Counts of vermetids removed from long-term vermetid removal reefs in Moorea, French Polynesia from 2012-2015

Website: https://www.bco-dmo.org/dataset/645990
Data Type: Other Field Results
Version: 1
Version Date: 2016-05-23

Project
» Spatial patterns of coral-vermetid interactions: short-term effects and long-term consequences (Vermetids_Corals)

Contributors	Affiliation	Role
Osenberg, Craig	University of Georgia (UGA)	Principal Investigator, Contact
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Table of Contents

Coverage

Spatial Extent: **Lat**:-17.47499 **Lon**:-149.79251
Temporal Extent: 2012-01-23 - 2015-07-12

Dataset Description

To keep up control and removal treatments, vermetids were identified and removed from the Long Term Vermetid Removal (LTVR) Reefs (129-144, 193-198) in the years 2012-2014. All species of vermetids were identified and removed on each of the “removal treatment” experimental reefs.

Long Term Vermetid Removal (LTVR) Reef sites in this project are manipulated reefs characterized in the Long Term Reef Physical Characteristics dataset.

Reefs labeled "TOW" in this dataset, numbered 129-144, are a subset of a larger number of Long Term Reefs (LTR) that were monitored as part of the project "Cryptic density dependence: the effects of spatial, ontogenetic, and individual variation in reef fish" beginning in 2003. This long term study continues to monitor those reefs in addition to reefs 193-198 starting in 2012. Data for these reefs between the years 2003 and 2009 can be found on the project site http://www.bco-dmo.org/project/540423.

Location: Moorea, French Polynesia (17.48 degrees S, 149.82 degrees W)

Other associated LTVR datasets:
LTVR - Fate of Reefs - Contains latitude and longitude of reefs used in this dataset
LTVR - Physical Characteristics - Contains characteristics of reefs used in this dataset.
LTVR - Fish Survey

LTVR - Percent Cover Point Contact
LTVR - Percent Visual Cover
LTVR - Pomacentrids
LTVR - Thalasssoma
LTVR - Vermetid Counts
LTVR - Vermetid Sizes in Quadrat

Methods & Sampling

Sampling and Analytical Methodology:
At each “removal treatment” reefs of the long-term vermetid removal project, four major species of vermetid snail were identified, counted and removed. Reef numbers 135-6, 138-140, 142-144, 194, 197 are the removal reefs. Removal was completed using a vermetid removal device to open the shell and remove the snail tissue. Starting in October 2013, D. merr were included in counts of removed vermetids, but only by one diver (JS).

Materials: snorkel gear, dive slate, vermetid removal tools

Data Processing Description

Data Processing:
(NA/No Processing notes)

NA- Not applicable (never recorded) to this data set
NR- Not recorded at certain times throughout the data set

BCO-DMO Processing Notes
- Generated from original file "LTVR_VermetidRemoval.csv" contributed by Rebecca Atkins
- Parameter names edited to conform to BCO-DMO naming convention found at Choosing Parameter Name
- Any blank rows removed

[table of contents | back to top]

Data Files

File
LTVR_VermetidRemoval.csv (Comma Separated Values (.csv), 5.73 KB) MD5:e3629a43e7e9442a2cfbaf6118317cb6 Primary data file for dataset ID 645990

[table of contents | back to top]

Parameters

Parameter	Description	Units
DATE	Date data collected	DD-MMM-YYYY
SITE	Site name (TOW)	text
REEF	Reef # (129-144; 193-198)	dimensionless
TREATMENT	Treatment type (Control/Removal)	text
Observer	Initials of observer Name of observer (CWO-Craig W. Osenberg; ALB-Anya L. Brown; JZ-Julie Zill; TF-Tom Frazer; AB-Andy Brooks JS-Jeff Shima)	text
C_maximum	Number of Ceraesignum maximum removed (0-200)	number of individuals
D_platypus	Number of Dendropoma platypus removed (0-200)	number of individuals
PR	Number of Petaloconchus keenae removed (0-200)	number of individuals
S__S	Number of Serpulorbis variabilis removed (0-200)	number of individuals
D_merr	Number of D. merr removed (0-200)	number of individuals
unknown	Number of unidentifiable vermetids (coil shaped) removed (0-200)	number of individuals
Notes	Notes	text

[table of contents | back to top]

Instruments

Dataset-specific Instrument Name	Mask and snorkel
Generic Instrument Name	Diving Mask and Snorkel
Generic Instrument Description	A diving mask (also half mask, dive mask or scuba mask) is an item of diving equipment that allows underwater divers, including, scuba divers, free-divers, and snorkelers to see clearly underwater. Snorkel: A breathing apparatus for swimmers and surface divers that allows swimming or continuous use of a face mask without lifting the head to breathe, consisting of a tube that curves out of the mouth and extends above the surface of the water.

Dataset-specific Instrument Name	Transect Tape
Generic Instrument Name	Measuring Tape
Dataset-specific Description	Materials: transect tape and slates
Generic Instrument Description	A tape measure or measuring tape is a flexible ruler. It consists of a ribbon of cloth, plastic, fibre glass, or metal strip with linear-measurement markings. It is a common tool for measuring distance or length.

Dataset-specific Instrument Name	Slate
Generic Instrument Name	Underwater Writing Slate
Dataset-specific Description	Materials: transect tape and slates
Generic Instrument Description	Underwater writing slates and pencils are used to transport pre-dive plans underwater, to record facts whilst underwater and to aid communication with other divers.

[table of contents | back to top]

Deployments

Osenberg_et_al_Moorea

Website	https://www.bco-dmo.org/deployment/644752
Platform	Osenberg et al Moorea
Start Date	2003-05-19
End Date	2015-07-12

[table of contents | back to top]

Project Information

Spatial patterns of coral-vermetid interactions: short-term effects and long-term consequences (Vermetids_Corals)

Coverage: Moorea, French Polynesia (-17.48 degrees S, -149.82 degrees W)

Description from NSF abstract:
Ecological surprises are most likely to be manifest in diverse communities where many interactions remain uninvestigated. Coral reefs harbor much of the world's biodiversity, and recent studies by the investigators suggest that one overlooked, but potentially important, biological interaction involves vermetid gastropods. Vermetid gastropods are nonmobile, tube-building snails that feed via an extensive mucus net. Vermetids reduce coral growth by up to 80%, and coral survival by as much as 60%. Because effects vary among coral taxa, vermetids may substantially alter the structure of coral communities as well as the community of fishes and invertebrates that inhabit the coral reef.

The investigators will conduct a suite of experimental and observational studies that: 1) quantify the effects of four species of vermetids across coral species to assess if species effects and responses are concordant or idiosyncratic; 2) use meta-analysis to compare effects of vermetids relative to other coral stressors and determine the factors that influence variation in coral responses; 3) determine the role of coral commensals that inhabit the branching coral, Pocillopora, and evaluate how the development of the commensal assemblage modifies the deleterious effects of vermetids; 4) determine how vermetid mucus nets affect the local environment of corals and evaluate several hypotheses about proposed mechanisms; and 5) assess the long-term implications of vermetids on coral communities and the fishes and invertebrates that depend on the coral.

Note: The Principal Investigator, Dr. Craig W. Osenberg, was at the University of Florida at the time the NSF award was granted. Dr. Osenberg moved to the University of Georgia during the summer of 2014 (current contact information).

[table of contents | back to top]

Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-1130359

[table of contents | back to top]