

Keystone Species and the Regulation of Ecosystems

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Food chains within ecosystems rely on producers for regulation simply because no food for herbivores means no food for carnivores. However, there is another important factor in the regulation of an ecosystem: top predators. Using HHMI BioInteractive's *Modeling Trophic Cascades* activity and *Exploring Trophic Cascades* click and learn, we will examine evidence on how top-down forces, such as predation, shape ecological communities both directly and indirectly. In this workshop, participants will learn how these two activities can be used in conjunction with a case from the National Center for Case Study Teaching in Science titled *The Return of Canis lupus?* Together, these resources provide the opportunity for an in-depth class discussion about keystone species and trophic cascades. Workshop participants will have the opportunity to work with data sets from the case and scientific literature all while learning helpful strategies for presenting these to students.

Keywords: keystone species, trophic cascades, predation, ecological communities, case study

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