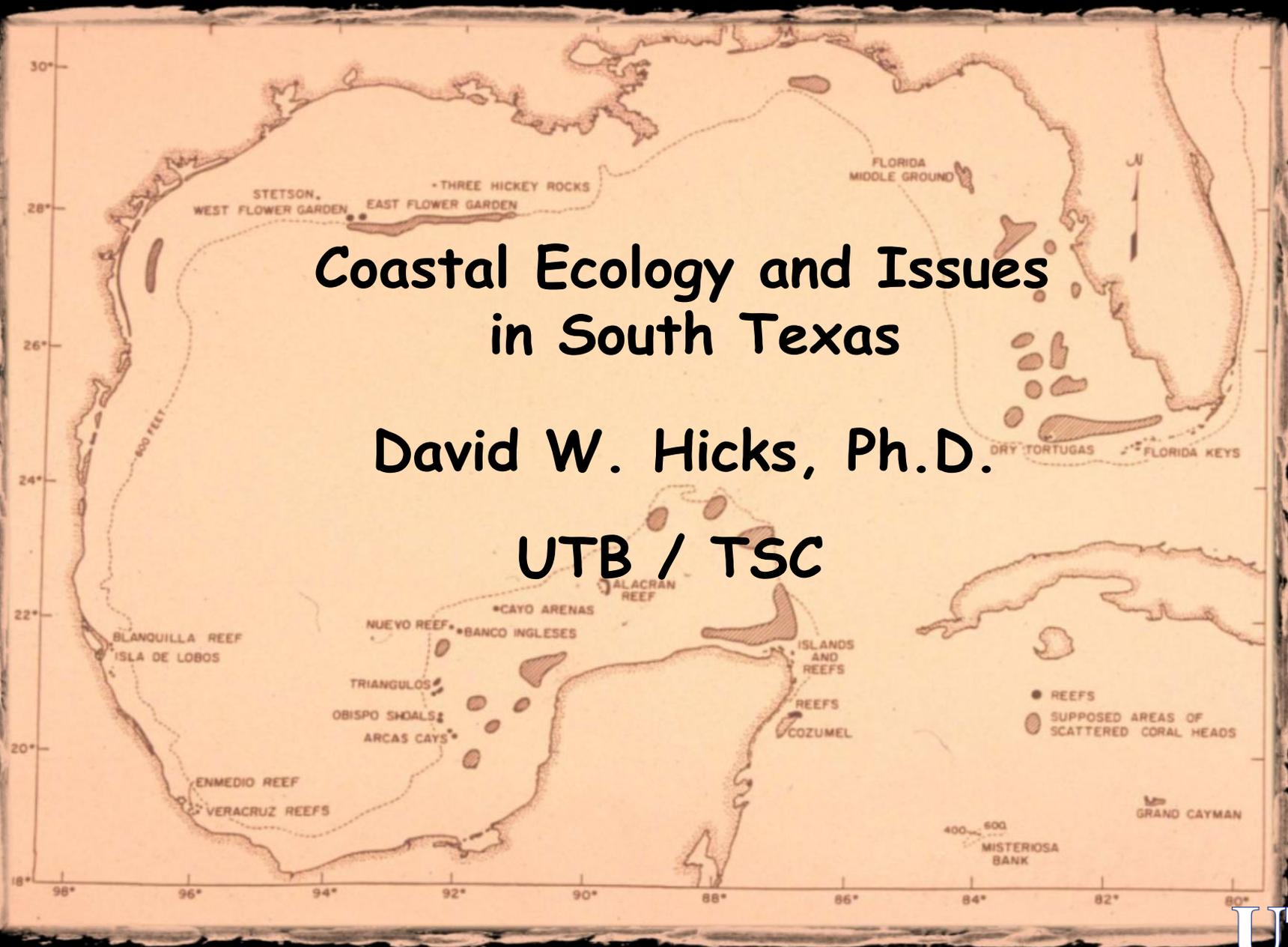


Coastal Ecology and Issues in South Texas

David W. Hicks, Ph.D.

