



Who, when and where: the importance of context for invasive-native species interactions

**THE CENTER FOR SUSTAINABLE ECOSYSTEM SOLUTIONS
PRESENTS:**

Dr Laura Lopez, UOW, Australia

Date: Monday 30th April

Time: 16:00 – 17:00

Venue: Building 20 Theatre 5 (20.5)

Refreshments will be provided

ABSTRACT

Invasive species can exert significant negative effects on native competitors and prey. Freshwater ecosystems are especially vulnerable to invasion, due to their close association with anthropogenic activity and limited biogeographic connectivity. Understanding the behavioural mechanisms which underlie these predator-prey and competitive interactions is critical when predicting the impacts of biological invasions, yet it is seldom considered. In addition to this, many invasive species have wide geographic distributions, indicating that inter-specific interactions occur under vastly different environmental conditions. Here I present research from my PhD where I used direct and indirect methods to determine whether and how interactions between the invasive eastern mosquito fish and native Australian fish are mediated by environmental variables and individual level traits. I also present work following on from my PhD which examines how individuals cope behaviourally and physiological with multiple stressors under different social conditions. Overall my work emphasises the importance of considering how environmental, individual and group level variables on interactions between invasive and native species.

BIOGRAPHY

Laura Lopez completed her PhD at the University of Wollongong in 2017 studying the context-dependency of invasive -native species interactions. Specifically, she used a combination of laboratory and field studies to identify the behavioural mechanisms underlying competitive and predatory interactions between invasive eastern mosquito fish and native Australian fish. Following this, she became interested in non-linear multiple stressors outcomes and how these may be mediated by animal behaviour. Funded by an Endeavour Research Fellowship, Laura went to UC Davis to study multiple stressor effects using a variety of quantitative and theoretical approaches. She is particularly interested in how predation pressure intersects with other stressors, and later this year will be heading to the University of Michigan to study how predators and parasites affect daphnia. Laura is also passionate about the conservation of Australian freshwater fauna and has been involved in projects at UOW assessing the impact of invasive species on endangered crayfish.



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