling production for commercial aquaculture: captive spawning, feeding and fingerling production

Increasing Fishing Opportunities and Creating Jobs through Baitfish Aquaculture

Effect of light spectrum and light intensity on growth and survival of red drum larvae through first feeding

Dimensions: Collaborative Research: Taihu Lake, China

Where a river slows: the oscillic freshwater zone

Chemical analysis on liquid biofertilizer samples

Acidification of coastal estuaries due to climate change, episodic nutrient loadings and hypoxia, and ocean acidification

The Arctic Great Rivers Observatory (Arctic - GRO)

Global ocean repeat hydrography, carbon and tracer measurements, 2015-2020

Relative Sea Level Rise habitat Assessment in Aransas Bay

Progesterone regulation of human vascular smooth muscle relaxation through mPR

Ecosystem services integrated assessment within the Mission Aransas Reserve

Ecological Impacts of Oil and Gas Inputs to the Gulf – 2 (ECOGIG-2)

51 Active Grants, 3.6/Fac

# Notable Recent Achievements



- **Prof. Ed Buskey**, Assoc. Chair and Director of GoMRI DROPPS Consortium **awarded total of \$15 Million** to conduct Oil Spill research



- **Prof. Peter Thomas**, HEB Chair & Lichtenstein Foundation Fellow, was honored for **“Top 10” *Endocrinology*** papers published in the world in 2014

Identification and characterization of membrane androgen receptors in the ZIP9 zinc transporter subfamily: II. Role of human ZIP9 in testosterone-induced prostate and breast cancer cell apoptosis. *Endocrinology* 155:4250



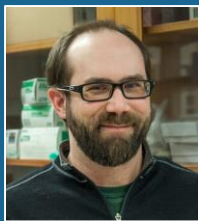
- **Assoc. Prof. Bryan Black** published twice in **Science**

Six centuries of variability and extremes in a coupled marine-terrestrial ecosystem.

*Science* 345:1498

Climate change and wind intensification in coastal upwelling ecosystems.

*Science* 345:77-80.

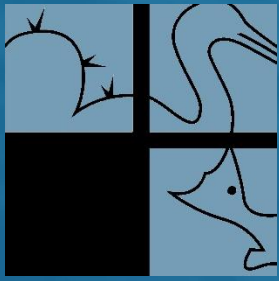


- **Asst. Prof. Brett Baker**, Sloan Fellow published landmark study in ***Nature Microbiology*** on most comprehensive genomic tree of life.

A new view of the tree of life.

*Nature Microbiology* 1, Article number: 16048 (2016)



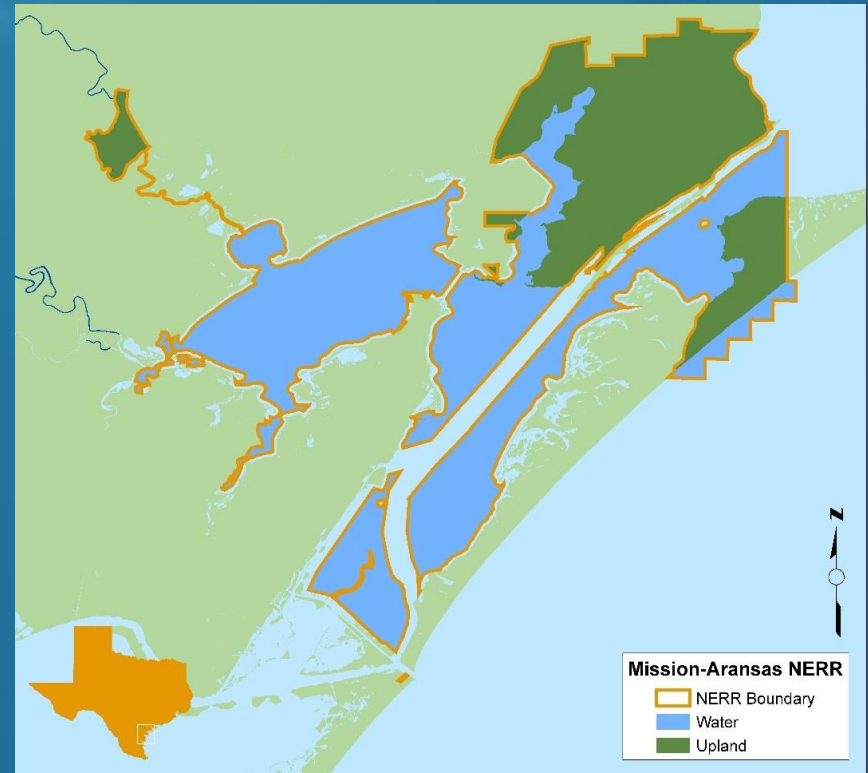


# UTMSI Managing Partner

## Mission-Aransas National Estuarine Research Reserve

Research | Education | Stewardship | Coastal Training

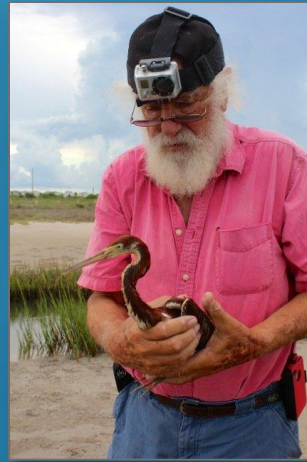
- NOAA Program managed by the UTMSI
- 185,708 Acres within the boundary – non-regulatory, non-enforcement
- 5 System-wide Monitoring Program Stations
- 1 of 28 in the United States and the only one on the Gulf of Mexico west of the Mississippi
- 3,300 acre Conservation Easement on the Fennessey Ranch & Bay Education Center in Rockport



