

Important!

This is the "CREEK Project's Oyster Biomass Database for Eight Creeks in the North Inlet Estuary, South Carolina" **original metadata**, created 2/24/2005 by Ginger Ogburn-Matthews. **Links and email addresses** in this document **have not been updated** as those locations and people may no longer be available.

The **condensed metadata** may be accessed at:

http://links.baruch.sc.edu/data/accessfiles/condensed_metadata/Oyster_Crassostrea_virginica_Biomass_CREEK_Project.zip

Because it is condensed, please consult this original metadata for additional information and more extensive description.

Questions about the data should be addressed to the data manager identified on the condensed metadata form.

1. Identification Information

1.1 Citation Information

8.1 Originator: David Bushek

8.1 Originator: Richard Dame

8.1 Originator: Leah Gregory

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 20030808

8.4 Title: CREEK Project's Oyster Biomass Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Belle W. Baruch Marine Field Laboratory, Georgetown, South Carolina USA

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

8.10 Online linkage: <http://links.baruch.sc.edu/data/>

8.11 Larger Work Citation

8. Citation Information

8.1 Originator: Richard Dame

8.1 Originator: David Bushek

8.1 Originator: Dennis Allen

8.1 Originator: Don Edwards

8.1 Originator: Alan Lewitus

8.1 Originator: Eric Koepfler

8.1 Originator: Bjorn Kjerfve

8.1 Originator: Leah Gregory

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences, Department of Marine Science, and Department of Statistics of the University of South Carolina

8.2 Publication Date: 20000730

8.4 Title: CREEK Project: RUI: the Role of Oyster Reefs in the Structure and Function of Tidal Creeks. A Project Overview.

8.6 Geospatial Data Presentation Form: NSF Proposal

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

8.9 Other Citation Details: This is a large 5 year monitoring program which contains multiple subprojects involving the study of the role of other estuarine subcomponents such as nekton, microzooplankton, phytoplankton, oyster diseases, and water chemistry. See cross reference section - this metadata file.

1.2 Description

1.2.1 Abstract:

A group of eight tidal creeks dominated by oysters, *Crassostrea virginica*, in North Inlet Estuary, South Carolina, USA were studied using a replicated BACI (Before - After Control - Incident) design in which all creeks are

sampled simultaneously. The study known as the CREEK Project began in January 1996. Based on detailed geomorphological observations from North Inlet creeks, by fall of 1996, eight small intertidal creeks had been selected based on similarities in size and configuration. During fall of 1996, the naturally occurring oyster biomass was estimated by measuring reef area in each creek and quantifying oyster biomass in square meter quadrats randomly collected from field surveys within each creek. This initial survey revealed an average biomass of about 8 grams dry body weight of oysters per cubic meter of water volume at bank full levels based on all eight creeks. In January 1997, oysters were added or removed from each creek to equalize oyster biomass at 8 grams dry body weight per cubic meter of bank-full water volume in each creek. This stage of the project is referred to as the “pre-manipulation” period where all creeks have the same amount of oyster biomass. About one year later in February 1998, living oysters were removed from four of the eight creeks (creeks 1, 4, 5, and 8), resulting in zero dry body weight per cubic meter of water at bank full volume. This stage of the project is considered the “manipulation” period where four of the creeks have had all of the oyster biomass removed. The same month (February 1998) that the four creeks had their living oysters removed (manipulated creeks), oyster reef area and biomass for the unmanipulated creeks were estimated using quadrat sampling. The period after this is considered the “post-manipulation” stage. About two years later during the post-manipulation period, a final biomass estimate was performed in May 2000 to determine if oyster recruitment and trampling during sampling activities had altered

oyster biomass during the manipulation phase of the study. The database file 'Final CREEK Oyster Biomass Estimates' contains data from the initial naturally occurring biomass survey in Fall 1996, the biomass of oysters in each creek in January and May 1997 following adjustments to equalize biomass to 8 g dry body weight per cubic meter, the biomass survey in February 1998 of unmanipulated creeks following removal of oysters from manipulated creeks, and data from the final biomass survey in May 2000. The final estimate data are in tabular form and are based on detailed field surveys of creek geomorphology (see CREEK Geomorphology database).

1.2.2 Purpose: The CREEK Project oyster biomass data was collected to determine the natural average biomass of oysters within intertidal creeks so that all creeks could be adjusted to that average level and subsequently to monitor changes in oyster biomass since elucidating the role of oysters was the primary purpose of the overall study.