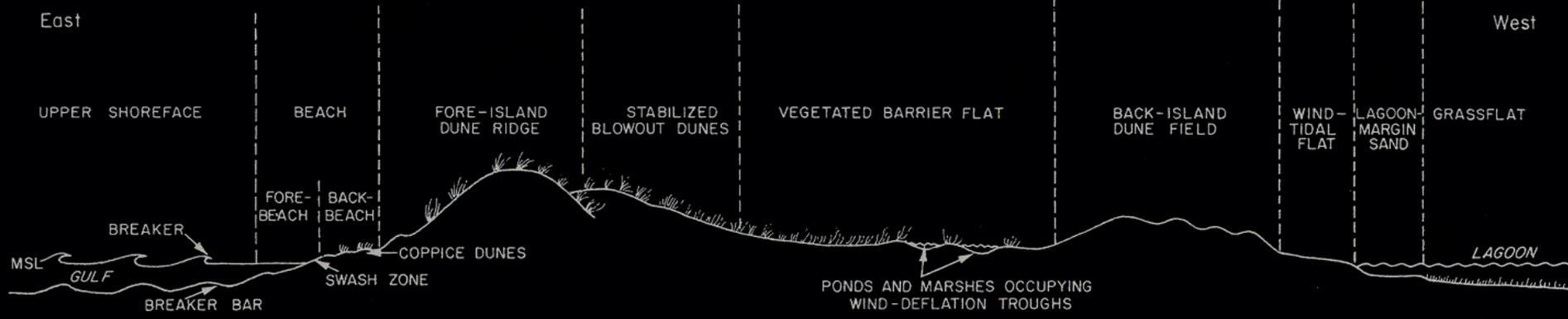
UTB / TSC



The Texas Barrier Island System

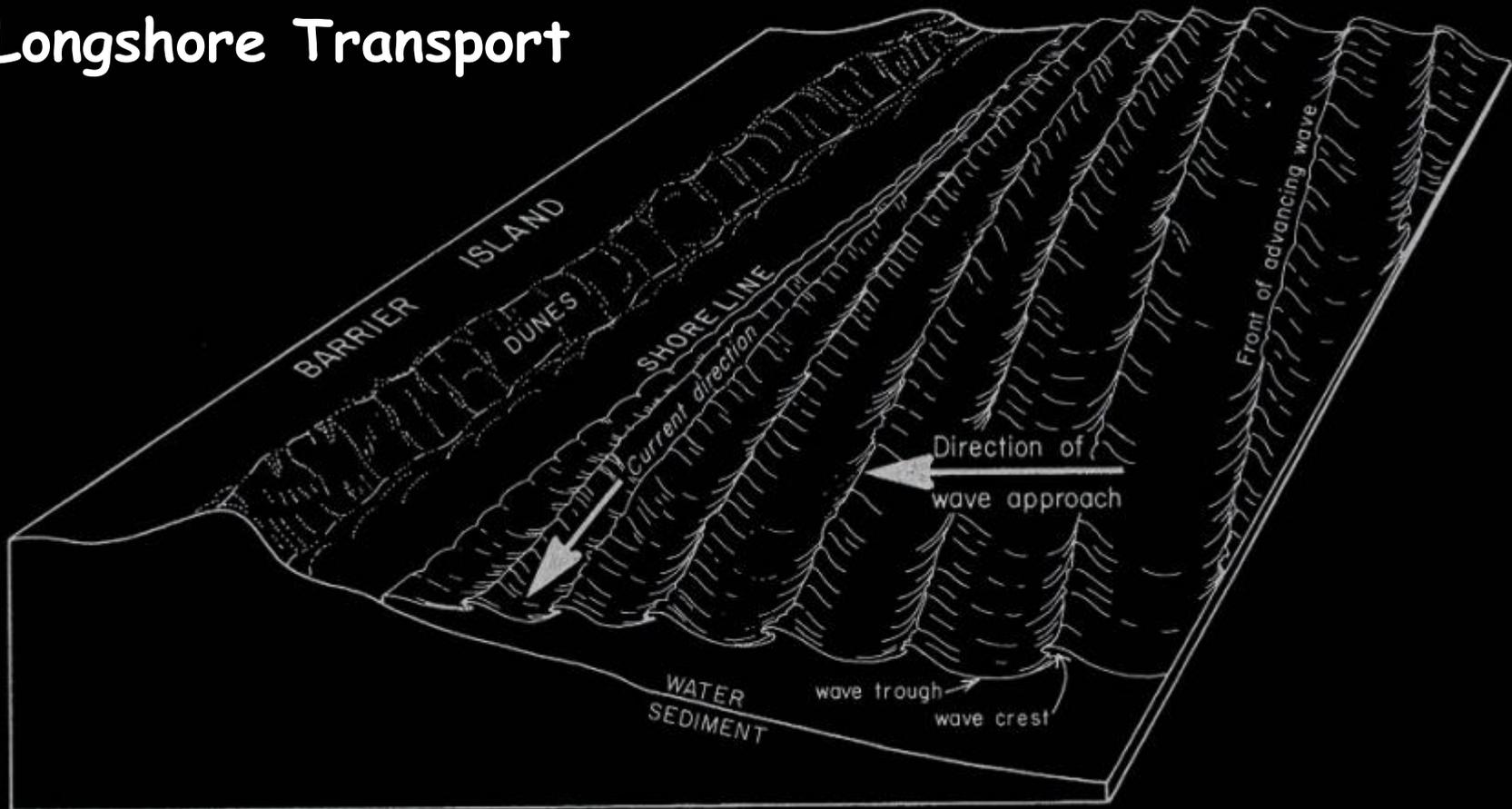


