

Vermetid sizes from quadrats sampled in Moorea, French Polynesia from 2012-2017

Website: <https://www.bco-dmo.org/dataset/645961>

Data Type: Other Field Results

Version: 2

Version Date: 2017-12-20

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
Frazer, Thomas	University of Florida (UF)	Co-Principal Investigator
Shima, Jeffrey	Victoria University of Wellington	International Collaborator
Gegg, Stephen R.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager
York, Amber D.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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Coverage

Spatial Extent: Lat:-17.47499 Lon:-149.79251

Temporal Extent: 2012-01-23 - 2017-06-30

Dataset Description

This dataset contains vermetid sizes and species identifications from quadrats on experimental reefs. These data were collected to examine spatial and temporal variation in vermetid abundances Moorea, French Polynesia.

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 Removal](#)

Methods & Sampling

Sampling and Analytical Methodology:

At each of the reefs monitored for the vermetid removal study, the aperture diameter of identifiable vermetids were measured in 10 20 x 20cm quadrats using calipers to the nearest 0.1 mm. Quadrats were placed haphazardly on the reef, 2 on the top and 2 on the upcurrent side (the side in the direction of the current), 2 on each of the left and right of the current direction, and 2 quadrats on the downcurrent side.

Materials: snorkel gear, dive slate, 20x20cm quadrat, calipers

Note extracted from a data comment: All Unk vermetids in 2015 were described as dark shelled, often dark body, curled tight.

Data Processing Description

BCO-DMO Data Manager Processing Notes for version 2016-01-26:

- Generated from original file "LTVR_VermetidSizesInQuadrats.csv" contributed by Rebecca Atkins
- Parameter names edited to conform to BCO-DMO naming convention found at [Choosing Parameter Name](#)
- Any blank rows removed

Current data version date 2017-12-20 replaces version 2016-05-23

* This update adds data new data chronologically and also includes a new column "Diam31" to accommodate a quadrat that contained 31 vermatids.

BCO-DMO Data Manager Processing Notes for version 2017-12-20:

- * added a conventional header with dataset name, PI name, version date
- * modified parameter names to conform with BCO-DMO naming conventions
- * blank values replaced with no data value "nd" for "no data"
- * removed three blank and un-named columns between "Diam31" and "Notes"
- * replaced "." values with "nd" for no data after communication with data submitter.
- * replaced commas with ; to support csv export
- * date formats had problems. Changed dates in format "dd-mmm_yyyy" to match the rest of the dataset "dd-mmm-yy"
- * blank rows removed
- * double quotes in a comment removed

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Data Files

File
LTVR_VermetidSizesInQuadrats.csv (Comma Separated Values (.csv), 265.08 KB) MD5:dc8e0171059467af86e8e9bc756e22aa
Primary data file for dataset ID 645961

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Parameters

Parameter	Description	Units
DATE	Date data collected in format dd-mmm-yy	unitless
OBSERV	Observer (CWO=Craig W. Osenberg; JS=Jeff Shima)	unitless
SITE	Site name (TOW)	unitless
REEF	Reef identifier	unitless
TREATMENT	Treatment type (control or removal)	unitless
Location	Spatial position on the reef (Left,Right, Top,Front, Back)	unitless
Rep	Quadrat number (2 per position)	unitless
Species	Cm = Ceraesignum maximum (formerly documented as Dendropoma maximum and may be referred to as such in other datasets) ; Dp = Dendropoma platypus; Pk= Petaloconchus keenae; S= Serpulorbis variabilis; Unk=Unknown	unitless
Number	Number of vermetids counted	per individual
Diam1	Aperture diameter of each vermetid counted	millimeters (mm)
Diam2	Aperture diameter of each vermetid counted	millimeters (mm)
Diam3	Aperture diameter of each vermetid counted	millimeters (mm)
Diam4	Aperture diameter of each vermetid counted	millimeters (mm)
Diam5	Aperture diameter of each vermetid counted	millimeters (mm)
Diam6	Aperture diameter of each vermetid counted	millimeters (mm)
Diam7	Aperture diameter of each vermetid counted	millimeters (mm)
Diam8	Aperture diameter of each vermetid counted	millimeters (mm)

Diam9	Aperture diameter of each vermetid counted	millimeters (mm)
Diam10	Aperture diameter of each vermetid counted	millimeters (mm)
Diam11	Aperture diameter of each vermetid counted	millimeters (mm)
Diam12	Aperture diameter of each vermetid counted	millimeters (mm)
Diam13	Aperture diameter of each vermetid counted	millimeters (mm)
Diam14	Aperture diameter of each vermetid counted	millimeters (mm)
Diam15	Aperture diameter of each vermetid counted	millimeters (mm)
Diam16	Aperture diameter of each vermetid counted	millimeters (mm)
Diam17	Aperture diameter of each vermetid counted	millimeters (mm)
Diam18	Aperture diameter of each vermetid counted	millimeters (mm)
Diam19	Aperture diameter of each vermetid counted	millimeters (mm)
Diam20	Aperture diameter of each vermetid counted	millimeters (mm)
Diam21	Aperture diameter of each vermetid counted	millimeters (mm)
Diam22	Aperture diameter of each vermetid counted	millimeters (mm)
Diam23	Aperture diameter of each vermetid counted	millimeters (mm)
Diam24	Aperture diameter of each vermetid counted	millimeters (mm)
Diam25	Aperture diameter of each vermetid counted	millimeters (mm)
Diam26	Aperture diameter of each vermetid counted	millimeters (mm)
Diam27	Aperture diameter of each vermetid counted	millimeters (mm)

Diam28	Aperture diameter of each vermetid counted	millimeters (mm)
Diam29	Aperture diameter of each vermetid counted	millimeters (mm)
Diam30	Aperture diameter of each vermetid counted	millimeters (mm)
Diam31	Aperture diameter of each vermetid counted	millimeters (mm)
Notes	Comment	unitless

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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.

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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

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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](#)).

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Funding

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

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