1.2.3. Supplemental Information:

In the original file provided by the PI (copied into the Rescue Process directory), there are two tables in the file: one labeled initial estimates and one labeled final estimates. The initial estimates were performed using volumes estimated from aerial photography and crude assumptions of creek bathymetry, whereas the final biomass estimates were based on detailed field surveys of creek geomorphology.

Several other datasets were collected over varying periods during the four years. Nutrients and chlorophyll *a* were measured weekly in each creek throughout the 4 years. Intensive planktonic - microbial loop sampling and experiments were conducted in selected creeks at various times. Collections of all nekton in creeks during bankfull neap tides were conducted seasonally during three years of the project, one pre-manipulation year and two post-manipulation years. Oyster growth was measured monthly during the same period of nekton collections. Infection intensities of the oyster parasite, *Perkinsus marinus*, were made in fall of the pre-manipulation year and once following the manipulation.

Significant Publications and Presentations: (¹ indicates undergraduate)

Dame R, Bushek D, Allen D, Edwards D, Lewitus A, Koepfler E, Gregory L. 2002. The ecosystem approach to sustainable bivalve management. *Aquatic Ecology* 36:51-65.

Dame R, Bushek D and Prins T. 2001. The role of suspension feeders as ecosystem transformers in shallow coastal environments. In K.Reise (Ed), *The Ecology of Sedimentary Coasts*. Springer-Verlag, Berlin. pp.11-37.

¹Green R, Bushek D and Dame R. 1998. The spatial distribution of the parasite, *Perkinsus marinus*, in the oyster *Crassostrea virginica* along the intertidal creeks of North Inlet estuary, South Carolina. National Conference on Undergraduate Research (NCUR) XII:1423-1426.

Lewitus A, Koepfler E and ¹Pigg R. 2000. Use of dissolved organic nitrogen by a salt marsh phytoplankton bloom community. *Arch. Hydrobiol. Spec. Issues Adv. Limnol.* 55:441-456.

¹Potthoff M and Allen DM, (in press). Site fidelity, home range and tidal migrations of juvenile pinfish, *Lagodon rhomboides*, in salt marsh creeks. *Environmental Biology of Fishes*.

¹Wetz M, Lewitus A, Koepfler E and ¹Hayes K. 2002. Impact of the Eastern oyster *Crassostrea virginica* on microbial community structure in a salt marsh estuary. *Aquatic Microbial Ecology* 28:87-97.

There were many individual student projects that were also undertaken during the Creek Study. The student's name, the year(s) it was done, and the project description is listed below. No formal metadata will be written up on the projects; to obtain more information, please contact any of the PIs listed as an "Originator" in the above Citation Information section.

Undergraduate students	Year	Project Description
Heather Hostetler	2000	Terrapin utilization of tidal creeks
Mike Wetz	1999-2001	Phytoplankton Ecology (Isolated pool phytoplankton) and effects of oyster grazing on microbial food web structure
Mike Potthoff	1999	Oyster recruitment post-manipulation, pinfish site fidelity, benthic core biomass analysis and nekton follow up for Beth Brost
Emily Butsic	1999-2000	Dermo disease distribution post-manipulation
Beth Brost	1999-2000	Nekton ecology, experiments in lab with habitat choice chambers
Brian Milan	1997-1999	Nekton ecology (Nekton Habitat Utilization)
Carrie Burdick	1998-1999	Fecal transmission of Dermo
Jodi Brewster	1998-1999	Modelling Dermo disease transmission
Amy Sabo	1998	Oyster growth rates
Kristine Johnston	1998	Flow dynamics

Barbara Castellion	1997-1998	Nutrient cycling in linear, flow-thru flume
Chris DeFranco	1997-1998	Oyster growth
Becky Green	1997-1998	Dermo disease distribution pre-manipulation
Jennifer Raphan	1997-1998	Oyster settlement pre-manipulation
Ryan Pigg	1997-1998	Use of dissolved organic nitrogen by North Inlet phytoplankton
Becky King	1996-1998	Oyster ecology
Leroy Humphries	1996-1997	Creek geomorphology
Amy Anderson	1996-1997	Oyster and other invertebrate biomass
Bonnie Willis	1995-1997	Microbial food web dynamics
Ken Hayes	1995-1997	Regulation of microbial food web functioning by grazing and organic substrates.

