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Resman. *The Geometry and Dynamics of an Ecological Arms Race.*

This project examines the geometry and dynamics of a predator-prey arms race by comparing growth modes, environmentally induced responses, and foraging effectiveness of two introduced crab species and defense effectiveness of a snail species along the New England coast. One component of the research concentrates on the dynamical aspects of the predator-prey and competitions systems. The other aspect develops geometric models for the snail shape and explores the influence of shell thickness on overall morphogenesis. The geometric part of the research feeds in the dynamical one by determining the relevant morphogenetic parameters that may influence the population dynamics. (Received September 19, 2010)