

Data Documentation

Dataset Information

Dataset Title:

NCCOS Assessment: Juvenile fish trap data from Salt River Bay, St. Croix, U.S. Virgin Islands, from 2018-05-16 to 2019-06-26

Description:

This tabular dataset provides all catch records for a fish trapping study conducted in Salt River Bay National Historical Park and Ecological Preserve, St. Croix, U.S. Virgin Islands (USVI). From May 2018 to June 2019 fish traps were deployed along the mangrove fringe on the east and west sides of Triton Bay and Sugar Bay within the Salt River Bay estuary. Catch was quantified and recorded in this data table for future use by researchers and managers. Records include taxonomic identification, abundance, and length.

Purpose:

The overall goal of the project was to evaluate the habitat function of mangroves in Salt River Bay compared to their status from an assessment conducted 25 years earlier (1991-1993) by Tobias *et al.* (1996) and Adams and Tobias (1999). This was achieved by replicating the methods of the earlier study and conducting statistical comparisons of the catch data between the two time-periods. The study was a collaboration between NOAA, the authors of the original study, and local management authorities including the USVI Department of Planning and Natural Resources (DPNR) Coastal Zone Program (CZ), and the National Park Service (NPS). The dataset is being made available for other researchers and managers to conduct additional analyses and for comparison to future monitoring at this and other locations.

Methods:

From May 2018 to June 2019 three fish traps (92 x 57 x 19 cm constructed from vinyl-coated wire mesh with 1.3 cm square openings) were deployed bi-monthly on the east and west sides of Triton and Sugar Bay within the Salt River Bay estuary. Traps were spaced 50 m apart, baited with herring, placed directly along the mangrove fringe, soaked for 24 hours, and then had their contents emptied into bins for evaluation. All fish, crabs, and other organisms were identified to the lowest possible taxonomic level, counted, measured, and released back to the point of capture. Records for each individual caught include bay (Triton or Sugar), coast (east or west), latitude (DD), longitude (DD), date and time traps was deployed, date and time trap was retrieved, organism number pulled from the trap (1 to n individuals), family, genus, species (when possible), total length for fish or carapace width for crabs (mm), and notes (*e.g.*, dead, regurgitated).

For a complete description of the process and analyses see Kendall *et al.* (in prep.).

Cited Publications:

- Kendall, M.S., B.L. Williams, A. Ruffo, A. Winship, L. Siceloff, A. Adams, and W. Tobias. (in preparation). How and why have fish abundance and biodiversity changed in the mangroves of a Caribbean estuary in 25 years? *Marine Biology*.

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- Tobias, W.J., S. Myers, B. Kojis, and B. Dalmida-Smith. 1996. The determination of mangrove habitat for nursery grounds of recreational fisheries in St. Croix. Final Report to U.S. Fish and Wildlife Service, Sport Fish Restoration Program. U.S. Virgin Islands Department of Planning and Natural Resources. 82 pp.
- Adams, A.J., and W. Tobias. 1999. Red mangrove prop-root habitat as a finfish nursery area: A case study of Salt River Bay, St. Croix, USVI. In: Proceedings of the Gulf and Caribbean Fisheries Institute, 46:22-46. <http://aquaticcommons.org/id/eprint/12902>

People & Projects

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Collaborators:

- Bethany Williams, NCCOS
- Ashley Ruffo, US DOC; NOAA; NMFS; Southeast Regional Office; Habitat Conservation Division (HCD)

Partners:

- US DOI; National Park Service (NPS)
- USVI; Department of Planning and Natural Resources (DPNR)
- USVI; DPNR; Coastal Zone Program (CZ)
- USVI; DPNR; Division of Fish and Wildlife (DFW)

Funding:

- US DOC; NOAA; NOS; National Centers for Coastal Ocean Science (NCCOS)
- US DOC; NOAA; NOS; Coral Reef Conservation Program (CRCP)

Associated Online Resources:

- NCCOS Project #341, Mangrove Function as Nursery Habitat for Fish in Salt River Bay National Historical Park and Ecological Preserve, <https://coastalscience.noaa.gov/project/mangrove-function-as-nursery-habitat-for-fish-in-salt-river-bay-national-historical-park-and-ecological-preserve/>
- CRCP Project #31190, MPA Boundary efficacy and biotic movements in Salt River Bay National Historical Park and Ecological Preserve