Graduate Students	Year	Project Description
Becky Ellin	1998-2000	Planktonic transmission of Dermo disease
Sarah Crawford	1998-1999	The Importance of Oysters in Tidal Creeks: Design and Analysis of an Ecological Experiment

Summary of important results:

Although covering 25-70% (avg.40%) of intertidal creek bottoms, oysters do not dominate faunal biomass or the remineralization of nutrients.

Totally unexpected was the finding that summer nekton (fishes, shrimps, crabs) biomass is higher than oyster biomass.

Nekton prefer certain creeks to others and these distributions are related to creek shape, mean depth, flooding and discharge rate, and distance to upland ridge, but not creek size (volume, area, or length).

A tag/recapture study by a student found that pinfish migrated into flooding creeks but did not move among creeks. El Niño, a global environmental event, was clearly evident from the analysis of three years of weekly chlorophyll and nutrient data (1997-00).

Utilizing limited literature values and preliminary experiments, a simple budget for ammonium indicated that nekton inputs were considerably greater than oyster excretion as a source to intertidal creeks.

Map of the eight creek sites can be found at

<http://links.baruch.sc.edu/data/CREEK/CreekOysterBiomass/OysterBio.htm>

1.3 Time Period of Content:

9.3 Range of Dates/Times

9.3.1 Beginning Date: 199611

9.3.3 Ending Date: 200005

1.3.1 Currentness Reference: Ground condition.

1.4 Status:

1.4.1 Progress: Complete

1.4.2 Maintenance and update frequency: As needed

99.1.5.1 Description of Geographic Extent:

All eight creeks reside in North Inlet estuary, four off of Clambank Creek, and four off of Town Creek.

The North Inlet Estuary (33.20°N, 79.10°W) lies east of the uplands of Hobcaw Barony (also known as the Belle W. Baruch Property). The Estuary is located in Georgetown County, South Carolina.

1.5.1.1 West Bounding Coordinate: -79.192

1.5.1.2 East Bounding Coordinate: -79.167

1.5.1.3 North Bounding Coordinate: 33.350

1.5.1.4 South Bounding Coordinate: 33.327

1.6 Keywords

1.6.1 Theme

1.6.1.1 Theme Keyword Thesaurus: None

1.6.1.2 Theme Keyword:	BIOMASS
1.6.1.2 Theme Keyword:	LIVE BIOMASS
1.6.1.2 Theme Keyword:	OYSTERS
1.6.1.2 Theme Keyword:	COASTAL
1.6.1.2 Theme Keyword:	CREEK PROJECT
1.6.1.2 Theme Keyword:	ECOSYSTEMS
1.6.1.2 Theme Keyword:	ESTUARINE COMMUNITIES
1.6.1.2 Theme Keyword:	ESTUARINE
1.6.1.2 Theme Keyword:	ESTUARY
1.6.1.2 Theme Keyword:	TIDAL CREEK
1.6.1.2 Theme Keyword:	MARSH
1.6.1.2 Theme Keyword:	SALT MARSH
1.6.1.2 Theme Keyword:	CRASSOSTREA VIRGINICA
1.6.1.2 Theme Keyword:	FIELD EXPERIMENT

1.6.2 Place

1.6.2.1 Place Keyword Thesaurus:	None
1.6.2.2 Place Keyword:	NORTH INLET ESTUARY
1.6.2.2 Place Keyword:	SOUTH CAROLINA
1.6.2.2 Place Keyword:	TOWN CREEK
1.6.2.2 Place Keyword:	CLAMBANK CREEK
1.6.2.2 Place Keyword:	EAST COAST
1.6.2.2 Place Keyword:	SOUTHEAST COAST
1.6.2.2 Place Keyword:	COASTAL
1.6.2.2 Place Keyword:	GEORGETOWN COUNTY
1.6.2.2 Place Keyword:	USA

1.6.3 Stratum

1.6.3.1 Stratum Keyword Thesaurus:	None
1.6.3.2 Stratum Keyword:	BENTHIC
1.6.3.2 Stratum Keyword:	BOTTOM

1.6.4 Temporal

1.6.4.1 Temporal Keyword Thesaurus:	None
1.6.4.2 Temporal Keyword:	1996
1.6.4.2 Temporal Keyword:	1997
1.6.4.2 Temporal Keyword:	1998
1.6.4.2 Temporal Keyword:	1999
1.6.4.2 Temporal Keyword:	2000
1.6.4.2 Temporal Keyword:	1996-2000

1.7 Access Constraints:

None; however, it is strongly recommended that these data be acquired directly from the Belle W. Baruch Institute for Marine and Coastal Sciences and not indirectly through other sources which may have changed the data in some way.

