

Identification\_Information:

Citation:

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Originator: NOAA Fisheries Service

Publication\_Date: 20050906

Title:

Nekton use of salt marsh, seagrass, and nonvegetated habitats in Aransas Bay, Texas: September 1993 and May 1994.

Description:

Abstract:

During September 20-23, 1993 and May 9-12, 1994, a total of 200 samples were collected at proposed dredge disposal sites along the Intercoastal Waterway in Aransas National Wildlife Refuge, Texas. Vegetated habitats supported significantly higher densities of most numerically dominant species. Nekton size also differed among habitats.

Purpose:

Identify and describe the relationship between fishery productivity and the coastal environment. Specifically, to quantify nekton densities to estimate the relative nursery values of different habitat types.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 19930920

Ending\_Date: 19940512

Currentness\_Reference: ground condition

Status:

Progress: complete

Maintenance\_and\_Update\_Frequency: As necessary

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -96.860

East\_Bounding\_Coordinate: -96.740

North\_Bounding\_Coordinate: 28.250

South\_Bounding\_Coordinate: 28.150

Keywords:

Theme:

Theme\_Keyword\_Thesaurus:

Theme\_Keyword: distribution

Theme\_Keyword: abundance

Theme\_Keyword: predator

Theme\_Keyword: prey

Theme\_Keyword: seagrass

Theme\_Keyword: 1.14-m diameter cylindrical drop sampler

Theme\_Keyword: submerged aquatic vegetation

Theme\_Keyword: dredge disposal

Theme\_Keyword: core sampler

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

Place:

Place\_Keyword\_Thesaurus:  
Place\_Keyword: Texas  
Place\_Keyword: Aransas Bay  
Place\_Keyword: Aransas National Wildlife Refuge  
Place\_Keyword: Carlos Bay  
Place\_Keyword: Mesquite Bay  
Place\_Keyword: Ayres Island  
Place\_Keyword: Bludworth Island  
Place\_Keyword: Blackjack Peninsula  
Place\_Keyword: False Live Oak Island  
Place\_Keyword: Mitchell Site  
Place\_Keyword: Longuard Tube Site  
Place\_Keyword: Rattlesnake Island  
Place\_Keyword: Southend Bay  
Place\_Keyword: Gulf Intracoastal Waterway  
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 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

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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 1.14-m diameter cylindrical drop trap was a fiberglass enclosure with a galvanized metal skirt along the bottom that enclosed a 1-m<sup>2</sup>. Traps were deployed from a front-mounted boom on a boat.

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. data were collected within the sampler. Minimum and maximum water depth was taken with a meter stick and recorded to the nearest centimeter. Average water depth was considered the midpoint between values.

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 and a trap blow-out. If the sample was taken in a marsh, vascular plants enclosed in the sampler were clipped at ground level, counted and removed to assist in animal retrieval. At seagrass sites, vegetation biomass was determined from three 5-cm diameter cores collected randomly inside the sampler.

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 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. 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, waterproof shipping 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 10 percent formalin. Ten percent 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. The log book served as a sample inventory and to verify sample arrival and condition. Sediment samples were organized by number and refrigerated or frozen until processed. Field data sheets were entered into an electronic database. A printout was given to the primary investigator for review.

Process\_Date: unknown

Process\_Step:

Process\_Description:

SPECIES MEASUREMENT AND SUB-SAMPLING PROCEDURES:

Organisms were measured to the nearest millimeter to determine total length (TL) for fish and penaeids and 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 in fish. TL in penaeids was from the tip of the rostrum to the tip of telson. Carapace width (CW) of crabs was measured across the widest part of the carapace (from tip to tip of the lateral spines, if present). Penaeid shrimp were measured to the nearest mm TL, non-penaeid crustaceans to the nearest 5-mm TL and fish to the nearest 10-mm TL. Hermit crabs were not measured.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Preservation and Storage of Fish and Invertebrates:

After sorting and identification, organisms were preserved in 10 percent formaldehyde for storage.

Process\_Date: unknown

Process\_Step:

Process\_Description:

Measuring Biomass of Plants and Animals:

EMERGENT MARSH PLANTS: Emergent marsh plants

were sorted, washed, identified and dried to a constant weight at 60oC for 24 hrs and weighed to the nearest 0.1 g. Samples were re-weighed again after 24 hrs and every 12 hrs thereafter until a constant weight was obtained.

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 list.

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Metadata\_Reference\_Information:

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Metadata\_Contact:

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NOAA Fisheries Service, formerly National Marine  
Fisheries Service, Fishery Ecology Branch, Galveston, Texas

Contact\_Person: Dr. Jim Ditty

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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