Noam Altman-Kurosaki

Ph.D. Candidate, Biology Second Year
ARCS Scholar Herz Global Impact Award

Georgia Tech

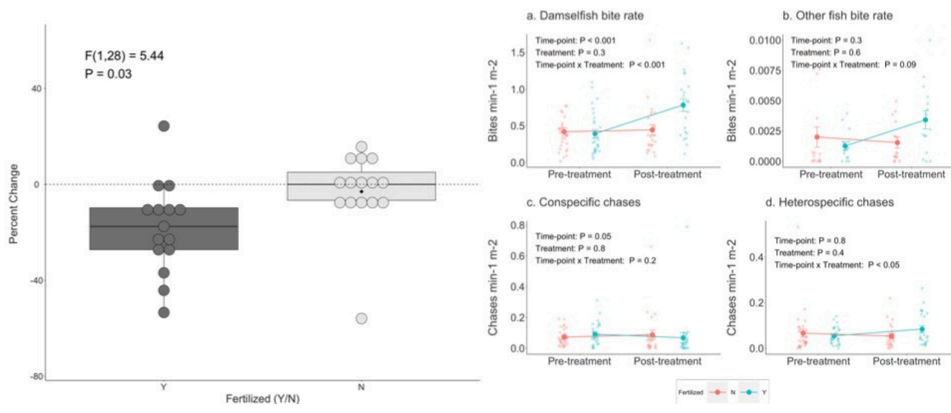
Shifts in coral-algae-herbivore interactions in Mo'orea, French Polynesia

Fish provide a variety of direct and indirect benefits to corals and reef organisms.

Critically, herbivorous fish can remove turf algae that might overgrow or kill corals.

I use farming damselfish as a study system to understand how coastal stressors affect fish behavior and fish health.

Damselfish defend smaller territories more aggressively if nutrient input increases (e.g. from runoff).



Turfs themselves can mediate transitions in reef state. I found that

- produce chemicals that are toxic to corals,
- some corals are more sensitive to these chemicals, and
- the impacts were worse in the summer!

Moving forward, I plan on testing how removing damselfish from territories (e.g. due to predation or a reduction in territory size) affects corals that settled in those territories, their interactions with turf, and ultimately alter trajectories of reefs.

Thank you to the Hay Lab (PI: Mark Hay, Cody Clements, Stephanie Bilodeau), collaborators in the Kubanek lab, and the Mo'orea LTER for supporting me throughout my research. This work was funded in part by NSF Grant 1947522, the Georgia Tech President's Fellowship, the Georgia Tech Institution Fellowship, and the ARCS Foundation Herz Global Impact award.

Scholar Awards Celebration
November 15, 2023

ARCS Scholar Awards Celebration — ARCS Foundation Atlanta

Igniting Innovation in Georgia