1.8 Use Constraints:

Following academic courtesy standards, the PIs (originators), the University of South Carolina's Belle W. Baruch Institute for Marine and Coastal Sciences, Coastal Carolina University, and Grantor (see Data Set Credit section) should be fully acknowledged in any subsequent publications in which any part of these data are used. Use of the data without completely reading and understanding the metadata is not recommended. The Baruch Institute, Coastal Carolina University, Baruch Institute and Coastal Carolina researchers, and Grantor are not responsible for the use and/or misuse of data from this database. See the section on Distribution Liability for more information.

1.9 Point of Contact:

10.2 Contact Organization Primary

10.2.1 Contact Organization:	Univ. of South Carolina's Baruch Institute
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10.2.2 Contact Person: Ginger Ogburn-Matthews
10.3 Contact Position: Research Data Manager & Analyst
10.4 Contact Address
10.4.1 Address Type: Mailing Address
10.4.2 Address: USC Baruch Marine Field Laboratory
10.4.2 Address: P.O. Box 1630
10.4.3 City: Georgetown
10.4.4 State or Province: South Carolina
10.4.5 Postal Code: 29442
10.4.6 Country: USA
10.5 Contact Voice Telephone: (843) 546-6219
10.7 Contact Facsimile Telephone: (843) 546-1632
10.8 Contact Electronic Mail Address: ginger@belle.baruch.sc.edu
10.9 Hours of Service: 8:30 am to 4:30 pm Mon.- Friday

1.11 Data Set Credit:

Funding was provided by the National Science Foundation, grant DEB_95_0957 to Coastal Carolina University and the University of South Carolina's Belle W. Baruch Institute, with Dr. Richard Dame as project director. Numerous researchers and students contributed to these datasets.

1.14 Native Data Set Environment

Data are in Microsoft Excel 2000 Professional and csv formats. Metadata are in MS Word 2000 Professional and txt formats. Graphics are in SigmaPlot 8.0 and jpg formats

1.15 Cross Reference:

8. Citation Information

8.1 Originator: Richard Dame
8.1 Originator: David Bushek
8.1 Originator: Dennis Allen
8.1 Originator: Leah Gregory
8.1 Originator: Don Edwards
8.1 Originator: Alan Lewitus
8.1 Originator: Sarah Crawford
8.1 Originator: Eric Koepfler
8.1 Originator: Bjorn Kjerfve
8.1 Originator: Theo Prins
8.1 Originator: Chris Corbett
8.1 Originator: Department of Marine Science, Coastal Carolina University
8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina
8.2 Publication Date: 20000730
8.4 Title: The experimental analysis of tidal creeks dominated by oyster reefs: the premanipulation year
8.6 Geospatial Data Presentation Form: Scientific publication
8.8 Publication Information:
8.8.1 Publication Place: unknown
8.8.2 Publisher: Journal of Shellfish Research
8.9 Other Citation Details: Vol.19:1, pages 361-369.

1.15 Cross Reference:

8. Citation Information:

8.1 Originator: Richard Dame
8.1 Originator: Leah Gregory
8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina
8.1 Originator: Department of Marine Science, Coastal Carolina University
8.2 Publication Date: 20000701
8.4 Title: CREEK Project's Water Chemistry, Chlorophyll a, and Suspended Sediment Weekly Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina
8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, South Carolina USA

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

1.15 Cross Reference:**8. Citation Information**

8.1 Originator: Richard Dame

8.1 Originator: Leah Gregory

8.1 Originator: Dennis Allen

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 2003

8.4 Title: CREEK Project's Nekton Seasonal Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

1.15 Cross Reference:**8. Citation Information**

8.1 Originator: Richard Dame

8.1 Originator: Alan Lewitus

8.1 Originator: Eric Koepfler

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 2004

8.4 Title: CREEK Project's Microzooplankton Seasonal Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

1.15 Cross Reference:

8.1 Originator: Alan Lewitus

8.1 Originator: Raphael Tymowski

8.1 Originator: Ivy Collins

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 20050228

8.4 Title: CREEK Project's Phytoplankton Pigment Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina: 1997-1999

8.6 Geospatial Data Presentation Form: comma delimited digital data and Microsoft Excel spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC USA