Barrier Island Profile

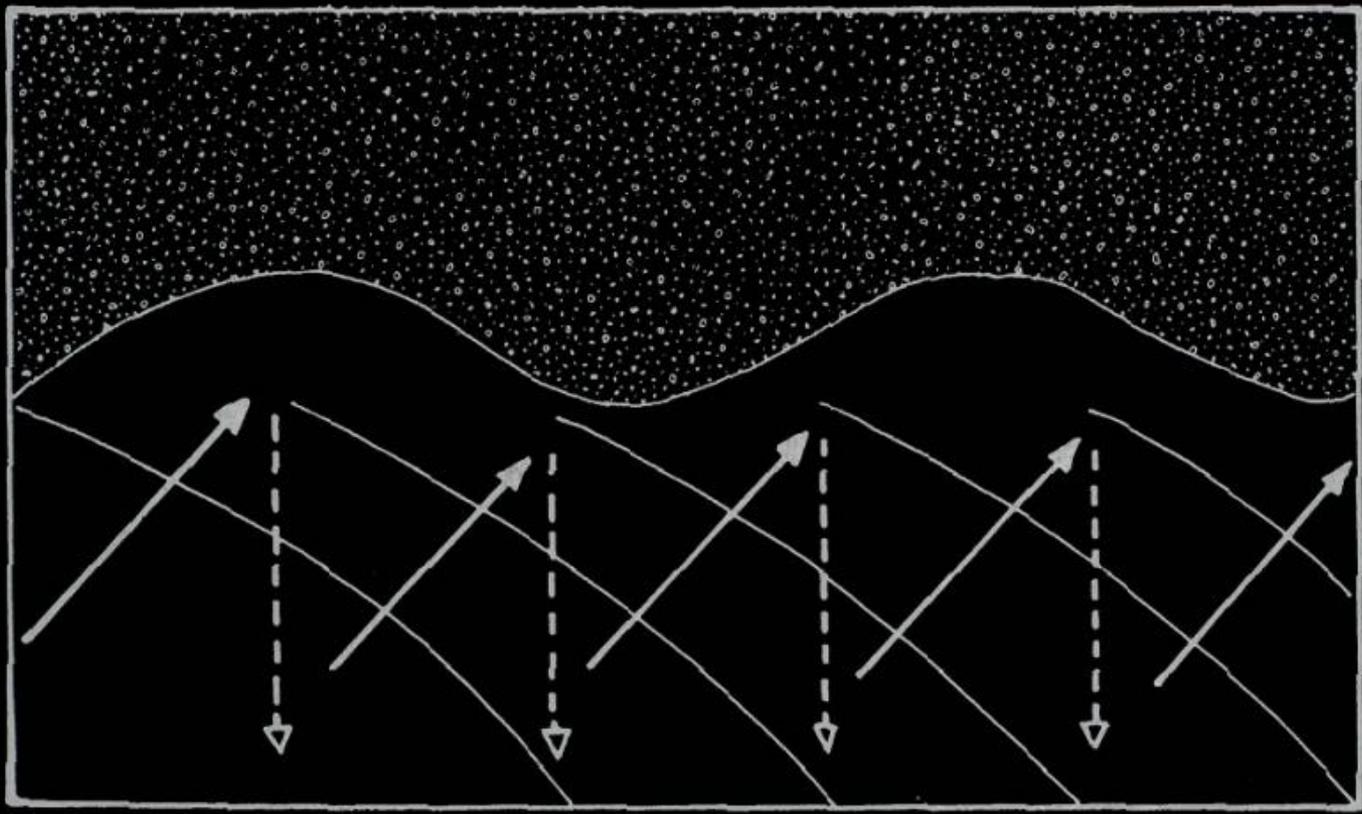


Sediment Dynamics of Gulf Beaches:

