

Reef composition surveys on reefs in Moorea, French Polynesia from 2003-2017

Website: <https://www.bco-dmo.org/dataset/645713>

Data Type: Other Field Results

Version: 2

Version Date: 2018-01-26

Project

» [Spatial patterns of coral-vermetid interactions: short-term effects and long-term consequences](#)

(Vermetids_Corals)

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Coverage

Spatial Extent: Lat:-17.47499 Lon:-149.79251

Temporal Extent: 2012-01-23 - 2017-06-29

Dataset Description

Reef composition was surveyed on the reefs used in the long-term removal study during the years 2012-2017.

These data are meant to provide contextual information for how vermetids affect reef communities.

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 Visual Cover](#)

[LTVR - Pomacentrids](#)

[LTVR - Thalassoma](#)

[LTVR - Vermetid Counts](#)

[LTVR - Vermetid Removal](#)

[LTVR - Vermetid Sizes in Quadrat](#)

Methods & Sampling

Sampling and Analytical Methodology:

Three transects were laid out over the right, middle and left side of each reef. The diver recorded the substrate every 10 cm yielding at least 50 fixed-point contacts for every reef. For each reef there are at least 50 fixed-point contacts. Corals and algae that are commonly observed are divided by genera. Porites spp are further distinguished as ridged, smooth or columnar.

Materials: transect tape and slates

Entries with a question mark following the point contact value likely indicate uncertainty during data transcription.

Data Processing Description

Data Processing:

To obtain "TOTPOINTS": Sum all species points from the reef.

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_PercentCoverPointContact.csv" contributed by Rebecca Atkins
- Parameter names edited to conform to BCO-DMO naming convention found at [Choosing Parameter Name](#)
- Any blank rows removed
- Site "TOE" in original .csv file replaced with "TOW" per feedback from PI

Data version 2: 2018-01-26 replaces data version 1: 2016-05-23. Data range extended to 2017.

BCO-DMO Data Manager Processing Notes for version 2018-01-26:

- * Added a conventional header with dataset name, PI name, version date
- * Modified parameter names to conform with BCO-DMO naming conventions
- * converted commas to semicolons to support csv export.
- * PSPSMOO PSPRIDG PSPCOLUM PRUS MONTIP POC ACROP OTHCORAL blanks changed to 0s.

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Data Files

File
LTVR_PercentCoverPointContact.csv (Comma Separated Values (.csv), 19.13 KB) MD5:7f112c0c9c1e8606d6b0a6d5ef6600bd
Primary data file for dataset ID 645713

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Parameters

Parameter	Description	Units
DATE	Date Data Collected (2012-2014)	DD-MMM-YYYY
Time_In	Time observer entered the water	HH:MM
Time_Out	Time observer exited the water	HH:MM
OBSERV	Initials of observer (ACS-Amanda Strong; JS-Jeff Shima; CWO-Craig Osenberg; TF-Tom Frazer)	text
SITE	Location of reefs	text
REEF	Reef #	dimensionless
TREATMENT	Treatment (Control/Removal)	text
PSPSMOO	Porites sp. (Smooth) (Range: 0 - TOTAL POINTS)	number of individuals
PSPRIDG	Porites sp. (Ridged) (Range: 0 - TOTAL POINTS)	number of individuals
PSPCOLUM	Porites sp. (Columnar) (Range: 0 - TOTAL POINTS)	number of individuals
PRUS	Porites rus (Range: 0 - TOTAL POINTS)	number of individuals
MONTIP	Montipora spp. (Range: 0 - TOTAL POINTS)	number of individuals
POC	Pocillopora spp. (Range: 0 - TOTAL POINTS)	number of individuals
ACROP	Acropora spp. (Range: 0 - TOTAL POINTS)	number of individuals
OTHCORAL	Other Corals (Range: 0 - TOTAL POINTS)	number of individuals
TURF_steg	Stegastes sp. turf (does not apply to this dataset- see "TURF" below)	number of individuals
TURF_surg	Turf grazed by Acanthurids (does not apply to this dataset)	number of individuals
TURF	Stegastes sp. turf (Range: 0 - TOTAL POINTS)	number of individuals
TURBINAR	Turbinaria sp. (Range: 0 - TOTAL POINTS)	number of individuals
CCA	CCA (crustose coralline algae) (does not apply to this data set)	NR
Bare	Bare substrate; including coralline algae (Range: 0 - TOTAL POINTS)	number of individuals
Bare_plus_CCA	(does not apply to this data set)	NA
PIRREG	Porites irregularis? Unidentified branching species of coral common on reefs (Range: 0 - TOTAL POINTS)	number of individuals
LEPTASTR	Leptastrea spp. (Range: 0 - TOTAL POINTS)	number of individuals
PAVONA	Pavona cactus (Range: 0 - TOTAL POINTS)	number of individuals
FUNGIA	Fungia spp.	number of individuals
MUSSIDAE	Corals from the family Mussidae (difficult to i.d. to genera) (Range: 0 - TOTAL POINTS)	number of individuals

CAULERPA	Caulerpa spp. (Range: 0 - TOTAL POINTS)	number of individuals
DICTYOTA	Dictyota spp. (Range: 0 - TOTAL POINTS)	number of individuals
HALIMEDA	Halimeda spp. (Range: 0 - TOTAL POINTS)	number of individuals
PADINA	Padina spp. (Range: 0 - TOTAL POINTS)	number of individuals
CYANO	Various growth forms of cyanobacteria (Range: 0 - TOTAL POINTS)	number of individuals
GALAXAUR	Galaxaura sp. (Range: 0 - TOTAL POINTS)	number of individuals
AMANSIA	Amansia rhodantha (Range: 0 - TOTAL POINTS)	number of individuals
SPONGE	Fleshy grey sponge (Range: 0 - TOTAL POINTS)	number of individuals
VERMETID	Vermetid spp. (does not apply to this data set)	NA
TRIDACNA	Tridacna Spp. (does not apply to this data set)	NA
SPIROBRANCH	Spirobranch Spp. (does not apply to this data set)	NA
CORALGAE	Coraline algae (Range: 0 - TOTAL POINTS)	number of individuals
OTHER	Other Corals (Range: 0 - TOTAL POINTS)	number of individuals
TOTAL_POINTS	Sum of FPC points measured for that reef (Total points)	number of individuals
NOTES	NOTES	text

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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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