31 March 2017

Dear Editor,

Please find the attached manuscript entitled “Depth-mediated interactions between color and *Symbiodinium* in *Montipora capitata* in Kāne‘ohe Bay, O‘ahu, Hawai‘i”, which we are submitting for publication in the journal of *Marine Ecology Progress Series*. In this paper, we describe striking depth distributions of both *Symbiodinium* and colony color among 707 colonies of *M. capitata*, a dominant reef-building coral across Kāne’ohe Bay, O’ahu, Hawai’i.

Kāne’ohe Bay has a history disturbance and bleaching events, yet there exists high coral coverage and apparent recovery. Previous studies found symbiont community composition to be an indicator of bleaching susceptibility with clade C-dominated colonies being more susceptible than colonies dominated by stress-tolerant clade D symbionts. Consequently, the spatial distribution of *Symbiodinium* across environmental regimeswas investigated. Colonies of *M. capitata* were more likely to be clade D-dominated in shallow environments and clade C-dominated in deeper environments. Similarly, colonies of *M. capitata* were more likely to be orange in shallow environments and brown in deeper environments. These findings, supplemented with a lack of geographic distributional patterns, provide evidence for niche-partitioning in a single species, suggesting that depth-mediated abiotic conditions drive distributional patterns.

This spatial analysis of symbiont association and color in individual coral colonies across a depth range provides a novel understanding of the community composition of a dominant reef-building coral. We suggest that variance in abiotic conditions, probably relatively to light attenuation, drives the evident distributions and be monitored along depth gradients to supplement geographic monitoring. Therefore, we anticipate great interest among readership. We thank you for your consideration of this manuscript. Please do not hesitate to contact us with questions or concerns.

Sincerely,

Teegan Innis

(On behalf of coauthors Ross Cunning, Raphael Ritson-Williams, Chris Wall and Ruth D. Gates)

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