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

8.10 Online linkage: <http://links.baruch.sc.edu/data/>

1.15 Cross Reference:**8. Citation Information**

8.1 Originator: Richard Dame

8.1 Originator: David Bushek

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 2004

8.4 Title: CREEK Project's Oyster Disease Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

1.15 Cross Reference:

8. Citation Information

8.1 Originator: Richard Dame

8.1 Originator: Bjorn Kjerfve

8.1 Originator: Chris Corbett

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 2004

8.4 Title: CREEK Project's Tidal Creek Geomorphology Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

1.15 Cross Reference:

8. Citation Information

8.1 Originator: Dennis Allen

8.1 Originator: David Bushek

8.1 Originator: Brian Milan

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: Unpublished material

8.4 Title: CREEK Project's Internal Creek Habitat Survey for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

1.15 Cross Reference:

8. Citation Information

8.1 Originator: Richard Dame

8.1 Originator: David Bushek

8.1 Originator: Department of Marine Science, Coastal Carolina University

8.1 Originator: Belle W. Baruch Institute for Marine and Coastal Sciences and Department of Statistics of the University of South Carolina

8.2 Publication Date: 2004

8.4 Title: CREEK Project's Oyster Growth and Survival Monitoring Database for Eight Creeks in the North Inlet Estuary, South Carolina

8.6 Geospatial Data Presentation Form: comma delimited digital data and spreadsheet

8.8 Publication Information:

8.8.1 Publication Place: Baruch Marine Field Laboratory, Georgetown, SC

8.8.2 Publisher: Belle W. Baruch Institute for Marine and Coastal Sciences, University of South Carolina

2. Data Quality Information

2.1 Attribute Accuracy

2.1.1 Attribute Accuracy Report:

Measurements were made to the nearest 0.01 mm with electronic calipers, but accuracy estimates appeared to be only sensitive to about 2.00 mm.

2.2 Logical Consistency Report: Not applicable

2.3 Completeness Report:

There are no missing or anomalous data for Oyster Biomass database.

2.5 Lineage

2.5.1 Methodology

2.5.1.1 Methodology Type: Field Collection Procedures and Protocols

2.5.1.3 Methodology Description:

Pre-manipulation refers to the period of time that data were collected from the intertidal creeks after adjusting all eight creek oyster biomass to 8 grams dry body weight per cubic meter and before removal of oysters from the four manipulated creeks. Post- manipulation is that period following removal of oysters from the four manipulated creeks. Survey maps were used to determine the contours of the creeks, the volume of water in the creeks, and the location of oyster reefs within the creeks. Before the pre-manipulation year observations began, the area of each creek covered by oyster reef was measured from field surveys. Oysters from 10 quadrats (0.25^2) distributed at different elevations along the length of each creek were collected and total dry body weight per quadrat averaged for each creek. Oyster biomass for each creek was then estimated by multiplying the average biomass per quadrat by the area of oyster reef in each creek. Oysters were then redistributed among creeks by hand to yield an oyster biomass of 8 grams dry body weight per cubic meter of water volume in each creek. Oyster biomass estimates were made from converting length measurements to dry body weight using the allometric relationship published in Dame 1972. The grams dry body per cubic meter relationship was used because it more realistically describes the benthic-pelagic coupling of the oysters to the water column (Dame 1993).

2.5.1.4 Methodology Citation:

8. Citation Information

8.1 Originator: Dame, R.F.

8.2 Publication Date: 1993

8.4 Title: Bivalve filter feeders and coastal and estuarine ecosystem processes.

8.6 Geospatial Data Presentation Form: Book

8.8 Publication Information:

8.8.1 Publication Place: New York

8.8.2 Publisher: Springer Verlag

8.9 Other Citation Details: Page 579

2.5.1.4 Methodology Citation:

8. Citation Information

8.1 Originator: Dame, R.F.

8.2 Publication Date: 1972

8.4 Title: Comparison of various allometric relationships in intertidal and subtidal American oysters

8.6 Geospatial Data Presentation Form: Scientific publication

8.8 Publication Information:

8.8.1 Publication Place: unknown

8.8.2 Publisher: Fish. Bull. US

8.9 Other Citation Details: Volume 70: pages 1121-1126

2.5.3: Process Step

2.5.3.1 Process Description:

Creek detailed Volume survey: Data were collected in the field by a Topcon total station and handwritten into field notebooks that were then transcribed into a spreadsheet for computer analysis.

Oyster Biomass estimates: Oysters were brought into the laboratory, cleaned and measured. Data were obtained directly into a text file from electronic calipers, then transferred into EXCEL spreadsheets for analysis. Dry body weights were determined by shucking meats into tared foil weigh boats, dried at 60 C to constant weight and data entered into EXCEL by hand.

