Parasite diversity and burden in relation to diet in a hermaphroditic fish (*Halichoeres semicinctus*)

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**Introduction**

- Trophic transmission: parasites are transferred from prey to predator → use to learn about host behavior
- Larger fish have more parasites
- Fish higher on the food chain have more parasites
- Rock wrasse (*Halichoeres semicinctus*) changes from female to male¹
- Little is known about its parasites

**Questions**

- Is there a difference between the parasites of males and females?
- What features would influence parasite assemblages?

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**Methods**

**Identifying and counting parasites**

- Perform tissue squashes

**Analyzing Gut Contents**

- Identify parasites
- Sort gut contents

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**Results**

**Females had a slightly higher parasite burden**

Mid-sized wrasses had higher burden and diversity

Diet diversity correlated with parasite diversity

No clear relationship between length and diet diversity

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**Discussion**

- High diet diversity correlates with high parasite diversity: Eating more types of prey → exposed to more types of parasites
- Mid-sized wrasses have a high parasite burden and diversity: Possibly, diverse diet → diverse parasites

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**References**


Photo credits: [http://www.diverkevin.com/NorthAmerica/FishEastern-Pacific/Fish-Eastern-Pacific/i-bmZh5gX](http://www.diverkevin.com/NorthAmerica/FishEastern-Pacific/Fish-Eastern-Pacific/i-bmZh5gX); [http://www.marinelifephotography.com/diving/cabo/cabo.htm](http://www.marinelifephotography.com/diving/cabo/cabo.htm); [https://www.wildlife.ca.gov/Conservation/Marine/Parasites](https://www.wildlife.ca.gov/Conservation/Marine/Parasites)