Measurements of female Dendropoma maximum (now Ceraesignum maximum) snails, their weight, egg capsule length and number of larvae in capsules in Moorea, French Polynesia from April to September 2008 (Vermetids_Corals project)

Website: https://www.bco-dmo.org/dataset/724586
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
Phillips, Nicole	Victoria University of Wellington	Principal Investigator, Contact
Shima, Jeffrey	Victoria University of Wellington	Co-Principal Investigator
Biddle, Mathew	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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Coverage

Spatial Extent: **N**:-17.47279 **E**:-149.78277 **S**:-17.48365 **W**:-149.84698
Temporal Extent: 2008-04-01 - 2008-09-30

Dataset Description

These data include information on the reproductive biology and ecology of *Ceraesignum* (formerly *Dendropoma*) *maximum.*

Related Datasets:

- Reef Locations: https://www.bco-dmo.org/dataset/645257
- Phillips and Shima 2010 - Brooding and Size: https://www.bco-dmo.org/dataset/722287
- Phillips and Shima 2010 - Development Stage Capsule: https://www.bco-dmo.org/dataset/722344
- Phillips and Shima 2010 - Egg Number and Female Size: https://www.bco-dmo.org/dataset/724569
- Phillips and Shima 2010 - Larvae per Capsule: https://www.bco-dmo.org/dataset/724586 (The current page)
- Phillips and Shima 2010 - Size and Sex: https://www.bco-dmo.org/dataset/724601

Methods & Sampling

Individual *Dendropoma* (now *Ceraesignum*) *maximum* were collected haphazardly from seven sites in April and September 2008. Snails were removed with their shells in tact using a chisel and hammer. At the lab, snails were removed from the shell. Females were determine by the presence of a mantle slit and appearance of gonads. Length of capsules were measured in April to the nearest 0.01mm. The number of larvae in an egg capsule was determined by a subset of the capsules in a female. Weights that are the same are from the same female. Missing female weights are because those females were not weighed.

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
- empty values were replaced with 'nd' (no data).

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Data Files

File
PhillipsShima_2010_LarvaePerCapsule.csv (Comma Separated Values (.csv), 779 bytes) MD5:df390899426fdde42817d2699bf6600a Primary data file for dataset ID 724586

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Related Publications

Phillips, N. E., & Shima, J. S. (2009). Reproduction of the vermetid gastropod Dendropoma maximum (Sowerby, 1825) in Moorea, French Polynesia. Journal of Molluscan Studies, 76(2), 133–137. doi:10.1093/mollus/eyp049
General

Shima, J. S. 1999a. An evaluation of the processes that influence variability in abundance of a coral reef fish. Dissertation. University of California-Santa Barbara, California, USA. https://www.researchgate.net/profile/Jeffrey_Shima/publication/235678400_An_evaluation_of_processes_that_influence_variability_in_abundance_of_a_coral_reef_fish/links/5701922708aevaluation-of-processes-that-influence-variability-in-abunda
General

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Parameters

Parameter	Description	Units
FEMALE_WEIGHT	mass of individual female snails	grams (g)
EGG_CAPSULE_LENGTH	length of the egg capsule from an individual female	millimeters (mm)
number_LARVAE_IN_CAPSULE	number of larvae in egg capsule	unitless

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Instruments

Dataset-specific Instrument Name	length was determined
Generic Instrument Name	Measuring Tape
Dataset-specific Description	In the lab the diameter of the opening of the shell was measured in samples from April.
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	balance
Generic Instrument Name	scale
Dataset-specific Description	Snails were removed from the shell, and sex, length and wet mass were determined.
Generic Instrument Description	An instrument used to measure weight or mass.

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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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