Data Capture of Original Raw and Final Data Files and Documentation (August 2003)

All original field survey sheets and survey maps were scanned and saved in the Rescue Directory: OYSTERBIOMASS.ORIGINAL.RAW. Original hardcopy and digital files were obtained from the PI, Dr. David Bushek.

Data Verification, Editing, and Graphing (August 2003)

The computer program Sigma Plot was used to generate the oyster biomass graphs for each creek. Data were verified using the original digital files.

Creation of Final Rescued Databases (August 2003)

In the original Oyster Biomass digital file provided by the PI, there are two tables in the file, one labeled initial estimates and one labeled final estimates. The initial estimates were performed using volumes estimated from aerial photography and crude assumptions of creek bathymetry, whereas the final biomass estimates were based on detailed field surveys of creek geomorphology. The final Rescue database only contains the final biomass estimates based on detailed field surveys.

Data Archive and Dissemination of Rescued Data, Documentation, and Graphics (August 2003)

Rescued final data, graphics, and metadata are all printed out into a hardcopy paper version and also burned onto CD. All original hardcopy scanned data sheets images and original digital data were also archived to CD. All original and final hardcopy and CD versions are compiled into a 3-ring binder notebook and stored at the BMFL Computer Laboratory. CDs are also stored in a fireproof cabinet at the BMFL data manager's office. Final data, graphics, and metadata are also available on Baruch Institute's web site: <http://links.baruch.sc.edu/data/> and archived on Baruch's Rescue Server. Metadata are published on the BMFL's Isite Node.

2.5.2.3 Process Date: 20030731

3 Spatial Data Organization Information:

3.1 Indirect Spatial Reference:

North Inlet Estuary which is part of Hobcaw Barony is located in Georgetown County, South Carolina, USA

3.2 Direct Spatial Reference Method: Point

5. Entity_and_Attribute_Information:

5.2 Overview_Description:

5.2.1 Entity_and_Attribute_Overview:

Each subproject had its own database attribute naming conventions, abbreviations, and meanings. See each subproject's metadata for details. But, there were some names and meanings common to the entire Creek project.

File: CREEK Biomass Final Volume Estimates

Creek = numbering identification of each tidal creek within North Inlet Estuary where water samples were collected; creeks 1-4 were creeklets running into Clambank Creek; creeks 5-8 were creeklets running into Town Creek. See map for creek numbering and location within North Inlet Estuary (located in Supplemental Information).

Date = month/year (mmyy) that the sample was collected (not necessarily processed or analyzed)

Final Bankfull Estimates (m^3) = A detailed topographic/bathymetric survey of each creek and its basin was conducted utilizing a Topcon total station. All elevations were referenced to a common datum that are in turn referenced to eight USGS permanent benchmarks. These data generated estimates of creek length, width, cross-sectional area at mouth, surface area, and water volume.

Nov-96 Initial Biomass (grams dry body weight per cubic meter) = During fall of 1996, the naturally occurring oyster biomass was estimated by measuring reef area in each creek and quantifying oyster biomass in square meter quadrats randomly collected from field surveys within each creek.

Jan-97 Adjusted Biomass (grams dry body weight per cubic meter) = In January 1997, oysters were added or removed from each creek to equalize oyster biomass at 8 grams dry body weight per cubic meter of bank-full water volume in each creek.

May-97 Measured Biomass (grams dry body weight per cubic meter) = In May 1997, oysters were added or removed from each creek to equalize oyster biomass at 8 grams dry body weight per cubic meter of bank-full water volume in each creek.

Feb-98 Removal Biomass (grams dry body weight per cubic meter) = In February 1998, living oysters were removed from four of the eight creeks (creeks 1, 4, 5, and 8), resulting in zero dry body weight per cubic meter of water at bank full volume. The same month (February 1998) that the four creeks had their living oysters removed (manipulated creeks); oyster reef area and biomass for the unmanipulated creeks were estimated using quadrat sampling.

May-00 Biomass (grams dry body weight per cubic meter) = In May 2000, a final biomass estimate was performed to determine if oyster recruitment and trampling during sampling activities had altered oyster biomass during the manipulation phase of the study.

5.2.2 Entity and Attribute Detail Citation:

Definitions were developed by the Baruch Institute's and Coastal Carolina University's researchers, data managers, and technicians; no published standards for entity definitions were used to define the entities used in this dataset. However, some of the entity type definitions are standard for the field of estuarine ecology.

