

# Condition index for bivalves recovered at the end of the cage experiment from oyster reefs along Southeastern Atlantic Bight (SAB) from North Carolina to Florida in 2011 (Oyster Trophic Cascades project)

Website: <https://www.bco-dmo.org/dataset/554968>

Version: 2015-04-01

## Project

» [The influence of predators on community structure and resultant ecosystem functioning at a biogeographic scale](#) (Oyster\_Trophic\_Cascades)

Contributors	Affiliation	Role
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## Dataset Description

Oyster reef cages containing either bivalves, consumers or predators were set up along the southeastern US coast from N. Carolina to Florida. This dataset includes initial and final oyster shell length and wet and dry weights of the tissue.

### Related Reference:

DL. Kimbro, JE. Byers, JH. Grabowski, AR. Hughes and MF. Piehler. The biogeography of trophic cascades on US oyster reefs (2014) Ecology Letters 17:845-854. doi: 10.1111/ele.12293.

Data is also available from the Knowledge Network for Biocomplexity (KNB):  
1. Cage Experiment Bivalve Data <http://knb.ecoinformatics.org/knb/metacat?action=read&qformat=knb&sessionid=0&docid=evanlpettis.101.15>

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## Data Files

File
<b>clam_condition.csv</b> (Comma Separated Values (.csv), 42.06 KB) MD5:ca1270c770c0e99980e1e3f81f3c95e2
Primary data file for dataset ID 554968

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## Parameters

Parameter	Description	Units
site	Experimental study site/estuary within each region; Two sites per region	unitless
lat	latitude; north is positive	decimal degrees
lon	longitude; east is positive	decimal degrees
cage	ID number of caging enclosure	unitless
treatment	Experimental treatment	unitless
subcage_phantom	Indicates whether clam was planted in a subcaged or phantom caged location	unitless
on_off_reef	Whether clams were planted on or off the reef (for untagged live clams on/off reef will be unknown)	unitless
position	Position at which individual clam was assigned within the cage	unitless
tag	Tag on clam	unitless
len_init	Initial shell length of clam	millimeter
len_final	Final length of clam if recovered and measurable	millimeter
wgt_shell	Mass of both valves; tissue and tag removed; dried with paper towel	grams
wgt_container	Mass of empty tin used for measuring the wet and dry tissue mass of clam	grams
wgt_wet_container	Mass of wet tissue and tin	grams
wgt_dry_container	Mass of tissue and tin after drying for 24 hours at 70 degrees C	grams
wgt_wet_tissue	Mass of wet tissue alone	grams
wgt_dry_tissue	Mass of dry tissue alone	grams

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## Deployments

### Kimbro\_2011

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/554925">https://www.bco-dmo.org/deployment/554925</a>
<b>Platform</b>	Oyster_Reefs_SE-US
<b>Start Date</b>	2011-06-02
<b>End Date</b>	2011-09-02
<b>Description</b>	Oyster reef communities were manipulated to test the generality of potential causal factors of trophic cascades across a 1000-km region from N. Carolina to Florida using monitoring and cage experiments.

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## Project Information

**The influence of predators on community structure and resultant ecosystem functioning at a biogeographic scale (Oyster\_Trophic\_Cascades)**

**Coverage:** St. Augustine, FL to Cape Hatteras, NC

Predators structure ecological communities by consuming and altering the traits of prey, yet these effects have only recently been linked to local variation in ecosystem functions such as primary production and nutrient cycling. Such linkages may operate differently across biogeographic scales because factors known to affect local predator mechanisms also vary with latitude. The mismatch between knowledge of how predators locally affect ecosystem functions and the biogeographic range at which predator-prey interactions occur inhibits understanding of linkages between ecological communities and ecosystems, and thus our ability to manage valuable ecosystem services. Intertidal oyster reefs provide a model system to address this knowledge gap: they occur throughout the mid-Atlantic and Gulf coasts; they contain a similar food-web assemblage across latitudinal gradients in predation, resource supplies, and environmental conditions; they are strongly influenced by predator effects; and they influence sediment and nutrient cycles by enhancing benthic-pelagic coupling. This research involves a series of standardized sampling and experimental studies to: (1) investigate biogeographic patterns in oyster food web structure, resource supplies, environmental conditions, and sediment properties associated with reef function (2) determine how the vital rates of oysters, which can influence benthic-pelagic coupling, vary geographically; and (3) examine experimentally the relative importance of consumptive and non-consumptive predator effects on oyster reef communities and the ecosystem processes they provide and how these effects vary latitudinally. It will provide a mechanistic understanding of the basis for biogeographical shifts in valuable ecosystem services performed by an important marine foundation species, and it will also advance understanding of the interactions between predator effects in food webs and the ecosystem processes that depend on them. *(from the Lead Principal Investigator proposal Abstract)*

This is a Collaborative Project with Investigators from four major research universities.

[Funding for this project has transferred from award OCE-0961633 to OCE-1338372, and from award OCE-0961741 to OCE-1203859, coincident with Principal Investigators Dr. Kimbro's and Dr. Grabowski's affiliation changes.]

BCO-DMO is in the process of serving data from this project directly. These data are also available online from the [Knowledge Network for Biocomplexity](#).

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## Funding

Funding Source	Award
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-0961633</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-1338372</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-0961853</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-0961741</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-1203859</a>

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