LTR - Percent Visual Cover

Website: https://www.bco-dmo.org/dataset/645061
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Project
» Cryptic density dependence: the effects of spatial, ontogenetic, and individual variation in reef fish
(CDD_in_Reef_Fish)

Contributors	Affiliation	Role
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Dataset Description

Coral, algae, and invertebrates were observed, and their percent cover on each of the patch reefs estimated. These data were collected from 2003-2005, 2007, 2009, 2012, and 2014. These surveys were conducted at each of 192 reefs. Beginning in 2012, reefs 129-144 and added reefs 193-198 were manipulated for a project studying the effects of vermetid removals; information pertaining to this manipulation can be found in the project "Spatial patterns of coral-vermetid interactions: short-term effects and long-term consequences". All data collected on reefs 129-144 and 193-198 beginning in 2012 can also be found under that project. Descriptions of each reef are located in the "Long Term Reef Physical Characteristics" dataset. Estimating benthic composition of each reef provides serial data over time and space. These data are meant to provide contextual information for vermetid and *Thalassoma* dynamics.

Location: Moorea, French Polynesia (17.48 degrees S, 149.82 degrees W)

Methods & Sampling

Sampling and Analytical Methodology:

One person swims around the reef and visually estimates the relative cover of different substrates. In early years there was some confusion about *Stegastes* turf and grazed turf (Surgeonfish fish grazed turf). By 2012, grazed turf is now considered bare space. Divers ignored taxa that covered less than 1 percent of the benthos in 2003 and 2004. Starting in 2005, they looked at cover of 2% and above. In 2004, additional lettered reefs were monitored for benthic cover. These lettered reefs were experimentally added to the site for another experiment. After 2004 they were not monitored again. For a limited number of reefs between 2003-2005, the investigators completed a limited number of point contacts to verify their estimates.

Materials: dver, slate

Data Processing Description

Data Processing:
Calculations: To get "TOTALPOINTS", sum across the columns. Use that sum to estimate percent cover each substrate by dividing the number in the cell by the total points.

NA- Not applicable (never recorded) to this data set
NR- Not recorded at certain times throughout the data set
tr - "Trivial" amount

BCO-DMO Processing Notes
- Generated from original file "LTR_PercentVisualCover.csv" contributed by Rebecca Atkins
- Parameter names edited to conform to BCO-DMO naming convention found at Choosing Parameter Name
- Any blank rows removed

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Data Files

File
LTR_PercentVisualCover.csv(Comma Separated Values (.csv), 136.54 KB) MD5:1a6ba8d0fd1b684666c1466c0a2e9e05 Primary data file for dataset ID 645061

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Parameters

Parameter	Description	Units
DATE	Date Data Collected	DD-MMM-YYYY
OBSERV	Initials of observer (JSW-Jada Simone White)	text
Reef_let	Reef_let (does not apply to this data set)	NA
SITE	Location of reefs (TOW)	text
REEF	Reef # (two representative reefs chosen from each site) (1-192)	dimensionless
TREATMENT	Treatment (does not apply to this data set)	NA
PSPSMOO	Porites sp. (Smooth) (Range: 0-100)	number of individuals
PSPRIDG	Porites sp. (Ridged) (Range: 0-100)	number of individuals
PSPCOLUM	Porites sp. (Columnar) (Range: 0-100)	number of individuals
PRUS	Porites rus (Range: 0-100)	number of individuals
MONTIP	Montipora spp. (Range: 0-100)	number of individuals
POC	Pocillopora spp. (Range: 0-100)	number of individuals
ACROP	Acropora spp. (Range: 0-100)	number of individuals

OTHCORAL	Total coverage of other live coral (Range: 0-100)	number of individuals
TURF	Stegastes sp. turf (Range: 0-100)	number of individuals
TURF_steg	Turf in Stegastes territories (Range: 0-100)	number of individuals
TURF_surg	Turf grazed by Acanthurids (Range: 0-100)	number of individuals
TURBINAR	Turbinaria sp. (Range: 0-100)	number of individuals
Bare	Bare substrate; including coralline algae (Range: 0-100)	number of individuals
PIRREG	Porites irregularis (Range: 0-100)	number of individuals
LEPTASTR	Leptastrea spp. (Range: 0-100)	number of individuals
PAVONA	Pavona cactus (Range: 0-100)	number of individuals
FUNGIA	Fungia spp. (Range: 0-100)	number of individuals
MUSSIDAE	other corals (Range: 0-100)	number of individuals
CAULERPA	Caulerpa spp. (Range: 0-100)	number of individuals
DICTYOTA	Dictyota spp. (Range: 0-100)	number of individuals
HALIMEDA	Halimeda spp. (Range: 0-100)	number of individuals
PADINA	Padina spp. (Range: 0-100)	number of individuals
CYANO	Various growth forms of cyanobacteria (Range: 0-100)	number of individuals
GALAXAUR	Galaxaura sp. (Range: 0-100)	number of individuals
AMANSIA	Amansia rhodantha (Range: 0-100)	number of individuals
SPONGE	Fleshy grey sponge (Range: 0-100)	number of individuals
CCA	CCA (crustose coraline algae) (Range: 0-100)	number of individuals
OTHER	Total coverage of other dominant substrate: algae; sponges; etc. (Range: 0-100)	number of individuals
TOTALPOINTS	sum of points (Range: 0-100)	number of individuals
NOTES	Notes	text
NOTES_2	NOTES 2 (no.acanthaster) (2009 only)	text

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

Cryptic density dependence: the effects of spatial, ontogenetic, and individual variation in reef fish (CDD_in_Reef_Fish)

Coverage: Moorea, French Polynesia (-17.48, -149.82)

Description from NSF award abstract:
Ecologists have long been interested in the factors that drive spatial and temporal variability in population density and structure. In marine reef systems, attention has focused on the role of settlement-the transition of pelagic larvae to a benthic stage-and on density-dependent processes affecting recently settled juveniles. Recent data suggest that co-variance in settlement and subsequent density-dependent survival can obscure the patterns of density dependence at larger scales, a phenomenon called cryptic density dependence. This research will explore the mechanisms that underlie the spatial covariance of settlement and site quality - a process that has received little attention in the standard paradigm. These mechanistic studies of cryptic density dependence will facilitate the development of new frameworks for fish population dynamics that incorporate larval ecology, habitat quality, density dependence, life history, and the patterns and implications of spatial covariance among these factors. More generally, the work provides a specific empirical context, and a general theoretical treatment, of cryptic heterogeneity (hidden individual variation in demographic rates).

Note: Drs. Craig W. Osenberg and Ben Bolker were 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). Dr. Bolker moved to McMaster University in 2010 (current contact information).

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-0242312

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