6. Distribution Information

6.1 Distributor:

10.2 Contact Organization Primary

10.1.2 Contact Organization: Univ. of South Carolina's Baruch Institute

10.1.1 Contact Person: Ginger Ogburn-Matthews

10.3 Contact Position: Research Data Manager & Analyst

10.4 Contact Address

10.4.1 Address Type: Mailing Address

10.4.2 Address: USC Baruch Marine Field Lab

10.4.2 Address: PO Box 1630

10.4.3 City: Georgetown

10.4.4 State or Province: South Carolina

10.4.5 Postal Code: 29442

10.4.6 Country: USA

10.5 Contact Voice Telephone: (843) 546-6219

10.7 Contact Facsimile Telephone: (843) 546-1632

10.8 Contact Electronic Mail Address: ginger@belle.baruch.sc.edu

10.9 Hours of Service: 8:30 am to 4:30 pm EST/EDT Mon.- Friday

6.2 Resource Description:

Creek Project's Oyster Biomass

Dataset Identification Names and Content:

Directory: OYSTERBIOMASS.ORIGINAL.RAW: (Total size 111 Mb, 28 Folders, 144 files)

Directory: DATA: all files are in MICROSOFT EXCEL WORKBOOK format and CSV format

Final CREEK Oyster Biomass Estimates.xls

Oyster Biomass May 2000.xls

Premanipulation Oyster Biomass Data.xls

Final CREEK Oyster Biomass Estimates.csv

Oyster Biomass May 2000 Creek 1.csv Oyster

Biomass May 2000 Creek 2.csv Oyster

Biomass May 2000 Creek 3.csv Oyster

Biomass May 2000 Creek 4.csv Oyster

Biomass May 2000 Creek 5.csv Oyster

Biomass May 2000 Creek 6.csv Oyster

Biomass May 2000 Creek 7.csv Oyster

Biomass May 2000 Creek 8.csv

Premanipulation Oyster Biomass Data A.csv

Premanipulation Oyster Biomass Data 5.csv

Premanipulation Oyster Biomass Data 6.csv

Premanipulation Oyster Biomass Data 7.csv

Premanipulation Oyster Biomass Data 8.csv

Premanipulation Oyster Biomass Data newest123.csv

Premanipulation Oyster Biomass Data 456.csv

Premanipulation Oyster Biomass Data 789.csv

Premanipulation Oyster Biomass Data Newest1.csv

Premanipulation Oyster Biomass Data Creek 2 (South of Clambank).csv

Premanipulation Oyster Biomass Data template.csv

Premanipulation Oyster Biomass Data 5-97 creek data.csv

Premanipulation Oyster Biomass Data 5-97 biomasses.csv

Directory: Field Survey Sheets: all files are in .JPG format

Directory: Field Survey Sheets 1997

FSS.CREEK1.QAUDRAT1 - FSS.CREEK1.QAUDRAT5
FSS.CREEK2.QAUDRAT1 - FSS.CREEK2.QAUDRAT5
FSS.CREEK3.QAUDRAT1 - FSS.CREEK3.QAUDRAT5
FSS.CREEK4.QAUDRAT1 - FSS.CREEK4.QAUDRAT5
FSS.CREEK5.QAUDRAT1 - FSS.CREEK5.QAUDRAT5
FSS.CREEK6.QAUDRAT1 - FSS.CREEK6.QAUDRAT5
FSS.CREEK7.QAUDRAT1 - FSS.CREEK7.QAUDRAT5
FSS.CREEK8.QAUDRAT1 - FSS.CREEK8.QAUDRAT5

Directory: Field Survey Sheets 1998

FSS.CREEK2.QAUDRAT1 - FSS.CREEK2.QAUDRAT6
FSS.CREEK3.QAUDRAT1 - FSS.CREEK3.QAUDRAT6
FSS.CREEK6.QAUDRAT1 - FSS.CREEK6.QAUDRAT6
FSS.CREEK7.QAUDRAT1 - FSS.CREEK7.QAUDRAT6

Directory: Field Survey Sheets 2000

FSS.CREEK1.QAUDRAT1 - FSS.CREEK1.QAUDRAT5
FSS.CREEK2.QAUDRAT1 - FSS.CREEK2.QAUDRAT5
FSS.CREEK3.QAUDRAT1 - FSS.CREEK3.QAUDRAT5
FSS.CREEK4.QAUDRAT1 - FSS.CREEK4.QAUDRAT5
FSS.CREEK5.QAUDRAT1 - FSS.CREEK5.QAUDRAT5
FSS.CREEK6.QAUDRAT1 - FSS.CREEK6.QAUDRAT5
FSS.CREEK7.QAUDRAT1 - FSS.CREEK7.QAUDRAT5
FSS.CREEK8.QAUDRAT1 - FSS.CREEK8.QAUDRAT5

