Jigsaw

Advancing Student-Active Learning in Ecology Education

ECOLOGICAL SOCIETY OF AMERICA esa

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Photo from EcoEdDL: An ant (Crematogaster opuntiae) visits an extrafloral nectary of a fishhook barrel cactus (Ferocactus wislizeni), William Wilson, Duke University.

Happy Holidays!

Wishing everyone a Joyful Holiday Season and a Brilliant 2015!

Undergraduate Biology Education Research: *Investigating and Implementing Evidence-Based Reform*
July 12-17, 2015
Bates College
Lewiston, ME
Apply early.

Special Feature: Pollination

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What's new in EcoEdDL

Resources are free but an account is required. This is to help us understand our users better. Login to EcoEdDL to download the resource.

How do pawpaws affect tree regeneration? (Published by TIEE) *Kathryn M. Flinn, Franklin and Marshall College*
Students investigate whether and how much the native understory shrub pawpaw (Asimina triloba) may affect tree regeneration in a forested habitat. This study introduces students to key components of ecological research including transect and plot sampling, paired designs, statistical analysis and scientific writing.

Agapostemon sweat bee
Image by Griselda Melendez, Texas Tech University; submitted by Patrick Monahan, ESA. Around the world, many farmers rely on a single, managed bee species (often honey bees) to pollinate

EcoEdDL Stewards

their crops. Recent research has shown that promoting a diversity of wild insect pollinators – such as the sweat bee in this photograph – can augment crop yield. This image is connected to an article published in the ESA Frontiers journal, Garibaldi et al, *From research to action: enhancing crop yield through wild pollinators.*

Announcements

Share Your Teaching Resource this Winter!

We invite you to share your teaching resources to one of these peer-reviewed collections.

- Teaching Issues and Experiments in Ecology (TIEE), an online education journal coordinated by ESA's Committee for Education and Diversity. Accepts teaching ideas for labs, and those using figure sets and data sets. All TIEE resources are
- ESA EcoEd Digital Library, a portal of the LifeDiscoveryEd Digital Library. Accepts images, datasets, videos, figures and tables and learning activities. All resources should be accompanied with recommendations for pedagogical use.
- CourseSource New ESA has developed the Ecology Learning Framework to guide the development of teaching material for submissions. Articles in the new journal spans across all the undergraduate biological sciences.

Reports

Exploring Opportunities for STEM Teacher Leadership: Summary of a Convocation (2014), National Academies Press. The convocation focused on empowering K-12 teachers to play greater leadership roles in education policy at all levels.

Resources

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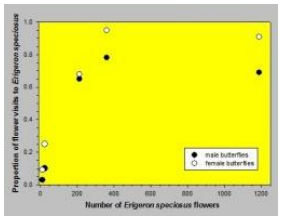
Nora Bynum
Philip Bourne

Investigating the footprint of climate change on phenology and ecological interactions in north-central North America

Kellen M. Calinger, Ohio State University.

This exercise uses large datasets to evaluate long-term temperature change and its impacts on flowering phenology, pollinator emergence and arrival phenology, and emergent trophic mismatches.



Effects of frost on wildflowers

David Inouye, University of Maryland

A graph demonstrating that Speyeria mormonia (Mormon fritillary) butterfly visits are proportionally greater when their food plant, Erigeron (fleabane), produces many flowers. Frost damage reduces the number of available flowers. When flowers are abundant, they produce more nectar and attract more butterflies. In turn, the greater availability of nectar causes the fritillary butterfly to produce more eggs.

Want more Pollination resources? Click here!

Have a Pollination resource to share? Submit here!