

# Effect of distance between coral lesions on coral linear extension from experiments in Moorea, French Polynesia from May, 2013 through May, 2014

**Website:** <https://www.bco-dmo.org/dataset/777212>

**Data Type:** Other Field Results

**Version:** 1

**Version Date:** 2019-09-20

## Project

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

Contributors	Affiliation	Role
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## Abstract

Experimental corals were artificially damaged using a waterpik with lesion centroids separated by 1.2cm and 3.5cm, and then dyed with Alizarin S. After 1 year, corals were bisected, photographed and linear extension measured using Image J at each polyp's growth lines.

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## Coverage

**Spatial Extent:** Lat:-17.48 Lon:-149.82

**Temporal Extent:** 2013-05 - 2014-05

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## **Dataset Description**

Experimental corals were artificially damaged using a waterpik with lesion centroids separated by 1.2cm and 3.5cm, and then dyed with Alizarin S. After 1 year, corals were bisected, photographed and linear extension measured using Image J at each polyp's growth lines.

## **Acquisition Description**

Growth and angle were measured following polyp growth lines in Image J

## **Processing Description**

BCO-DMO Processing Notes:

- added conventional header with dataset name, PI name, version date
- modified parameter names to conform with BCO-DMO naming conventions
- added lat, lon columns.

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## **Parameters**

Parameter	Description	Units
Coral	Coral ID Number	unitless
Treatment	Experimental Treatment - (control – no lesions); 2 (centroids separated by 1.2cm); 3 (lesion centroids separated by 3.5cm)	unitless
Angle	Angle from top of coral	degrees
Growth	Linear extension from alizarin line	centimeters (cm)
lat	Latitude of sampling. Positive values indicate North.	decimal degrees
lon	Longitude of sampling. Negative values indicate West.	decimal degrees

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## Instruments

<b>Dataset-specific Instrument Name</b>	photographed
<b>Generic Instrument Name</b>	Camera
<b>Dataset-specific Description</b>	Coral lesions were also photographed and images analyzed to assess the % of lesion with regenerated tissue.
<b>Generic Instrument Description</b>	All types of photographic equipment including stills, video, film and digital systems.

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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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