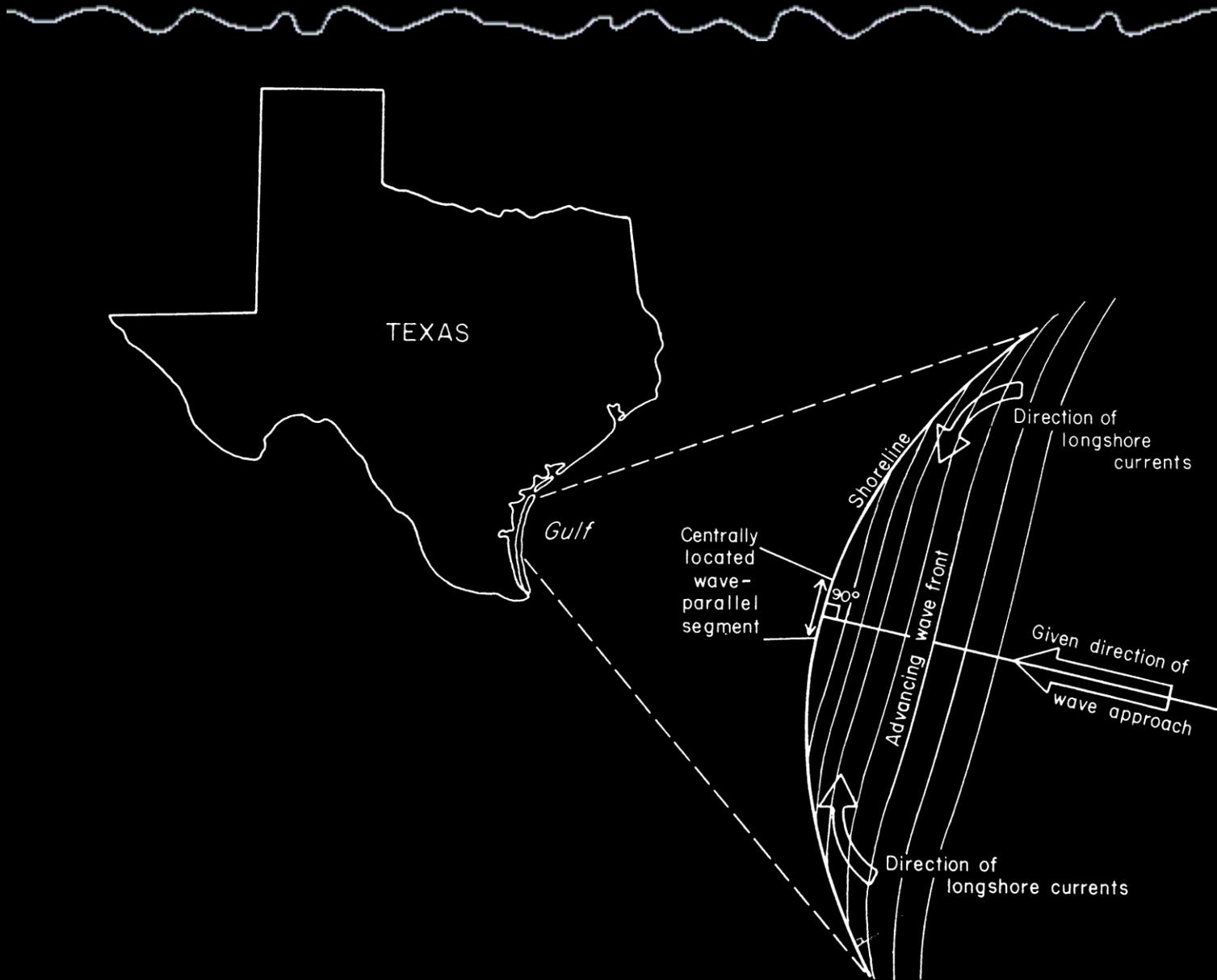
Longshore Transport



Longshore drift



Regional Patterns of Nearshore Sediment transport



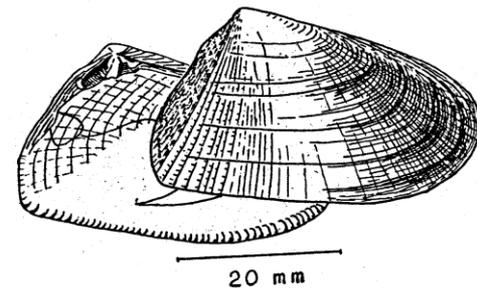
Effects of man-made shoreline features



Beach community ecology:

