

# Jigsaw

Advancing  
Student-Active Learning in  
Ecology Education



ECOLOGICAL SOCIETY OF AMERICA

esa

Published by the ESA Office of Education and Diversity Programs

November 2013

Vol. 3 Issue 8

*Photo Credit from EcoEdDL: An Iberian lynx ([Lynx pardinus](#)), one of the world's most endangered cat species by Antonia Sabater.*

## Special Feature: Conservation

### What's new in EcoEdDL

#### Geographic Gradients in Community Patterns of Forest Trees

By Tom A. Langen

This exercise, provides a guided inquiry approach to understanding continental scale patterns of species richness and patterns of relative abundance within community species assemblages. Students are introduced to the concept of latitudinal gradients in species richness. They are also introduced to the concept of evenness of relative abundances within a community assemblage, and how empirically it is often true that species rich communities have more even relative abundances of the constituent species.

*An LDDL Digital Resource Discovery Science Pipes Learning Activity.*

### Announcements

#### 2nd Annual Life Discovery – Doing Science Conference: Call for Proposals

The 2014 *Life Discovery – Doing Science* Conference will be held in San José, California on October 3-4, 2014. This year's theme is "Realizing Vision and Change, Preparing for Next Generation Biology". Proposals for Hands-on Workshops are currently being accepted through **January 15, 2014**. Calls for other session formats will be announced over the next months. To submit, or for more information, please visit <http://www.esa.org/ldc/2014-ldc-conference/program/>.

#### Share your Teaching Ideas at ESA next summer!

You are invited to share your favorite teaching ideas at the ESA Annual Meeting next year! Please submit teaching your activity to EcoEdDL by **January 31, 2014** to be

### Upcoming Events

**NSF New Program:  
Improving Undergraduate  
STEM Education Program  
Webinars**

Select from a series  
December 3 -12.

**2014 National Conference  
on Undergraduate Research  
(NCUR) Abstract Submission  
Deadline**

December 6, 2013

**Science Case Network  
Scholarship of Teaching and  
Learning (SOTL)**

December 15, 2013

**AAC&U Scientific Thinking  
and Integrative Reasoning  
Skills (STIRS) Scholars**

January 6, 2014

**Biology Scholars Program  
Scholarship of Teaching and  
Learning (SOTL)**

February 1, 2014

### EcoEdDL Stewards

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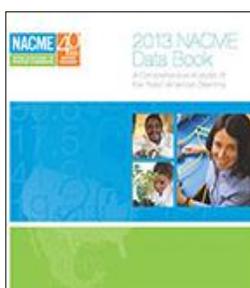
featured in workshops at the ESA annual meeting next summer! We are especially interested in resources related to [Vision and Change concepts and competencies](#). Questions? Contact [EcoEdDL@esa.org](mailto:EcoEdDL@esa.org)

## Happy Holidays

Wishing all readers a safe and Happy Holiday season. Jigsaw will pause in December for the holidays and return in the New Year!

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## Reports



### 2013 NACME Data Book

(National Action Council for Minorities in Engineering, 2013)

The 2013 NACME Data Book is the most authoritative source on the state of underrepresented minority group participation in engineering education and careers.



### What Learning Progressions tell us about students' ability to participate in the global climate change and biofuels debates

(Joyce Parker, Elizabeth Xeng de los Santos, and Charles W. Anderson, 2013)

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## Resources



### *Special Feature: Conservation*

### NCEP Exercise – Exploring Amphibian Diversity and Strategies for its Conservation

By J. R. Mendelson, and R. Donnelly

In order to familiarize students with amphibian diversity, decline, and conservation, this exercise focuses on the role amphibians play in conservation. Topics examined range from whether amphibians are

Nora Bynum  
Philip Bourne

#### Digital Resource Discovery (DRD) Partners

Botanical Society of America  
Society for the Study of Evolution  
Society for Economic Botany  
Science Pipes, Cornell University

#### Committee on Diversity and Education (CDE)

#### ESA Education & Diversity programs staff

Teresa Mourad, Director of Education and Diversity Programs  
Fred Abbott, Diversity Programs Coordinator  
Keegan McCrady, Education Intern

#### Education Resource Partners



actually in crisis to using amphibians as conservation indicator species. These topics are supplemented with a series of exercises to help students explore each topic in more depth.

## Exploring The Population Dynamics of Wintering Bald Eagles Through Long-term Data

By Scott Robinson, Julie Beckstead, and Alexandra N. Lagasse

This data set explores the population dynamics of wintering bald eagles. This exercise allows students to examine questions about the influences bald eagle populations and migrations while providing students with valuable data manipulation experience.



## A Bearded Vulture (*Gypaetus barbatus*), a Threatened Species

By Antoni Margalida

## Taking GIS into the Wild: Teaching GIS to Practicing International Conservation Biologists

By Karen B. Willett, Eric W. Sanderson

This article is a guide for imbedding GPS/GIS in an existing ecology course, or for developing separate training vehicles. Topics include World Conservation Society basic training in GIS, challenges of teaching conservation GIS to international conservationists, and measures of success.

## For more resources related to Conservation in EcoEd Digital Library, click here

The EcoEd Digital Library currently has a number of resources that focus on climate change. This includes:

- [5 assignment/non-lab activities](#)
- [2 dataset exercises](#)
- [6 graphs or charts](#)
- [36 photographs](#)
- [16 teaching strategies and reports](#)



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If you have any questions, e-mail [ecoeddl@esa.org](mailto:ecoeddl@esa.org)