

Project name: Environmental impact on competition in ecological communities

Abstract:

We study the effects of environmental feedback on ecological competition by analyzing the classic Lotka-Volterra model coupled with a simple model of the environment. In particular, we look for ways in which feedback between competing populations and the environment stabilizes or destabilizes coexistence between the species. To do so, we use a combination of mathematical analysis and computer software such as Matlab. .

KEYWORDS; mathematical modeling, Lotka-Volterra, ecological competition, environmental feedback.