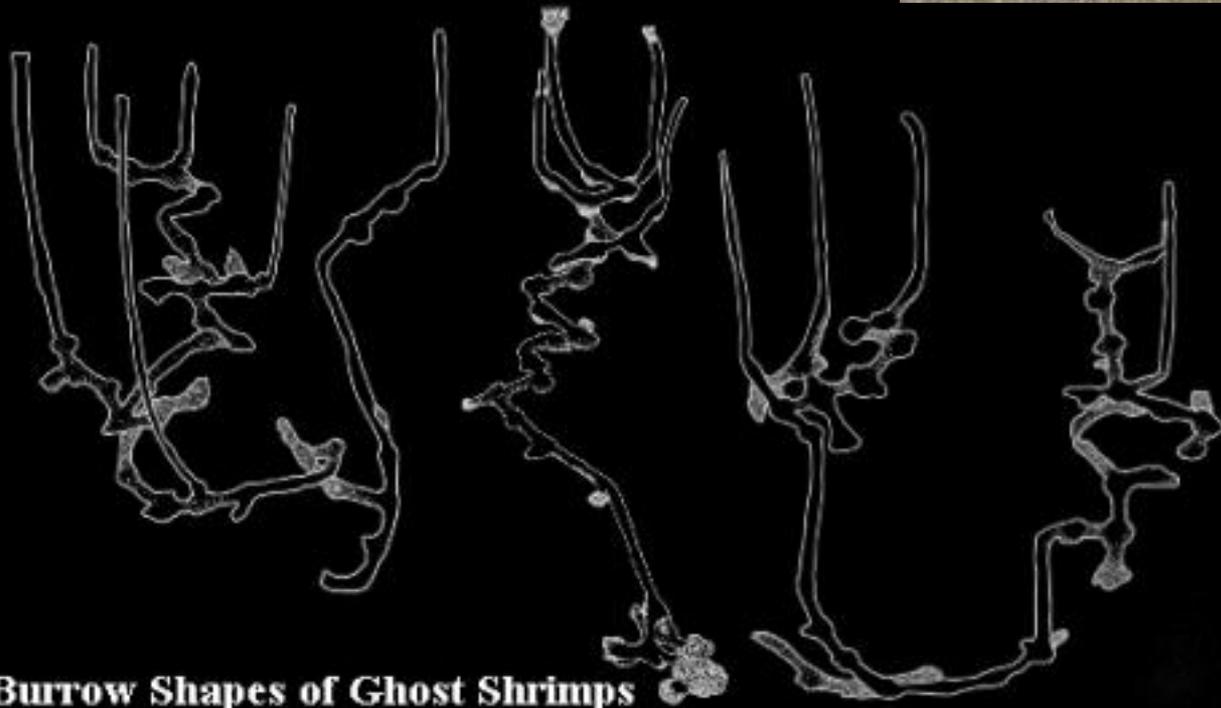


Donax variabilis and *D. texasiana* (coquina or surf clam)



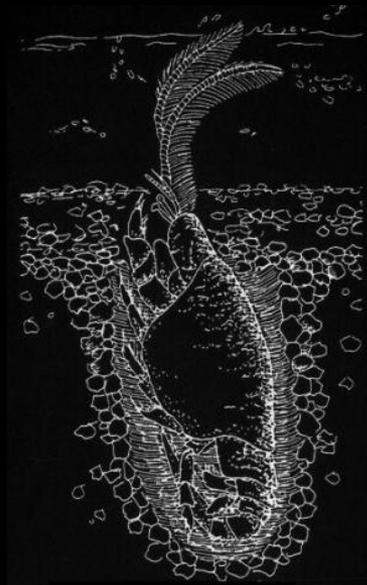
***Callichirus (=Callianassa) islagrande*: Ghost shrimp**



