



Photo from EcoEdDL: A close-up view of Aloe vryheidensis flowers with dark-colored nectar visible by Steven Johnson, University of KwaZulu-Natal

Special Feature: Interspecies Competition

What's new in EcoEdDL

Performing a Population Viability Analysis from Data Students Collected on a Local Plant

Noah Charney, Hampshire College & Sydne Record, Harvard University, Harvard Forest

This TIEE lab exercise has students using perennial plants to practice many different techniques and data analyzing methods. Students practice collecting data, using matrix models, doing population viability analyses, building transition matrices and running stimulations using R.

Teaching Exponential and Logistic Growth in a Variety of Classroom and Laboratory Settings

Barry Aronhime, Louisiana State University

This activity from TIEE is designed to demonstrate the roles that density-dependent and density-independent factors play on population models. Students get a strong understanding of exponential and logistic growth models by conducting different stimulations representing populations that are either growing, declining, or remaining constant.

Comparisons of Mycorrhizal Properties from Two Host Tree Species

Gregory D. Turner, West Chester University of Pennsylvania

Through a combination of labs and lectures, students study ectomycorrhizal fungal properties in the context of symbiotic relationships (i.e. mutualism, coevolution, host specificity). Field and lab work bring students to look at ectomycorrhizal fungal properties associated with two different tree species, as they gain experience using soil sampling and mycorrhizal field methods

Announcements

2nd Life Discovery – Doing Science Education Conference

Registration is open!

San José State University, October 3-4, 2014

Space is still available for the Education Share Fair Roundtables!

Upcoming Events:

CUR 16th National Conference

June 28- July 1, 2014 |
Washington, DC

American Society of Plant Biologists 18th Annual Meeting

July 12-16, 2014 | Portland, OR

Society for the Study of Evolution- 2014 Annual Meeting

July 20-24, 2014 | Raleigh, NC

Botanical Society of America – 2014 Annual Meeting

July 26-30, 2014 | Boise, ID

Animal Behavior Society – 51st Annual Meeting

August 9-14, 2014 |
Princeton, NJ

Ecological Society of America- 99th Annual Meeting

August 10-15, 2014 |
Sacramento, CA

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Discover innovative approaches to instruction and assessment that are suitable, scalable, and adaptable to secondary and post-secondary levels of education, aligning with the objectives of both the K12 Next Generation Science Standards and the Vision and Change for Undergraduate Biology Education. This event is co-organized by the Life Discovery Partners: ESA, BSA, SSE and SEB.

Call for Proposals for Resources for Ecology Education Fair and Share (REEFS) Special Session at ESA Annual Meeting, Sacramento, CA

Attending the 2014 ESA Annual Meeting? Whether you have a tried and tested lab, field or classroom activity or a brand new teaching idea, we invite you to present your ideas to engage undergraduate students using student-active methods. We will provide information on digital publishing options during the session. [Sign up](#) to share your ecology education resource by **June 27, 2014**. Questions? Contact: Carolyn Thomas, Education Section Chair, cthomas@ferrum.edu.

Just Released by the Botanical Society of America Inquiring about Plants: A Practical Guide to Engaging Science Practices



By Gordon Uno, Marshall Sundberg and Claire Hemingway
20 activities to promote students' critical thinking about concepts in ecology, morphology, anatomy, physiology, genetic variation, evolution and climate change. You will find tips to develop your own inquiry-based activities. *Suitable for high school and college audiences.*

Resources



Special Feature: Interspecies Competition

Effects of Eastern Hemlock on the Establishment of Interspecific Seedlings

By Kathy Winnett-Murray and Greg Murray, Hope College



Observations from faculty at Hope College led to an open investigation as to why there are fewer seedlings and saplings of woody plant species growing under eastern hemlock tree canopies compared to under other tree species. With this exercise students get to practice designing and performing experiments while exploring the concepts of species competition, spatial distribution patterns, and the effects of both allelopathic and non-allelopathic factors.

Photo from EcoEdDL: *Windy Lake in British Columbia* by Daniel Gavin, University of Illinois

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Exploring the Lotka-Volterra Competition Model with Two Species of Parasitoid Wasps

By Robert Matthews, Emory University et al.



Photo from EcoEdDL: A female parasitoid wasp feeds from its host, a beetle larva by David Giron, Centre National de la Recherche Scientifique

Students design an experiment to examine intraspecific and interspecific competition using two species of parasitoid wasps. They examine the effect of both types of competition on reproductive output in the wasps. Students use the data collected to estimate the parameters of the Lotka-Volterra competition model and learn how to use appropriate statistical analyses.

Foraging and Flocking Behavior

Christopher Smith, Kansas State University

This lab exercise will get students to examine eight different questions related to predator-prey interactions and foraging habits of flocks; such as what the advantages of foraging in mixed species flocks are, and what effects habitats have on foraging speed. Students will learn of the effects of environmental



variability on the behaviors and decisions of animals on their daily search of food.

Photo from EcoEdDL: A Red Knot foraging for bivalves in mud exhibits its ability to flex the tips of its upper mandible by Jan van de Kam

Want more interspecies competition resources? [Click here!](#)

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