

# GPX log of survey dives(?) from coastal reefs of Ormoc Bay, Leyte, Philippines, 2012-2018

**Website:** <https://www.bco-dmo.org/dataset/781652>

**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

GPX log of survey dives from coastal reefs of Ormoc Bay, Leyte, Philippines, 2012-2018. GPX is a log of 15-second interval GPS locations during dives.

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## Coverage

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

**Temporal Extent:** 2012-05-05 - 2018-04-10

## Dataset Description

GPX log of survey dives from the west coast of Ormoc Bay, Leyte, the Philippines in the municipalities of Albuera (10.91667, 124.69667) and Bay Bay City (11.07611, 124.87528), 2012-2018. GPX is a log of 15-second interval GPS locations during dives.

## Acquisition Description

The GPS reader was floating on the surface and tethered to the divers. Location should not be considered exact. With currents and wind, the GPS reader could drift a number of meters away from directly overhead the divers.

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

## Processing Description

### BCO-DMO Data Processing:

- reformatted 'time' column to ISO\_DateTime format (yyyy-mm-ddTHH:MM:SS)

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## Parameters

| Parameter          | Description  | Units           |
|--------------------|--|-----------------|
| lat                | latitude reading from gps                                  | decimal degrees |
| lon                | longitude reading from gps                                 | decimal degrees |
| ISO_DateTime_local | Local time of gps reading formatted as yyyy-mm-ddTHH:MM:SS | unitless        |
| unit               | number of gps unit   | unitless        |

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## Instruments

|   |  |
|---|--|
| <b>Dataset-specific Instrument Name</b> | Biomark 601 PIT tag reader   |
| <b>Generic Instrument Name</b>          | tracking tag   |
| <b>Dataset-specific Description</b>     | 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 alphanumeric 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. |
| <b>Generic Instrument Description</b>   | 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\_January2015

|                    |   |
|--------------------|---|
| <b>Website</b>     | <a href="https://www.bco-dmo.org/deployment/642952">https://www.bco-dmo.org/deployment/642952</a>   |
| <b>Platform</b>    | SCUBA Pinsky Leyte  |
| <b>Start Date</b>  | 2015-01-06  |
| <b>End Date</b>    | 2015-02-02  |
| <b>Description</b> | Field season (SCUBA) in Leyte, Philippines West coast of Leyte, Philippines in the municipalities of Albuera (10.91667, 124.69667) and Bay Bay City (10.676940, 124.799170) |

### SCUBA\_Pinsky\_Leyte\_June2014

|                    |   |
|--------------------|---|
| <b>Website</b>     | <a href="https://www.bco-dmo.org/deployment/642947">https://www.bco-dmo.org/deployment/642947</a>   |
| <b>Platform</b>    | SCUBA Pinsky Leyte  |
| <b>Start Date</b>  | 2014-06-07  |
| <b>End Date</b>    | 2014-07-03  |
| <b>Description</b> | Field season (SCUBA) in Leyte, Philippines West coast of Leyte, Philippines in the municipalities of Albuera (10.91667, 124.69667) and Bay Bay City (10.676940, 124.799170) |

### SCUBA\_Pinsky\_Leyte\_June2015

|                    |   |
|--------------------|---|
| <b>Website</b>     | <a href="https://www.bco-dmo.org/deployment/642938">https://www.bco-dmo.org/deployment/642938</a>   |
| <b>Platform</b>    | SCUBA Pinsky Leyte  |
| <b>Start Date</b>  | 2015-05-28  |
| <b>End Date</b>    | 2015-06-20  |
| <b>Description</b> | Field season (SCUBA) in Leyte, Philippines West coast of Leyte, Philippines in the municipalities of Albuera (10.91667, 124.69667) and Bay Bay City (10.676940, 124.799170) |

### SCUBA\_Pinsky\_Leyte\_May2016

|                    |   |
|--------------------|---|
| <b>Website</b>     | <a href="https://www.bco-dmo.org/deployment/652798">https://www.bco-dmo.org/deployment/652798</a>   |
| <b>Platform</b>    | SCUBA Pinsky Leyte  |
| <b>Start Date</b>  | 2016-05-10  |
| <b>End Date</b>    | 2016-06-17  |
| <b>Description</b> | Field season (SCUBA) in Leyte, Philippines 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                       |
|--|-----------------------------|
| <a href="#">NSF Division of Ocean Sciences (NSF OCE)</a> | <a href="#">OCE-1430218</a> |

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