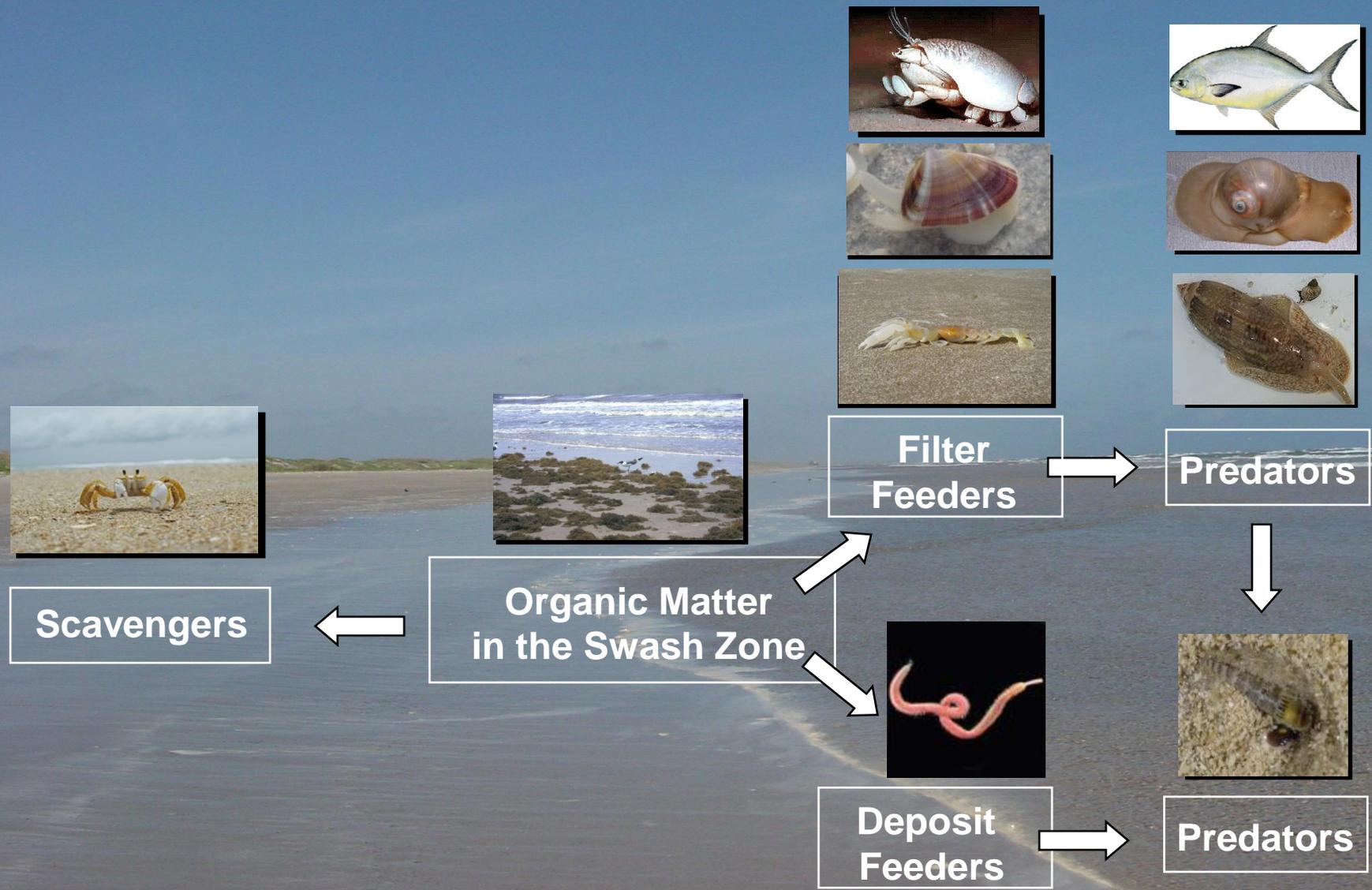


Burrow Shapes of Ghost Shrimps

Emerita spp. : Mole Crabs



Beach Food Chains



The Strandline/ *Sargassum*



Shipbreaking (Port of Brownsville)



- Invasive species
- Contaminates



Photo Courtesy of Tampa Electric Company (TECO)

Abandoned (?) Commercial Fishing Vessels



Courtesy of Jim White (Cameron Co. Parks)

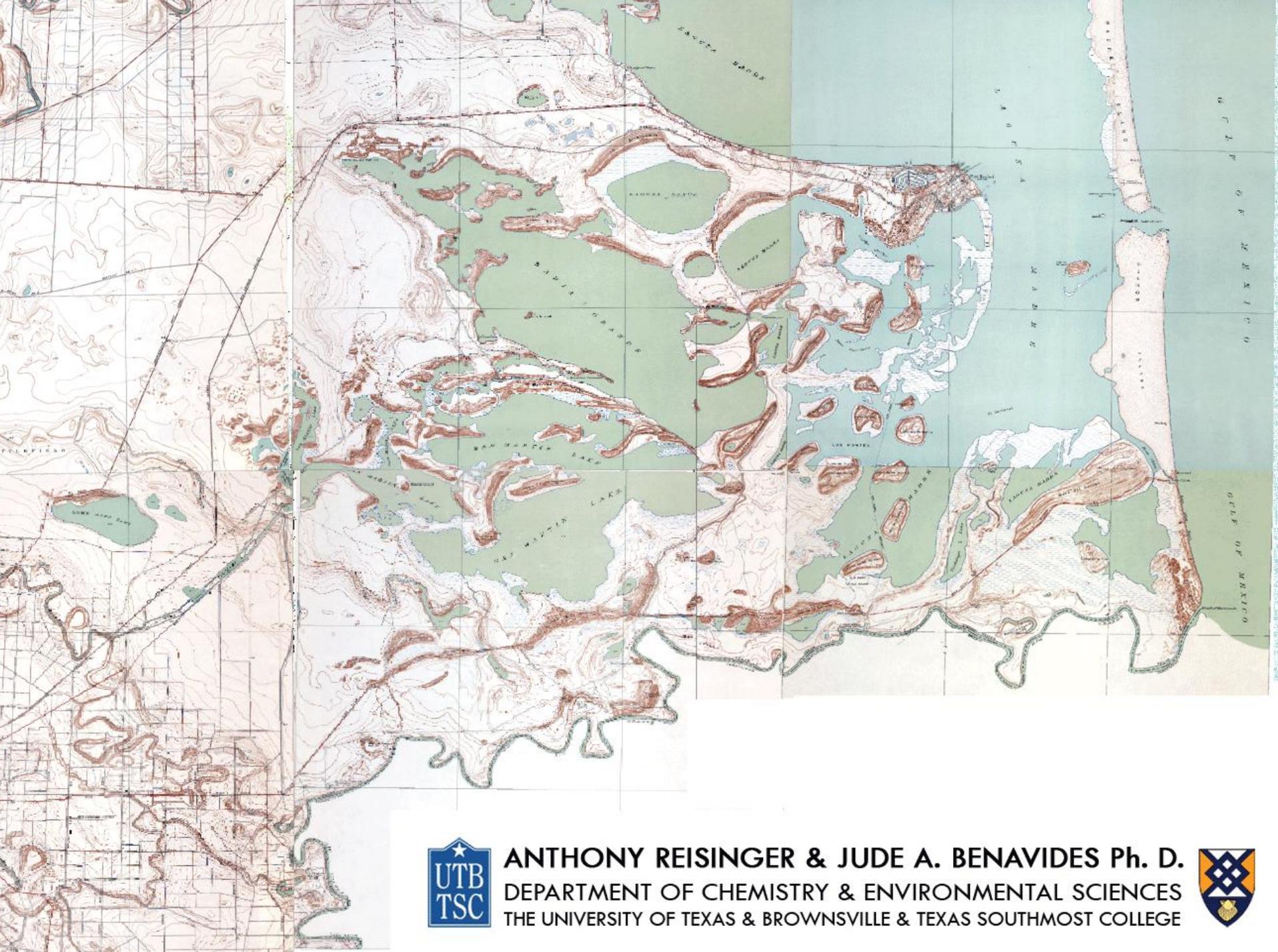
Seismic Testing / Oil & Gas Exploration



- 8,000 explosive charges are being set throughout the southern end of Laguna Madre
- 14,000 plus are scheduled for detonation on nearby refuge property and private land.
- Commissioner Jerry Patterson (TxGLO) presenting today at 4:30 pm

