Australian National University

PhD exit seminar:

Do the locomotion: Waves and swimming in coral reef fishes

Thursday 7 November, 2013 1:45-2:30pm

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Slatyer Seminar Room R.N. Robertson Building, Bldg. 46, Linnaeus Way, ANU

Wave-driven water flow is a major environmental factor limiting the distribution and abundance of marine organisms in shallow aquatic habitats. Distribution patterns of many coral reef fishes have been linked to their swimming performance across wave energy gradients, suggesting that species are limited to specific habitats according to these features. Yet, some widespread species are routinely found across habitats ranging from sheltered lagoonal fringing reefs to the exposed crests of barrier reefs. How are these species able to thrive in such a broad range of wave environments? As part of my PhD research, I am exploring the swimming performance of a variety of species from three common coral reef fish families (Damselfish, Surgeonfish and Wrasses) across natural wave energy gradients. Most members of these three families use their pectoral (arm) fins to move about their habitats. Using a combination of behavioural observations, morphological measurements, respirometry and rearing experiments, I will describe the intraspecific adaptations that allow some species to persist across a diversity of flow environments as well as suggest proximate mechanisms contributing to this variation. Studying natural populations distributed across steep environmental gradients provide excellent opportunities for understanding factors contributing to diversity and the capacity of species to respond to environmental fluctuations.

PUBLIC LECTURE

Presented by

Research School of Biology

ANU College of Medicine, Biology & Environment

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This lecture is free and open to the public

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