

Jigsaw

*Advancing
Student-Active Learning in
Ecology Education*



ECOLOGICAL SOCIETY OF AMERICA
esa

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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

Special Feature: Evolution

Announcements

Calling Graduate Students - Master Plant Science Team

Botanical Society of America, in partnership with ESA, is looking for a cohort of five (5) graduate students from ESA to join the PlantingScience.org Master Plant Science Team as online scientist mentors. Mentors must make a one year commitment (~2 hours per week when sessions are active). Selected MPST members will be rewarded with a free ESA student membership and 50% off the ESA 2014 Annual Meeting registration. Applications are due **August 29, 2014**. Please forward this information to your graduate students. Visit PlantingScience.org for more information and to apply.

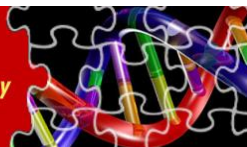
Syllabi, Lesson Plans, Images, Datasets

You have them. We want them! As you get ready for fall, please consider sharing your ideas and resources with your colleagues! ESA's EcoEd Digital Library wants them! Simply create an account, fill in the description of your resource and upload your file! And then add the published resource to your list of publications.
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LIFE DISCOVERY - DOING SCIENCE

Realizing Vision & Change, Preparing for Next Generation Biology

OCTOBER 3-4, 2014 - SAN JOSÉ STATE UNIVERSITY, SAN JOSÉ, CA



The Life Discovery- Doing Science Education Conference

With more than 60 sessions and workshops, bring innovation to your classroom and bridge the education gap between high school and college biology to implement **K12 Next Generation Science Standards** and **Vision and Change in Undergraduate Biology Education**. Registration Early Bird Deadline: **August 25, 2014**.

Upcoming Events:

**Life Discovery – Doing Science
Education Conference**

October 3-4, 2014 |
San José, CA

ESA 100th Annual Meeting

August 9-14, 2015 |
Baltimore, MD
Proposal deadline for Symposia,
Organized Sessions
September 25, 2014.

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NEW! Special Pre-Conference Workshop

Teaching about Topics in Bioinformatics Workshop- provides hands-on experience with the tools used to explore biodiversity using DNA sequence data. Thur. Oct. 2nd from 1:00-5:00pm. \$35 cost. Join us in San José from October 2-4, 2014!

Learning Resources

Educational Video Series from the American Geophysical Union (AGU)

AGU has a video series for K-12 educators entitled Live Education Activity Resource Network (LEARN) with AGU. This series of short Earth and space science-related videos gives you the tools you need to try new hands-on activities with your students, complete with teacher guides and other resources. Topics include climate change, the polar environment, astrobiology, earthquakes, oceanography, and more. The thirteen videos currently on the site were recorded at the [Geophysical Information For Teachers \(GIFT\)](#) workshop and other AGU events. You can also [submit your own](#) videos to the LEARN collection.

EcoEdDL Resources



Special Feature: Evolutionary Adaptation

Investigating the Evolutionary Adaptations that have Enabled Plants to Survive in a Diversity of Habitats

By Allison Rober, Michigan State University In a greenhouse facility, students investigate the evolutionary adaptations explore the biotic and abiotic constraints organisms must overcome to survive in desert and rainforest ecosystems; and compare evolutionary features that have allowed populations of organisms to overcome environmental challenges.

Rapid Adaptation of Bean Beetles to a Novel Host

Christopher W. Beck, Emory University; Lawrence S. Blumer, Morehouse College



Students are provided with live cultures of beetles containing adults that have been raised on mung beans for many generations; they're also given cultures that were originally grown on mung beans, but then switched to another bean species. Students design and conduct an experiment to determine whether beetles have adapted to the new host.

*Photo from EcoEdDL: A red milkweed beetle (*Tetraopes tetraophthalmus*) foraging on common milkweed (*Asclepias syriaca*) by Anurag Agrawal, Cornell University.*

Tracy Estelus, Education Intern

Education Resource Partners



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Yellow-rumped Warbler (*Setophaga coronata coronata*)

David Krauss, Borough of Manhattan Community College

The yellow-rumped warbler's special adaptation allows this species to eat bayberries to avoid competition among other warbler species.

Want more evolutionary adaptation resources? [Click here!](#)

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