

Identification\_Information:

Citation:

Citation\_Information:

Originator: NOAA Fisheries Service

Publication\_Date: 20060805

Title:

Selection of vegetated habitat and density of shrimp in a Galveston Bay, Texas salt marsh: 1982-1983.

Description:

Abstract:

Habitat related densities of natant macro-fauna were compared between vegetated and nonvegetated areas in a *Spartina alterniflora* marsh on Galveston Island, Texas. Much seasonal variability in abundance was attributed to changes in water temperature, salinity and water-level. Findings reveal how marshes of the Galveston Bay system are utilized by consumers.

Purpose:

Identify and describe the relationship between fishery productivity and the coastal environment. Specifically, to examine nursery utilization of estuarine marshes by fishery species in relation to differences in salinity among sites.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 19820303

Ending\_Date: 19830303

Currentness\_Reference: ground condition

Status:

Progress: complete

Maintenance\_and\_Update\_Frequency: Final

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -94.9893

East\_Bounding\_Coordinate: -94.9790

North\_Bounding\_Coordinate: 29.2102

South\_Bounding\_Coordinate: 29.2024

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: distribution

Theme\_Keyword: abundance

Theme\_Keyword: predator

Theme\_Keyword: prey

Theme\_Keyword: estuarine dependent

Theme\_Keyword: drop sampler

Theme\_Keyword: nekton

Theme\_Keyword: brown shrimp

Theme\_Keyword: white shrimp  
Theme\_Keyword: pink shrimp  
Theme\_Keyword: Farfantepenaeus aztecus  
Theme\_Keyword: Litopenaeus setiferus  
Theme\_Keyword: Farfantepenaeus duorarum  
Theme\_Keyword: nursery habitat  
Theme\_Keyword: salt marsh  
Theme\_Keyword: fish  
Theme\_Keyword: shrimp  
Theme\_Keyword: crabs  
Theme\_Keyword: invertebrates

Place:

Place\_Keyword\_Thesaurus: Galveston Bay  
Place\_Keyword: Jamaica Beach  
Place\_Keyword: Carancahua Cove  
Place\_Keyword: Galveston Island State Park  
Place\_Keyword: Texas  
Place\_Keyword: Gulf of Mexico

Access\_Constraints: None

Use\_Constraints:

Data set is not for use in litigation. While efforts have been made to ensure that these data are accurate and reliable, NOAA cannot assume liability for any or damages misrepresentations caused by inaccuracies in these data, or as a result of these data being used on a particular system. NOAA makes no warranty, expressed or implied, nor does distribution constitute any such warranty.

Point\_of\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization:

NOAA Fisheries Service, formerly  
National Marine Fisheries Service,  
Galveston, Texas

Contact\_Person: Dr. Jim Ditty

Contact\_Address:

Address\_Type: mailing and physical  
Address: Galveston Laboratory, 4700 Avenue U  
City: Galveston  
State\_or\_Province: Texas  
Postal\_Code: 77551-5997  
Country: Unites States of America  
Contact\_Voice\_Telephone: 409-766-3500

Data\_Quality\_Information:

Attribute\_Accuracy:

Attribute\_Accuracy\_Report:

Data were entered into spreadsheets and checked against the raw data sheet to avoid entry errors.

Logical\_Consistency\_Report:

Completeness\_Report:

Lineage:

Process\_Step:

Process\_Description:

Sampling Gear Description:

The cylindrical drop was a fiberglass enclosure with a galvanized metal skirt along the bottom.

The 1.8-m drop trap enclosed a 2.6-m<sup>2</sup> area.

Traps were deployed from a front-mounted boom on a boat and pushed into the substrate.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Measuring Environmental Variables:

Environmental data were collected immediately after gear deployment and before collection of animals.

Water temperature, salinity, and D.O. readings were collected inside the sampler and a water sample was collected at most stations and returned to the laboratory for turbidity analysis. Minimum and maximum water depth was taken and recorded to the nearest centimeter.

Field sheets were checked to ensure all required environmental data were recorded correctly.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Sampling of Nekton and Associated Plants:

The engine was turned off once the boat approached the sampling site to minimize site disturbance prior to sampling. The boat drifted or was slowly guided to the sampling site by pushing from the stern. One person in the boat released the trap from the bow. Immediately after drop sampler deployment, field personnel pushed the sampler approximately 15-cm into the sediment to obtain a proper seal along the bottom of the trap to prevent escape of organisms or a trap blow-out. If the sample was taken in a marsh, vascular plants enclosed in the sampler were often clipped at ground level to assist in animal retrieval. Vegetation retained on the sieve was placed in labeled bags, preserved in formalin and returned to the laboratory.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Removal of Animals

DROP TRAPS:

