

# Counts of vermetids at reefs before, during and after the die off in Moorea, French Polynesia (Vermetids\_Corals project)

**Website:** <https://www.bco-dmo.org/dataset/721511>

**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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| <a href="#">Shima, Jeffrey</a>  | Victoria University of Wellington                   | Co-Principal Investigator       |
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## Coverage

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

**Temporal Extent:** 2015-07-02 - 2015-10-04

## Dataset Description

Counts of vermetid gastropod *Ceraesignum maximum* at reefs before, during and after the die off.

### Related Datasets:

- Brown\_et\_al\_2016\_SimpleCounts: <https://www.bco-dmo.org/dataset/721511> (The current page.)
- Brown\_et\_al\_2016\_SizeComparison: <https://www.bco-dmo.org/dataset/721581>
- Brown\_et\_al\_2016\_QuadratSurvey: <https://www.bco-dmo.org/dataset/721232>

## Methods & Sampling

We had previously counted *Ceraesignum maximum* on 11 marked patch reefs on 2 July 2015. These patch reefs were  $65.8 \pm 4.7$  cm in height,  $77.9 \pm 4.6$  cm in diameter (mean  $\pm$  SE), and originally occupied by, on average, 34 living *C. maximum*. We did not observe any dead *C. maximum* at this time. Once we suspected a die-off had started, we recounted *C. maximum* three additional times (16 July, 24–25 July and 4 October 2015).

## 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 Mon-dd to yyyyymmdd.

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## Data Files

| File  |
|---|
| <b>Brown_2016_SimpleCounts.csv</b> (Comma Separated Values (.csv), 970 bytes)<br>MD5:6e86275233c8a988c75c5aa09806c46b |
| Primary data file for dataset ID 721511   |

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## Related Publications

Brown, A. L., Frazer, T. K., Shima, J. S., & Osenberg, C. W. (2016). Mass mortality of the vermetid gastropod *Ceraesignum maximum*. *Coral Reefs*, 35(3), 1027–1032. doi:[10.1007/s00338-016-1438-8](https://doi.org/10.1007/s00338-016-1438-8)  
*Results*

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## Parameters

| Parameter      | Description   | Units    |
|----------------|---|----------|
| ReefNum        | ID number of reef where samples were taken              | unitless |
| TotLive        | Counts of live vermetids                                | unitless |
| Day            | count from 0 of sampled days                            | days     |
| PreDieOff_Live | Number of live vermetids before die off (same as day 0) | unitless |
| Date           | Date of sampling in yyyyymmdd format                    | unitless |

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## Instruments

|   |   |
|---|---|
| <b>Dataset-specific Instrument Name</b> | snorkel   |
| <b>Generic Instrument Name</b>          | Diving Mask and Snorkel   |
| <b>Dataset-specific Description</b>     | Researchers snorkeled to the reef crest.  |
| <b>Generic Instrument Description</b>   | 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

|                   |   |
|-------------------|---|
| <b>Website</b>    | <a href="https://www.bco-dmo.org/deployment/644752">https://www.bco-dmo.org/deployment/644752</a> |
| <b>Platform</b>   | Osenberg et al Moorea   |
| <b>Start Date</b> | 2003-05-19  |
| <b>End Date</b>   | 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                       |
|--|-----------------------------|
| <a href="#">NSF Division of Ocean Sciences (NSF OCE)</a> | <a href="#">OCE-1130359</a> |

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