Hold the Salt, Please! Herbivory Along a Salinity Gradient in a Pacific Island Mangrove



WHERE IN THE WORLD'

Mangrove forests occur along coasts between 30° N and 30°S around the globe.
This study was conducted in Kosrae, Federated States of Micronesia, in the Pacific.

WHAT ARE MANGROVES?

Mangroves are Halophytes.
Halo = salt, -phyte = plant.
Mangroves grow in tidal areas
and are the interface between
terrestrial and marine systems.

WHO EATS MANGROVES?

Herbivores observed in this study were insects:

Orthoptera: Tettigoniidae

Lepidoptera: Geometridae

Crabs:

Sesarmidae



26.7%

& preferred bottom leaves.

Fresh

MORE SALT? LESS LEAF DAMAGE

Herbivory was negatively correlated with increasing salinity.

Saline

CLIMATE CHANGE

Sea level rise & increased storm frequency and intensity will drive changes in salinity regimes.

How will shifts in salinity affect patterns of plant-arthropod interactions?

WHAT NEXT?

This study focused on chewing herbivores on seedlings. Lots of plant-arthropod interactions remain to be explored in mangrove systems.

What questions would YOU ask?



References: Jayd et al (2019) Patterns of Mangrove Seedling Herbivory Across a Salinity Gradient, Unpublished manuscript. Cannicci et al (2008) Aquatic Botany,89(2), 186-200; Dangremond et al, Oecologia (2015) 179: 1187. Ewel et al (1998) Global Ecology and Biogeography Letters, 7, 49–56. Feller et al (2017) Global Ecology and Biogeography, 26:1326–1338.



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