

Identification_Information:

Citation:

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Originator: NOAA Fisheries Service

Publication_Date: 20060724

Title:

Ecological effects of pulsed freshwater releases on a marsh ecosystem in Louisiana.

Description:

Abstract:

Marsh and pond areas were sampled along two transects within the intermediate and brackish marsh zones of Breton Sound Basin, Louisiana from May 7-11, 2001. Sampling followed several planned releases of freshwater from the Caernarvon structure during spring 2001 as part of a larger study to examine the ecological effect of pulsed releases on the ecosystem.

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: 20010507

Ending_Date: 20010511

Currentness_Reference: ground condition

Status:

Progress: complete

Maintenance_and_Update_Frequency: As necessary

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -89.82859

East_Bounding_Coordinate: -89.65828

North_Bounding_Coordinate: 29.83117

South_Bounding_Coordinate: 29.61345

Keywords:

Theme:

Theme_Keyword_Thesaurus:

Theme_Keyword: distribution

Theme_Keyword: abundance

Theme_Keyword: nursery areas

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: crabs

Theme_Keyword: invertebrates
Place:
Place_Keyword_Thesaurus: Caernarvon
Place_Keyword: Louisiana
Place_Keyword: Breton Sound
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 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, 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:
Field 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 sampled a 1-m² area. The drop trap was 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 returned to the laboratory for turbidity analysis. Water depth was measured with a meter

stick and recorded to the nearest centimeter. Water depth was the average of 5 measurements. 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. 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 via a trap blow-out. If the sample was taken in a marsh, vascular plant stems enclosed in the sampler were clipped at ground level and counted. If submerged aquatic vegetation was present, percent coverage was estimated. Plants were identified to species.

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 as water depth is reduced. 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 catch. Nekton 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 cod-end catch bag detached. Samples were placed in a 1-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:

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, which 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, which served as a sample inventory and to verify sample arrival and condition. Turbidity samples were analyzed upon return to the laboratory and the information transferred to the field data sheets. Field data sheets were entered into an electronic database or a database manager, checked, and a printout given to the laboratory supervisor and primary investigator for review.

Process_Date: unknown
Process_Step:
Process_Description:
SPECIES IDENTIFICATION and MEASUREMENT:
Specimens were identified and the species name was recorded on the appropriate identification sheet. Organisms were measured to the nearest millimeter total length (TL) and standard length (SL) for fish, TL for shrimp, and carapace width (CW) for crabs. TL in shrimp was from the tip of the rostrum to the tip of telson. If the rostrum was broken, "broken rostrum" was recorded on the data sheet and 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, "broken lateral spines" was recorded on the data sheet for that individual and CW was not measured. 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 70 percent ETOH (i.e., mixture of 7.4 parts of 95 percent ETOH and 2.6 parts water) and samples were kept for at least 5 years.

Process_Date: unknown
Process_Step:
Process_Description:
Measuring Biomass of Animals:
Wet weight (g) was recorded by taxon for each sample.

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 were made at that time. A species ID code was assigned to each individual using the Fishery Ecology Branch revised species code list. A species not found on the code

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July 24, 2006

list was assigned a new code, which was added to the master list.

Process_Date: unknown

Metadata_Reference_Information:

Metadata_Date: 20060724

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

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

Contact_Person: Dr. Jim Ditty

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Address_Type: mailing and physical

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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