

Identification_Information:

Citation:

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Originator: NOAA Fisheries Service

Publication_Date: 20060703

Title:

Management effects on habitat selection
by nekton in the Barataria Basin system of
coastal Louisiana: 1995.

Description:

Abstract:

From March 21-25, 1995, 100 samples were collected in the Barataria Basin of Louisiana. Another 121 samples were collected during May, 16-19, 1995. The study concluded that the restricted water exchange in marshes under structural marsh management diminishes recruitment and standing stocks of species that must migrate from coastal spawning sites to marsh nurseries.

Purpose:

Examine the effects and implications of management decisions on habitat utilization by nektonic organisms. Specifically, to test the effects of structural marsh management on habitat use by juvenile fishery species and other small nekton before and during a spring drawdown of managed areas.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 19950321

Ending_Date: 19950519

Currentness_Reference: ground condition

Status:

Progress: complete

Maintenance_and_Update_Frequency: As necessary

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -90.06843

East_Bounding_Coordinate: -89.78172

North_Bounding_Coordinate: 29.48167

South_Bounding_Coordinate: 29.20833

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: distribution

Theme_Keyword: abundance

Theme_Keyword: nekton

Theme_Keyword: marsh management

Theme_Keyword: estuarine dependent

Theme_Keyword: 1.14-m diameter cylindrical drop trap

Theme_Keyword: 1-m2 throw trap
Theme_Keyword: submerged aquatic 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: crabs
Theme_Keyword: invertebrates

Place:

Place_Keyword_Thesaurus: Barataria Bay
Place_Keyword: Little Lake
Place_Keyword: Three Bayou
Place_Keyword: Louisiana
Place_Keyword: Gulf of Mexico

Access_Constraints:

Use_Constraints:

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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 1.14-m diameter cylindrical drop trap was a fiberglass enclosure with a galvanized metal skirt along the bottom and enclosed a 1-m² sample area. Drop traps were deployed from a front-mounted boom on a boat. Throw traps were of two types. One was a 1-m² trap with 0.61-m high walls made of thin sheet aluminum. The other 1-m² throw trap had 1-m high walls constructed of 1.6-mm mesh netting. A floating collar kept the trap vertical in the water column after deployment. Steel bar bent into a square and attached to the bottom of the net made it sink rapidly.

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. were collected within the sampler and a water sample was returned to the lab for turbidity analysis. Salinity was re-checked by hand-held refractometer in the lab. Minimum and maximum water depth was taken with a meter stick and recorded to the nearest centimeter. Water depth was considered the midpoint between values. Distance-to-marsh-edge was also measured.

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 drop trap from the bow. Immediately after sampler deployment, field personnel pushed the trap approximately 15-cm into the sediment to obtain a proper seal along the bottom to prevent escape of organisms or a trap blow-out. Immediately after throw trap deployment, field personnel checked to insure the bottom of the trap was set into the sediment to prevent escape of animals. If the sample was taken in a marsh, vascular plants enclosed in the sampler were clipped at ground level to assist in animal retrieval.

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-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. A similar procedure was followed for the throw traps, except animals were removed using clearing nets constructed of 1.6 mm nylon mesh netting attached to 1.3 x 1.3 m frames made from steel bar. The clearing net was placed against the ground and pushed through the surface layer and under the trap. Then both the net and trap were lifted out of the water. The contents of the clearing net were washed to remove mud and the net was visually and manually inspected for animals. Samples were placed in a 1.0 mm mesh bag, labeled, fixed and returned to the laboratory for processing.

Process_Date: unknown

Process_Step:

Process_Description:

Care of Nekton Samples in the Field:

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. 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 lab supervisor and primary investigator for review.

Process_Date: unknown

Process_Step:

Process_Description:

SPECIES IDENTIFICATION AND MEASUREMENT:

Specimens were initially rough sorted. Organisms were measured to the nearest millimeter 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. TL in shrimp was measured from the tip of the rostrum to the tip of telson. 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.

Process_Date: unknown

Process_Step:

Process_Description:

SAMPLE SORTING:

Samples were stored in 3 or 5 gallon buckets containing 10 percent formalin.

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: 20060703

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