

Examining the abundance of alive and recently consumed vermetids in the presence and absence of muricid, *Mancinella armigera* from September to October 2013 (Vermetids_Corals project)

Website: <https://www.bco-dmo.org/dataset/717528>

Data Type: Other Field Results

Version: 2017-10-05

Project

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

(Vermetids_Corals)

Contributors	Affiliation	Role
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Coverage

Spatial Extent: N:-17.47279 E:-149.78277 S:-17.48365 W:-149.84698

Temporal Extent: 2013-09-29 - 2013-10-02

Dataset Description

Related Datasets:

- Reef Locations: <https://www.bco-dmo.org/dataset/645257>
- Effects of vermetids on Pocillopora: <https://www.bco-dmo.org/dataset/717627>

Methods & Sampling

Researchers snorkeled to the reef crest at Moorea, French Polynesia. When at least one *Mancinella armigera* was observed, a 1 m² quadrat was centered on the snail(s) and all the *Ceraesignum maximum* were counted. Vermetids were classified as alive, recently killed (white tube with no fouling), or old kill (fouled, empty shell). For each site where a *Mancinella* was observed, a control quadrat was sampled. The control was chosen to be similar with regard to size and general community characteristics (percent coral cover and type of coral

present).

Data Processing Description

BCO-DMO Processing:

- added conventional header with dataset name, PI name, version date
- modified parameter names to conform with BCO-DMO naming conventions
- converted date from dd-Mon-yy to yyyyymmdd.

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Data Files

File
Brown_2014_Coral_Reefs.csv (Comma Separated Values (.csv), 462 bytes) MD5:9f09ecdaad4ef7994b846a566f841425
Primary data file for dataset ID 717528

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Related Publications

Brown, A. L., Zill, J., Frazer, T. K., & Osenberg, C. W. (2014). Death and life: Muricid snails consume the vermetid gastropod, *Dendropoma maximum*, and use empty shells for reproduction. *Coral Reefs*, 33(2), 497-497. doi:[10.1007/s00338-014-1141-6](https://doi.org/10.1007/s00338-014-1141-6)
Results

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Parameters

Parameter	Description	Units
Observer	Name of person who collected data (CWO = Craig Osenberg; TF = Tom Frazer)	unitless
Date	Date of data collection (YYYYMMDD)	unitless
Quadrat_Number	Paired quadrat number (1-4)	unitless
Control_withSnails	Control (no muricid) or With Snail (muricid present)	unitless
V_Alive	number of live veretids	count
V_recently_Dead	number of dead vermetids where shell is bright white	count
V_Old_Dead	number of dead vermetids with shell encrusted with crustose algae	count
Mancinella_number	number of mancinella in quadrat	count
Size_1_muricid_in_mm	size of the largest muricid in quadrat	millimeters (mm)

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Instruments

Dataset-specific Instrument Name	snorkel
Generic Instrument Name	Diving Mask and Snorkel
Dataset-specific Description	Researchers snorkeled to the reef crest.
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.

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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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