

## Identification\_Information:

## Citation:

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Originator: NOAA Fisheries Service

Publication\_Date: 20060210

## Title:

The use of Spartina marshes by fishery species in Lavaca Bay, Texas, with reference to the effects of floods: October 1985 through June 1987.

## Description:

## Abstract:

Samples were collected from October 15, 1985 through June 12, 1987 in emergent marsh and non-vegetated habitats throughout the Lavaca Bay system to characterize usage of saline coastal and brackish deltaic habitats by estuarine aquatic species. Results suggest that short term lowering of salinity does not deter estuarine organisms from using deltaic marshes, but rather long term habitat changes may cause these responses.

## Purpose:

Identify and describe the relationship between fishery productivity and the coastal environment. Specifically, to characterize usage of saline coastal and brackish deltaic habitats by estuarine organisms.

## Time\_Period\_of\_Content:

## Time\_Period\_Information:

## Range\_of\_Dates/Times:

Beginning\_Date: 19851015

Ending\_Date: 19870612

Currentness\_Reference: ground condition

## Status:

Progress: complete

Maintenance\_and\_Update\_Frequency: As needed

## Spatial\_Domain:

## Bounding\_Coordinates:

West\_Bounding\_Coordinate: -96.67

East\_Bounding\_Coordinate: -96.44

North\_Bounding\_Coordinate: 28.74

South\_Bounding\_Coordinate: 28.46

## Keywords:

## Theme:

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: distribution

Theme\_Keyword: abundance

Theme\_Keyword: habitat

Theme\_Keyword: estuarine dependent

Theme\_Keyword: 1.8 m diameter cylindrical drop sampler

Theme\_Keyword: vegetation

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: macrofauna  
Theme\_Keyword: salt marsh  
Theme\_Keyword: fish  
Theme\_Keyword: shrimp  
Theme\_Keyword: crabs  
Theme\_Keyword: invertebrates  
Theme\_Keyword: nekton

## Place:

Place\_Keyword\_Thesaurus: Lavaca Bay  
Place\_Keyword: Chocolate Bay  
Place\_Keyword: Lavaca River Delta  
Place\_Keyword: Powderhorn Lake  
Place\_Keyword: Redfish Lake  
Place\_Keyword: Texas  
Place\_Keyword: Gulf of Mexico

## Access\_Constraints:

## 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 damages or 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, Fishery Ecology Branch.

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 1.8 m diameter cylindrical drop trap was a fiberglass enclosure with a galvanized metal skirt along the bottom. The drop trap enclosed a 2.6 m<sup>2</sup> area. Traps were

deployed from a boat with a front-mounted boom.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Environmental data were collected immediately after gear deployment and before collection of animals. Water temperature, salinity, and D.O. data were collected within the sampler and a water sample was returned to the lab for turbidity analysis. Salinity was measured in the field by a hand-held refractometer. Minimum and maximum water depth was taken with a meter stick and recorded to the nearest 0.1 cm. 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 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 clipped at ground level to assist in animal retrieval. Vegetation retained on the sieve was placed in labeled plastic bags and returned to the laboratory for processing. Plant species were identified and recorded to the lowest possible taxon. Vegetation density and biomass were also obtained. Plants were placed into labeled plastic bags and returned to the laboratory for analyses.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Removal of Animals:

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 1.0 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 1.0 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, waterproof shipping tags were placed inside

of each 1.0 mm mesh sample bag. Samples were stored in 3 or 5 gallon buckets containing 10% formalin. Ten % formalin was 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. Turbidity samples were analyzed upon return to the lab and the information was transferred to the field data sheets. Field data sheets were entered into an electronic database or a database manager. A printout was given to the Primary Investigator for review.

Process\_Date: unknown

Process\_Step:

Process\_Description:

SPECIES IDENTIFICATION AND MEASUREMENT:

Organisms were measured to the nearest millimeter to determine total length (TL) or total carapace width (CW). Each fish was measured after being placed flat on its side with its mouth closed. TL was the distance from the snout to the tip of the longest caudal fin ray in fish. TL was measured from the tip of the rostrum to the tip of telson in shrimp. If the rostrum was broken, TL was not measured. Carapace width (CW) 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. Penaeid shrimp were measured and recorded to the nearest mm TL. Non-penaeids were measured and assigned to 5 mm TL size intervals. Fishes were measured and assigned to 10 mm size intervals.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Preservation and Storage of Fish and Invertebrates:

Organisms were preserved in 5% formaldehyde or 70% ETOH for long-term storage.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Measuring Biomass of Plants and Animals:

EMERGENT MARSH PLANTS:

Marsh plants were sorted, identified, counted, weighed wet and stored in mesh bags to air dry for two months, then re-weighed dry.

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. The data were printed out and checked against ID sheets to ensure all information was correct. Data corrections were made at this time. Hard copies of the file were given to the PI and stored in the project folder along with the original field and laboratory data sheets. A code was assigned to each species using the Fishery Ecology Branch revised species code list. Species not found on the code list were assigned a new code, which was also added to the master code file.

Process\_Date: unknown

Metadata\_Reference\_Information:

Metadata\_Date: 20060210

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