After the drop trap was pushed into the substrate, dip nets were used to sweep the bottom of the trap and remove the nekton. Enclosed water was pumped from the trap and filtered through a 1-mm mesh plankton net. As the water level dropped, the sampler was continually swept with dip nets because the efficiency of animal capture increases

with reduced water depth. Once drained, the sediment was visually and manually inspected for animals remaining on or burrowed into the substrate. Animals taken in dip nets or found during substrate inspection were added to the drop trap catch. Animals and other material (i.e., vegetation, macro-algae, shell hash, and detritus) pumped into the cod end of the plankton net were rinsed and the catch bag was detached. Samples were placed in a 1-mm mesh bag, labeled, preserved, and returned to the laboratory for processing.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Care of Nekton Samples in the Field:

Labeled tags were placed inside and attached to the outside of each 1-mm mesh sample bag. Samples were stored in 3 or 5 gallon buckets containing ten percent formalin made by mixing one part full-strength formaldehyde with nine parts water. If animals were too large to fit into the sample bag, the specimen was identified to the lowest taxon, measured, recorded, and released.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Initial Processing of Field Data and Samples:

After returning from the field, samples were recorded in the laboratory log book, which served as a sample inventory and verification of sample arrival and condition. Turbidity samples were analyzed and the information was transferred to the field data sheets. Field data sheets were entered into an electronic database or a database manager.

Process\_Date: unknown

Process\_Step:

Process\_Description:

**SPECIES IDENTIFICATION and MEASUREMENT:**

Specimens were identified and species name recorded on the appropriate identification sheet.

Organisms were measured to determine total length (TL) for fish and shrimp and total carapace width (CW) for crabs.

Fish were measured after being placed flat on their side with their mouth closed. TL in fish was the distance from the snout to the tip of the longest caudal fin ray. TL was measured from the tip of the rostrum to the tip of telson in penaeid shrimp. If the rostrum was broken, TL was not measured. Carapace width of crabs was measured across the widest part of the carapace (from tip to tip of the lateral spines, if present). If lateral spines were broken,

CW was not measured for that individual.  
Penaeid shrimp were measured to the nearest mm  
TL. Fishes were placed in 10-mm size intervals  
and non-penaeid crustaceans in 5-mm size intervals.  
Hermit crabs were not measured.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Measuring Biomass of Plants:

EMERGENT MARSH PLANTS:

Stem density was calculated by weighing  
a subsample and counting the number of culms.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Organism Data Entry and Validation:

Laboratory and field data were entered into the  
computer using a database manager. A text file was  
created that described these data and any abbreviated  
variables. Data were printed out, checked against  
ID sheets and corrections made at this time.

A code was assigned to each species using the  
Fishery Ecology Branch revised species code list.

A species not found on the code list was assigned a  
new code, which was added to the master code list.

Process\_Date: unknown

Entity\_and\_Attribute\_Information:

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: Descriptive Information for Sample Sites

Entity\_Type\_Definition: Terms relating to collection of flora and fauna

Entity\_Type\_Definition\_Source:

NOAA Fisheries Service, Fishery Ecology Branch, Galveston, Texas

Attribute:

Attribute\_Label: Miscellaneous Descriptor

Attribute\_Definition: Description of sites sampled

Attribute\_Definition\_Source:

NOAA Fisheries Service,  
Fishery Ecology Branch, Galveston, Texas

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Inner

Enumerated\_Domain\_Value\_Definition:

Sites closest to the State Park

Enumerated\_Domain\_Value\_Definition\_Source:

NOAA Fisheries Service,  
Fishery Ecology Branch, Galveston, Texas

Enumerated\_Domain:

Enumerated\_Domain\_Value: Middle

Enumerated\_Domain\_Value\_Definition:

Sites further away from Galveston Island State Park

Enumerated\_Domain\_Value\_Definition\_Source:

NOAA Fisheries Service,  
Fishery Ecology Branch, Galveston, Texas  
Enumerated\_Domain:  
Enumerated\_Domain\_Value: Outer  
Enumerated\_Domain\_Value\_Definition:  
Sites furthest away from Galveston Island State Park  
Enumerated\_Domain\_Value\_Definition\_Source:  
NOAA Fisheries Service,  
Fishery Ecology Branch, Galveston, Texas

Metadata\_Reference\_Information:

Metadata\_Date: 20060805

Metadata\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization:

NOAA Fisheries Service, Fishery Ecology Branch,  
Galveston, Texas

Contact\_Person: Dr. Jim Ditty

Contact\_Address:

Address\_Type: mailing and physical

Address: Galveston Laboratory, 4700 Avenue U

City: Galveston

State\_or\_Province: Texas

Postal\_Code: 77551-5997

Country: Unites States of America

Contact\_Voice\_Telephone: 409-766-3500

Metadata\_Standard\_Name:

FGDC Content Standard for Digital Geospatial Metadata

Metadata\_Standard\_Version: FGDC-STD-001.1-1999