Biology Seminar
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Knowing your enemy: predator recognition and risk assessment in diverse coral reef fish communities

Dr. Matthew Mitchell

Department of Biomedical Sciences, WCVM
University of Saskatchewan

Following a period of early development out in the pelagic, juvenile fishes recruit back to coral reefs. At this time, they are subjected to high predation rates from a diverse and abundant community of predators and their removal ultimately contributes to shaping the distribution and abundance of fish communities. If fishes are to survive this predation-induced bottleneck, they must accurately identify potential threats and respond appropriately. However, juvenile fishes appear to have little or no knowledge of who is and who isn't a predator when they recruit to coral reefs and must rapidly acquire information that allows them to recognise predators. In structurally complex environments, such as coral reefs, olfactory cues are thought to play an important role in risk assessment. Here I will present an overview of what olfactory cues are available for risk assessment and how individuals use them learn about their predators. Results suggest that fishes are able to use alarm cues from a range of species to assess risk and employ a range of mechanisms that allows them to rapidly learn about local predators, while minimising the costs associated with misidentifying non-predators.

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Room 125 – Biology Building