Area Restoration Projects





ANTHONY REISINGER & JUDE A. BENAVIDES Ph. D.
DEPARTMENT OF CHEMISTRY & ENVIRONMENTAL SCIENCES
THE UNIVERSITY OF TEXAS & BROWNSVILLE & TEXAS SOUTHMOST COLLEGE



A New Beginning: Pilot Channel, July 16, 2005



© Richard Stockton

Bahia Grande Today



UTB's Research Goals & Performance Criteria

- **Biological Monitoring Program:**

To provide the USFWS supplementary data for judging the ecological successes of restoration efforts.

- **Biological Surveys**

Benthic community
(marine worms, clams, crustaceans)

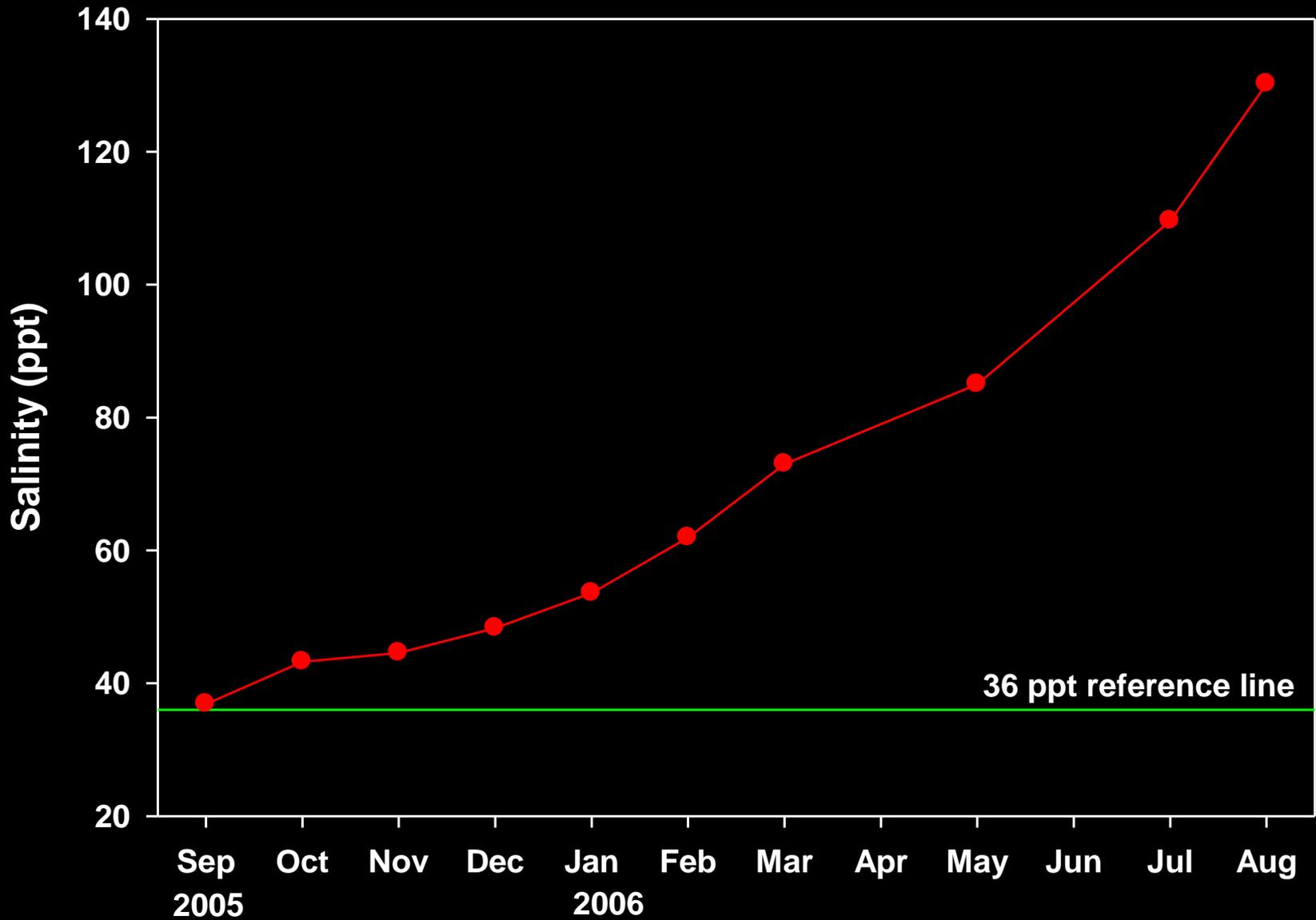
Nekton community
(larval & adult fish)