Extents

Northern Boundary: 17.773596

Southern Boundary: 17.769924

Western Boundary: -64.75956

Eastern Boundary: -64.75282

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Start Date: 2018-05-16

End Date: 2019-06-26

Keywords

Sea Areas, Water Bodies, Marine Protected Areas:

- Caribbean Sea
- St. Croix, U.S. Virgin Islands
- Salt River Bay National Historical Park and Ecological Preserve

NCCOS Keywords:

- NCCOS Research Priority > Marine Spatial Ecology
- NCCOS Research Topic > Ecological and Biogeographic Assessments
- NCCOS Research Location > Region > U.S. Caribbean
- NCCOS Research Location > U.S. States and Territories > U.S. Virgin Islands
- NCCOS Research Data Type > Field Observation

CoRIS Keywords:

- CoRIS Discovery Thesaurus:
 - Numeric Data Sets > Fish Census
 - Geographic Information > Fish Stock Characteristics
- CoRIS Theme Thesaurus:
 - EARTH SCIENCE > Oceans > Coastal Processes > Mangroves > Animal Association
 - EARTH SCIENCE > Oceans > Marine Biology > Fish > Fish Assemblages
 - EARTH SCIENCE > Biosphere > Ecological Dynamics > Species Recruitment
 - EARTH SCIENCE > Biosphere > Ecological Dynamics > Species Richness
- CoRIS Place Country/Territory Keywords:
 - COUNTRY/TERRITORY > United States of America > U. S. Virgin Islands > St. Croix > Salt River Bay (17N064W0022)
- CoRIS Place Ocean/Seas Keywords:
 - OCEAN BASIN > Atlantic Ocean > Caribbean Sea > Virgin Islands > St. Croix > Salt River Bay (17N064W0022)

File Information

Total File Size: 3.16 MB total, 3 files in 1 folder (unzipped), 2.98 MB (zipped)

Data Files:

- NCCOS-Salt-River-Fish-Traps_Data.CSV

Documentation Files:

- NCCOS-Salt-River-Fish-Traps_BrowseGraphic.JPG
- NCCOS-Salt-River-Fish-Traps_DataDocumentation.PDF

Data File Format(s): Comma-separated value (.CSV)

Data File Compression: no compression

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Table 1: Data Dictionary

Column	Variable Name	Definition	Units	Range
1	Bay	“Triton” or “Sugar”	n/a	n/a
2	Coast	“East” or “West”	n/a	n/a
3	Longitude	Longitude of the trap	decimal degrees	-64.759557 to -64.75282
4	Latitude	Latitude of the trap	decimal degrees	17.769924 to 17.773596
5	Date Deployed	Date deployed, Atlantic Standard Time	MM/DD/YY HH:MM	5/16/2018 9:21 to 6/25/2019 11:38
6	Date Retrieved	Date retrieved, Atlantic Standard Time	MM/DD/YY HH:MM	5/17/2018 8:53 to 6/26/2019 11:00
7	Fish/Crab#	n-th individual organism measured from the trap	n/a	n/a
8	Family	Taxonomic Family of the organism	n/a	n/a
9	Genus	Taxonomic Genus of the organism if determined	n/a	n/a
10	Species	Taxonomic Species of the organism if determined	n/a	n/a
11	TLorCW_mm	Total length for fish, or carapace width for crabs	millimeters	6 to 1005
12	Note	Text notes of any unusual findings or conditions	n/a	n/a

Parameter Information

Parameter: Trapped organisms
Property Type: measured, in situ
Units: number of individuals
Sampling Instrument: fish traps
Sampling Method: The data table is a list of all organisms that were trapped in the study. Taxonomic identification was conducted with reference books. Measurements were taken with a ruler. For a complete description of the process and analyses see Kendall *et al.* (in prep.).
Data Quality Method: Multiple observers agreed on taxonomy. Photos used for later ID of questionable specimens. For a complete description of the process and analyses see Kendall *et al.* (in prep.).

Document Information

Date: 2019-11-25
Resource Provider: NCCOS Data Manager, nccos.data@noaa.gov, US DOC; NOAA; NOS; National Centers for Coastal Ocean Science (NCCOS)
Comment: This data documentation describes data files archived as a NOAA NCEI data accession, and is intended to provide dataset-level metadata for the purposes of discovery, use, and understanding.
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