

Passive Integrated Transponder (PIT) tags scan log from the west coast of Leyte, the Philippines in the municipalities of Albueria and Bay Bay City, 2014-2018.

Website: <https://www.bco-dmo.org/dataset/781973>

Data Type: Other Field Results

Version: 1

Version Date: 2019-11-06

Project

» [RAPID: Mega-typhoon impacts on the metapopulation resilience of coral reef fishes](#) (Reef Fish Resilience)

Contributors	Affiliation	Role
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Abstract

Passive Integrated Transponder (PIT) tags scan log from the west coast of Leyte, the Philippines in the municipalities of Albueria (10.91667, 124.69667) and Bay Bay City (11.07611, 124.87528), 2014-2018.

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Coverage

Spatial Extent: N:11.0165 E:124.8083 S:10.6299 W:124.555

Temporal Extent: 2014-12-16 - 2018-04-10

Dataset Description

PIT scan log from the west coast of Leyte, the Philippines in the municipalities of Albueria (10.91667, 124.69667) and Bay Bay City (11.07611, 124.87528), 2014-2018.

Methods & Sampling

Anemone surveyor:

- searches adjacent area for anemone tag (anemone could have moved a few feet since last encounter)
- records time, species, size of anemone, tag number if present
- watches anemone and counts number of fish and estimate sizes (same procedure regardless of species)
- records species of fish, estimate sizes
- adds tag after the fact if one was missing or if there was only one zip tie tag (old system tag)
- flags anemone with flagging tape that it is ready to be hunted if APCL were present.

Fish catcher:

- waits for flagging tape to indicate anemone is ready for fish capture, ok to chase fish if they fled the area
- catches all fish of desired size range and places in holding vessel adjacent to anemone
- can move on to next anemone if anemone surveyor has flagged it

Data entry was made with Excel or Google sheets, depending on the internet connection.
Data cleaning was performed in R using the tidyverse package.

Data Processing Description

BCO-DMO Data Processing:

- reformatted 'fish_corr_date' column to ISO_Date format (yyyy-mm-dd)

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Data Files

File
PITscan.csv (Comma Separated Values (.csv), 101.84 KB) MD5:3eca2eb6b58b8a2ccd3b446d34f651d1 Primary data file for dataset ID 781973

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Parameters

Parameter	Description	Units
city	city code where PIT tag was made	unitless
tag	Passive Integrated Transponder (PIT) tag id number	unitless
date	date PIT tag was scanned	unitless
time_local	time PIT tag was scanned (local time: Manila time zone for this study)	unitless
pit_notes	notes regarding PITscan readings	unitless

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Instruments

Dataset-specific Instrument Name	Biomark 601 PIT tag reader
Generic Instrument Name	tracking tag
Dataset-specific Description	Passive Integrated Transponder (PIT) tags help scientists track individual organisms by providing a reliable lifetime 'barcode' for an individual animal. PIT tags are dormant until activated; they therefore do not require any internal source of power throughout their lifespan. To activate the tag, a low-frequency radio signal is emitted by a scanning device that generates a close-range electromagnetic field. The tag then sends a unique alpha-numeric code back to the reader (Keck 1994). Scanners are available as handheld, portable, battery-powered models and as stationary, automated models that are usually used for automated scanning.
Generic Instrument Description	Devices attached to living organisms with the purpose of determining the location of those organisms as a function of time after tagging and release.

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Deployments

SCUBA_Pinsky_Leyte

Website	https://www.bco-dmo.org/deployment/642952
Platform	SCUBA Pinsky Leyte
Start Date	2012-05-05
End Date	2018-04-10
Description	Field seasons (SCUBA) in Leyte, Philippines to study coral reef fish resilience. West coast of Leyte, Philippines in the municipalities of Albuera (10.91667, 124.69667) and Bay Bay City (10.676940, 124.799170)

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Project Information

RAPID: Mega-typhoon impacts on the metapopulation resilience of coral reef fishes (Reef Fish Resilience)

Coverage: West coast of Leyte Island, Visayas, Philippines

Description from NSF award abstract:

When Typhoon Haiyan hit the Philippines it had sustained winds of 305 to 315 kph and was the strongest storm ever to make landfall. Storms are one of the most important disturbances to coral reef ecosystems. Previous research has primarily emphasized that habitat recovery is important for the recovery of reef fish communities after disturbance. We understand little, however, about the role of larval dispersal in mediating species responses to disturbance. Reef fish function as metapopulations connected by larval dispersal among reefs, and larval connectivity is therefore a critical process for their dynamics. A field site directly in Typhoon Haiyan's path provides an ideal opportunity to address the role of larval dispersal during recovery. Over the course of four field seasons (2008 to 2013), nearly two thousand clownfish were surveyed along 20km of coastline. Clownfish possess the same basic life history as most reef fish (sedentary adults and pelagic larvae), but are sufficiently rare and visible that genetic parentage methods can be used to follow larval dispersal. This study site is therefore a unique location in which to understand the metapopulation impacts of a massive

storm. This project will focus on three hypotheses: 1) Habitat destruction determines the short-term impacts of storms disturbance, 2) Metapopulation processes shape recolonization after disturbance, and 3) Disturbance allows rare competitors to increase in abundance. The project will address these questions with a combination of fixed and random transects to assess reef habitat and reef fish abundance and diversity, as well as detailed, spatially explicit surveys of anemones and clownfish. Genetic mark-recapture and parentage methods with yellowtail clownfish will pinpoint the origin of new recruits that recolonize the reef post-typhoon.

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-1430218

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