# *NERR* Discovery Starts Here



Aboard the R/V Katy



ARK



The Estuary Explorium



Women in Marine Science Program



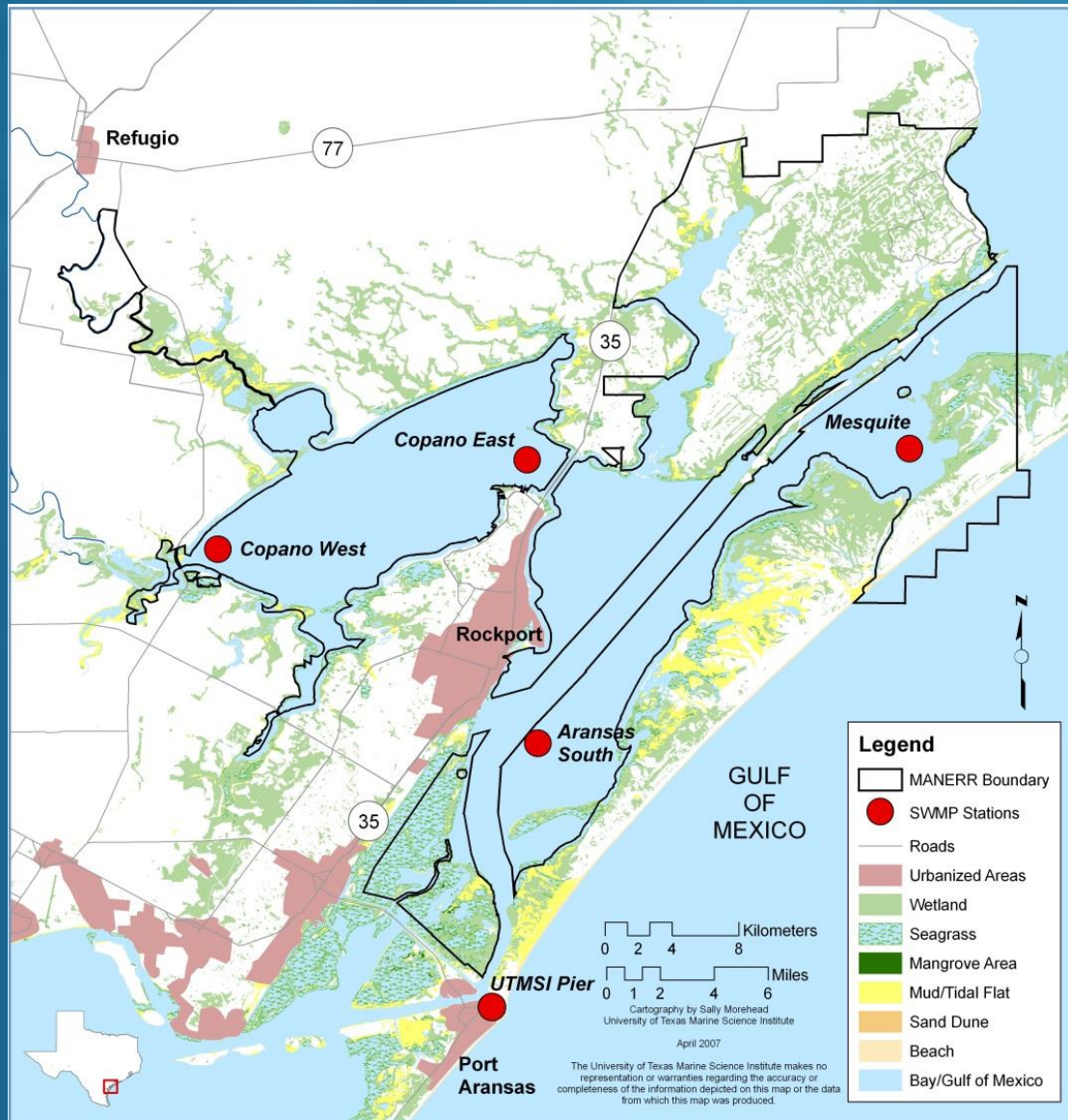
Wetlands Education Center



Rockport Bay Education Center



# Mission-Aransas National Estuarine Research Reserve (NERR) System Wide Monitoring Platforms



AVAILABLE ON-LINE

[www.utmsi.utexas.edu](http://www.utmsi.utexas.edu)

Water temperature  
pH  
Salinity  
Dissolved oxygen  
Turbidity  
Water level  
Air temperature  
Wind direction and speed  
Barometric pressure  
Relative humidity

Scientists also take nutrient samples for:

Ammonium  
Nitrate  
Nitrite  
Ortho-phosphate  
Chlorophyll A





*UTMSI Discovery Starts Here*