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PHASE-SENSITIVE CRITICAL TRANSITIONS IN PREDATOR-PREY SYSTEMS

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Global change is expected to lead to climate changes that include greater intensity and more autocorrelation in environmental noise. Many recent studies have noted that the greater variability associated with global change often has more impact than the change in average behaviour (temperature, precipitation, etc). In this presemtatopm we explore how changes in climate variability could interact with a system that is already oscillating, namely, predator-prey systems. We explore tipping points, likelihood of extinction, and early warning signals for such climatically-forced systems, and the implications for conservation. This is joint work with Jessa Marley (University of Alberta), Sebastian Wieczorek (University College Cork), and Hassan Alkhayuon (University College Cork).

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