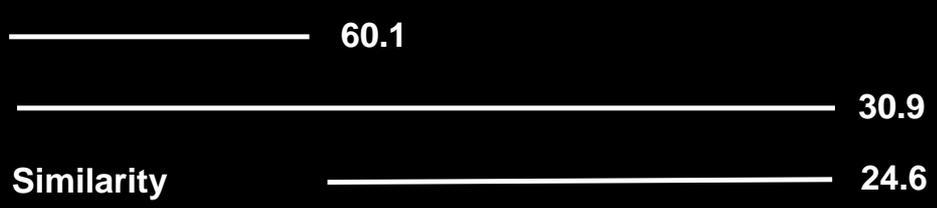
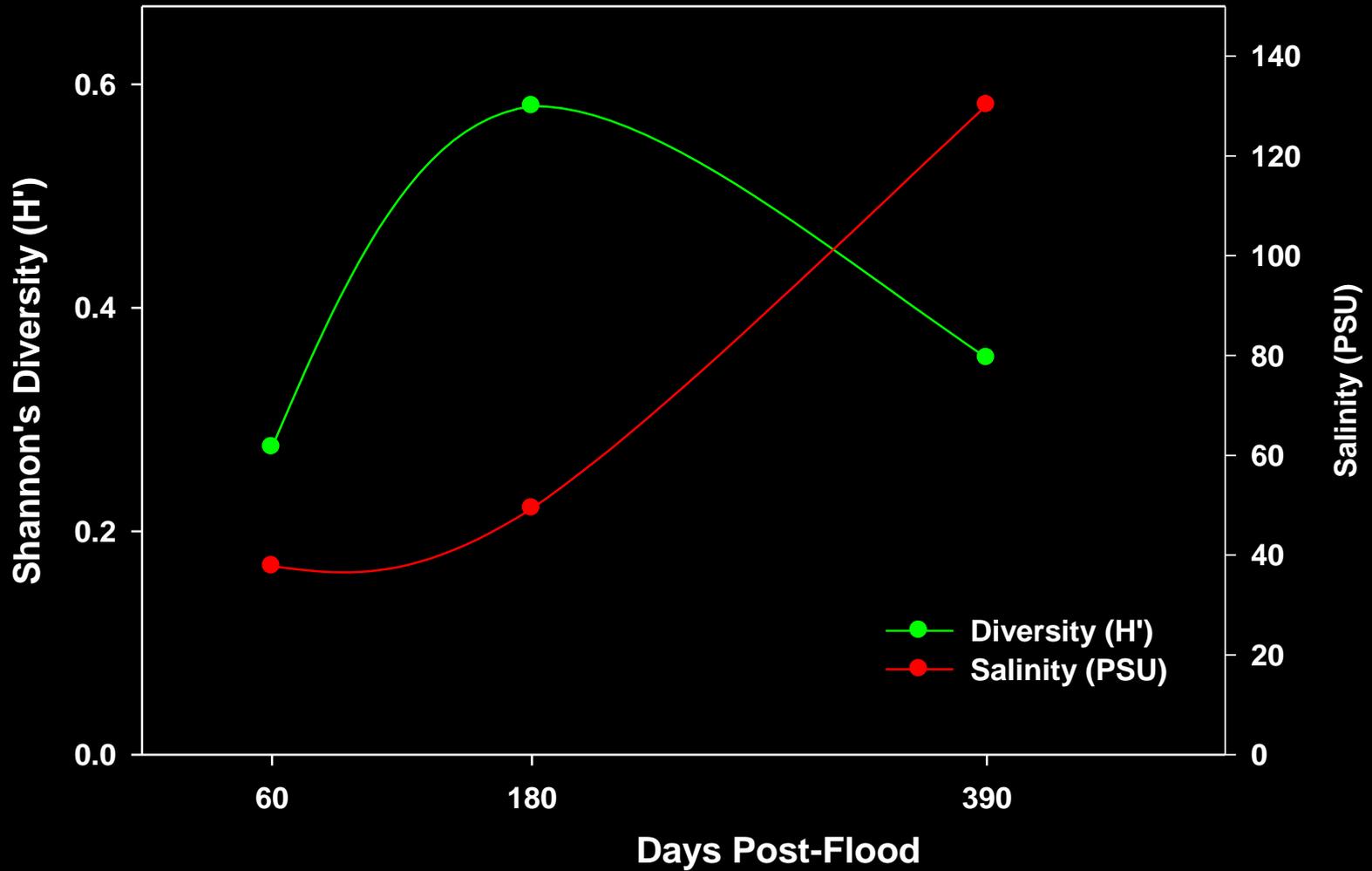
- **Water Quality Monitoring**

DO, Salinity, pH, Temp., & Depth



Salinity Troubles





Questions?

