



Data from: “Corallivore assemblage, feeding behavior, and cover of *Acropora* corals drive fish corallivory on tropical reefs”

This README file was generated on 08 Jul 2026 by **Tsai-Hsuan Tony Hsu** (tony.tsaihsuan.hsu@gmail.com).

1. Author information

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2. Date of data collection: Jan-May 2023

3. Geographic location of data collection: Lizard Island, Davies Reef, and Heron Island in the northern, central and southern regions of the Great Barrier Reef (GBR), respectively, and Masig Island in the Torres Strait (TS) in Australia

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R script to replicate our analyses: GitHub repository <https://github.com/THTonyHsu/Drivers-of-corallivory.git>



Methodological information

A detailed description of data acquisition and processing can be found in the published manuscript in the *Ecosphere* (in press).

Description of data structure

Description of dataset

These data were generated to understand drivers of fish corallivory among coral reefs across >1,800 km in northeast Australia

File List

File 1: Hsuetal_dataset_benthic_MFG.csv

List of benthic taxa to morpho-functional groups

File 2: Hsuetal_dataset_benthic_taxa.csv

Benthic communities of each plot, characterized by per cent cover of 72 benthic taxa

File 3: Hsuetal_dataset_Complexity.csv

Structural complexity metrics for each plot

File 4: Hsuetal_dataset_Corallivory.csv

Feeding activities of obligate corallivores annotated in EventMeasure

File 5: Hsuetal_dataset_FishUVC.csv

Fish assemblages surveyed by Underwater Visual Census (UVC)

File 6: Hsuetal_dataset_Obligate_corallivore.csv

List of obligate corallivores as defined by [Cole et al. \(2008\)](#)

File 7: Hsuetal_dataset_preym_FMG.csv

List of coral prey to morpho-functional groups



Data-specific information

File 1: Hsuetal_dataset_benthic_MFG.csv

1. Number of variables/columns: 2
2. Number of cases/rows: 73
3. Missing data codes: None
4. Variable List
 - Column A - taxa: benthic taxa
 - Column B - MFG: morpho-functional group
5. Abbreviations used
 - for MFG:
 - Abiotic: abiotic substrate
 - Acro.arb: arborescent *Acropora*
 - Acro.bran: other branching *Acropora*
 - Acro.cory: corymbose *Acropora*
 - Acro.tab: tabular *Acropora*
 - alg.ca: calcareous algae
 - alg.oth: other algae
 - CCA: crustise coralline algae
 - Foliose.lett: lettuce-like foliose hard coral
 - Foliose.plat: plate-like foliose hard coral
 - Freelifving: free living hard coral (e.g., Fugiidae)
 - HC.other.bran: other branching hard coral
 - HC.other.mas: other massive hard coral
 - oth.ben: other benthos
 - oth.mob: other mobile organisms
 - Porites.mas: massive *Porites*
 - SC.bran: branching soft coral
 - SC.fan: fan-shaped soft coral
 - SC.mas: massive soft coral
 - SC.oth: other soft coral
 - SC.whip: whip-like soft coral
 - TurfL turf algae
 - UnID: unidentifiable

File 2: Hsuetal_dataset_benthic_taxa.csv

1. Number of variables/columns: 79
2. Number of cases/rows: 65
3. Missing data codes: None
4. Variable List
 - Column A - Region



- Column B - Reef
- Column C - Habitat
- Column D - Position
- Column E - Site
- Column F - Plot
- Column G - Site_Plot
- Column H-CA: 72 benthic taxa

5. Abbreviations used

- for Region:
 - GBR: Great Barrier Reef
 - TS: Torres Strait
- for Reef:
 - CBHE: Heron Island, southern GBR
 - OCDA: Davies Reef, central GBR
 - ONLI: Lizard Island, northern GBR
 - TSMA: Masig Island, TS
- for Habitat:
 - BA: Back-reef
 - FR: Fore-reef

File 3: Hsuetal_dataset_Complexity.csv

1. Number of variables/columns: 6
2. Number of cases/rows: 65
3. Missing data codes: None
4. Variable List
5. Column A - Reef
6. Column B - Habitat
7. Column C - Position
8. Column D - Site
9. Column E - Plot
10. Column F - Rugosity_plane: the ratio of 3D surface area over the 2D surface area projected onto the plane of best fit
11. Abbreviations used
 - for Reef:
 - CBHE: Heron Island, southern GBR
 - OCDA: Davies Reef, central GBR
 - ONLI: Lizard Island, northern GBR
 - TSMA: Masig Island, TS
 - for Habitat:



- BA: Back-reef
- FR: Fore-reef

File 4: Hsuetal_dataset_Corallivory.csv

1. Number of variables/columns: 15
2. Number of cases/rows: 6504

Missing data codes: None

3. Variable List

- Column A - Reef
- Column B - Habitat
- Column C - Position
- Column D - Site
- Column E - Plot
- Column F - Time
- Column G - SN: Genus_species
- Column H - Family
- Column I - Genus
- Column J - Species
- Column K - Number
- Column L - Activity: either Passing or Feeding
- Column M - TL: total length (cm)
- Column N - Comment
- Column O - ID: ID to distinguish fish individuals for each species at each plot

4. Abbreviations used

- for Reef:
 - CBHE: Heron Island, southern GBR
 - OCDA: Davies Reef, central GBR
 - ONLI: Lizard Island, northern GBR
 - TSMA: Masig Island, TS
- for Habitat:
 - BA: Back-reef
 - FR: Fore-reef
- for Comment:
 - time in: the time each individual entered the field of view
 - time out: the time each individual left the field of view

File 5: Hsuetal_dataset_FishUVC.csv

1. Number of variables/columns: 13
2. Number of cases/rows: 923
3. Missing data codes: NA
4. Variable List



- Column A - Reef
- Column B - Habitat
- Column C - Position
- Column D - Site
- Column E - Family
- Column F - Genus
- Column G - Species
- Column H - Valid_as: scientific name
- Column I - Trophic_group
- Column J - Feeding_group
- Column K - TR: transect
- Column L - Density (individuals per 100 m⁻²)
- Column M - Biomass (g per 100 m⁻²)

5. Abbreviations used

- for Reef:
 - CBHE: Heron Island, southern GBR
 - OCDA: Davies Reef, central GBR
 - ONLI: Lizard Island, northern GBR
 - TSMA: Masig Island, TS
- for Habitat:
 - BA: Back-reef
 - FR: Fore-reef
- for TR:
 - T1: Transect 1, spanning plots 1 & 2
 - T2: Transect 2, spanning plots 3 & 4

File 6: Hsuetal_dataset_Obligate_corallivore.csv

1. Number of variables/columns: 4
2. Number of cases/rows: 30

Missing data codes: None

3. Variable List

- Column A - Family
- Column B - Genus
- Column C - Species
- Column D - SN: Genus_species
- Column E - Valid_as: scientific name

File 7: Hsuetal_dataset_preym_MFG.csv

1. Number of variables/columns: 2
2. Number of cases/rows: 29
3. Missing data codes: NA



4. Variable List

- Column A - Prey: coral preys form which corallivores took bites
- Column B - MFG: morpho-functional group

5. Abbreviations used

- for MFG:
 - Acropora.tab: Tabular *Acropora*
 - Encrusting: Encrusting hard coral
 - Acropora.Branching.Other
 - Massive: Massive hard coral