Directory: GRAPHICS: all files are in .JPG format

AerialPhotograph.Oct8.1991
MAP.CREEK1.FEB13.1997
MAP.CREEK2.FEB13.1997
MAP.CREEK3.FEB13.1997
MAP.CREEK4.FEB13.1997
MAP.CREEK5.FEB13.1997
MAP.CREEK6.FEB13.1997
MAP.CREEK7.FEB13.1997
MAP.CREEK8.FEB13.1997
MAP.CREEKS1-8

Directory: Oyster Removal: all files are in .JPG format

OYSTERREMOVAL.FEB1998
OYSTERBIOEQUALIZATION.DATASHEET.JAN1997
OYSTERBIOEQUALIZATION.JAN1997A
OYSTERBIOEQUALIZATION.JAN1997B

Directory: OYSTERBIOMASS.RESCUE2003.PROCESS: (Total size 751Kb, 1 Folder, 1 file)

Directory: GRAPHICS: all files are in SIGMAPLOT 8.0 format

File: OysterBiomass

Directory: OYSTERBIOMASS.RESCUE2003.FINAL: (Total size 1.17 Mb, 3 Folders, 11 files)

Directory: FINAL.DOCUMENTATION: file is in MICROSOFT WORD and TXT format

OYSTERBIOMASS.FINAL.FGDC

Directory: FINAL.GRAPHICS: files are in JPG format

CREEK 1
CREEK 2
CREEK 3
CREEK 4
CREEK 5
CREEK 6
CREEK 7
CREEK 8

Directory: FINAL.DATA: files are in MS EXCEL and CSV format

CREEK Biomass Final Volume Estimates

6.3 Distribution Liability:

The datasets are only as good as the quality assurance and quality control procedures outlined in the Metadata. The user bears all responsibility for its subsequent use in any further analyses or comparisons. No warranty expressed or implied is made regarding the accuracy or utility of any data collected, managed, or disseminated for general or scientific purposes by the Belle W. Baruch Institute for Marine and Coastal Sciences. This disclaimer applies both to individual use of the data and aggregate use with other data. It is strongly required that these data be directly acquired from the Belle W. Baruch Institute for Marine and Coastal Sciences and not indirectly through other sources which may have changed the data in some way. It is strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. Neither the Belle W. Baruch Institute for Marine and Coastal Sciences, Coastal Carolina University, nor the National Science Foundation shall be held liable for the use and/or misuse of the data described and/or contained herein.

6.4 Standard Order Process

6.4.2. Digital Form

6.4.2.1 Digital Transfer Information

Format Name: EXCEL (.XLS) or WORD (.DOC) format as well as .CSV or .TXT (text only) format.

6.4.2.1.2 Format Version Number: Microsoft Office Professional 2000

6.4.2.1.6 File Decompression Technique: No compression applied

6.4.2.2 Digital Transfer Option

Computer Contact Information

Network Address

Network Resource Name: <http://links.baruch.sc.edu/data/>

6.4.3 Fees: None

6.5 Custom Order Process:

If requesting Non-digital (Paper (hard copy) printout), a fee of \$50 per hour (with a one-hour minimum) plus the cost of supplies will be imposed. As an offline option, CD-ROMs are available at the cost of \$5.00 each. This fee pays for the CD, the creation of the CD, and mailing charges.

7. Metadata Reference Information

7.1 Metadata Date: 20030804

7.2 Metadata Review Date: 20030924

7.4 Metadata Contact:

10.2 Contact Organization Primary

10.1.2 Contact Organization: Univ. of South Carolina's Baruch Institute

10.1.1 Contact Person: Ginger Ogburn-Matthews

10.3 Contact Position: Research Data Manager & Analyst

10.4 Contact Address

10.4.1 Address Type: Mailing Address

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10.7 Contact Facsimile Telephone: (843) 546-1632

10.8 Contact Electronic Mail Address: ginger@belle.baruch.sc.edu

10.9 Hours of Service: 8:30 am to 4:30 pm EST/EDT Mon.- Friday

7.5 Metadata Standard Name:

Content Standard for Digital Geospatial Metadata, Part 1: Biological Data Profile

7.6 Metadata Standard Version: FGDC-STD_001.1-1999