

## I. Greetings from the EREN Coordinator's Office

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Dear EREN Members,

I hope everyone's academic year is off to a great start. This has been an exciting year for me as I integrate EREN projects into my upper level plant ecology and my lower level introductory biology classes. The students have been excited about being part of a network of ecologists doing research with a common purpose and tolerant of the technical glitches in the pilot phase of our work.

This newsletter illustrates that our members are actively engaged in our pilot projects and that members are using the EREN platform to create new projects that fit their unique vision of collaborative, continental scale research. This is what EREN is all about. I look forward to our continued work together as we explore, refine, and perfect this model of ecological scholarship and teaching.

Laurie Anderson, EREN Coordinator

## II. Future EREN Events

**EREN Founders Meeting – November 2-3, 2012, St. Olaf's College, MN:** The EREN Founders will meet to discuss EREN curriculum development, future funding, and the next EREN All Members event. Please send items for the agenda to [erenteam@gmail.com](mailto:erenteam@gmail.com).

**EREN All Members Meeting – Summer 2013:** We had a very positive response to the 2012 All Members Meeting and lots of support for a similar event in the future. We are starting to plan the next event, tentatively set for sometime in June 2013. Send ideas for venues, activities, and speakers to [erenteam@gmail.com](mailto:erenteam@gmail.com).

### III. Report on the ESA Meeting

Once again, EREN had an active presence at the Ecological Society of America Annual Meeting in Portland, OR in August 2012. To summarize:

- Preliminary data from three EREN pilot projects were presented in posters and we shared poster titles of EREN members through our e-mail list.
- We held an informal networking lunch for current and new EREN members that was attended by about 40 people and stimulated lots of interesting conversations.
- EREN was represented in a panel discussion on diverse approaches to global-scale, interdisciplinary ecological research as part of a Special Session.
- EREN had an information table at the ESA Diversity Celebration.

EREN will continue to use the Ecological Society of America Annual Meetings as a networking venue for our group. Let us know if you have an idea for an EREN event at a future ESA meeting!

### IV. Pilot Project Updates

EREN currently has four ongoing pilot projects and one new member project. The current members of each project and their respective institutions are listed below. We are now in the process of constructing Google maps for each study to show the geographical locations of the participating institutions and highlight their ability to answer ecological questions along environmental gradients. Please contact the Lead Scientist(s) if you wish to join a project, or visit [www.erenweb.org](http://www.erenweb.org) and click on the "Research" tab for more details.

## a. Permanent Forest Plot Project

Lead Scientists: Karen Kuers, [kkuers@sewanee.edu](mailto:kkuers@sewanee.edu),  
Sewanee: University of the South, TN, and Erin Lindquist,  
[erinlind@meredith.edu](mailto:erinlind@meredith.edu), Meredith College, NC.

The goal of this project is to establish a set of permanent research plots at colleges and universities throughout the United States that will allow faculty and students to address questions related to tree biomass, carbon accumulation, invasive species, and disturbance across a range of sites and ecoregions. There are currently 42 members from 36 different institutions participating in this project.

Kudos to Ben Dolan and Jason Kilgore for arranging field trips in which students from the University of Findlay and Washington and Jefferson College collected data in each other's permanent plots!

Laurie Anderson	Ohio Wesleyan University
Aaron Berdanier	Duke University
Larry Blumer	Morehouse College
Richard Boyce	Northern Kentucky University
Cathy Collins	Colby College
Ben Dolan	The University of Findlay
Jerald Dosch	Macalester College
Marion Dresner	Portland State University
Richard Durtsche	Northern Kentucky University
Bohdan Dziadyk	Augustana College
Denny Fernandez del Viso	University of Puerto Rico at Humacao
Kristine Hopfensperger	Northern Kentucky University
Christopher Ivey	California State University, Chico
Linda Johnson	Chatham University
Eric Keeling	SUNY New Paltz
Jason Kilgore	Washington and Jefferson College
Karen Kuers	Sewanee: The University of the South
Mark Lassiter	Montreat College
Jessica LeRoy	Chatham University
Erin Lindquist	Meredith College
Kathleen LoGiudice	Union College
Kelly Lyons	Trinity University
Jose-Luis Machado	Swarthmore College
Sean Menke	Lake Forest College
Timothy Menzel	Piedmont College
Lynn Moseley	Guilford College

Greg Murray	Hope College
Josh Ness	Skidmore
Fernando Nieto-Fernandez	SUNY College, Old Westbury
Kristen Page	Wheaton College
Bob Pohlad	Ferrum College
Vikki Rodgers	Babson College
Kim Sadler	Middle Tennessee State University
Kathleen Shea	St. Olaf College
Jeffery Simmons	Mount St. Mary's University
Rose Smiechowski	Chatham University
Judy Stone	Colby College
Liette Vasseur	Brock University
Gordon Wells	Ohio Valley University
James Whitacre	Chatham University
Amity Wilczek	Deep Springs College
Craig Zimmerman	Rogers State University

## **b. TURTLEPOP: Population Structure of Freshwater Turtles along an Urbanization Gradient**

*Lead Scientist: David R. Bowne, [bowned@etown.edu](mailto:bowned@etown.edu), Elizabethown College, PA.*

The TurtlePop project utilizes EREN members to conduct turtle sampling in lentic habitats on or near campuses in order to determine the population structure of turtles across an urbanization gradient. The TurtlePop Project now includes 34 participants from 31 institutions.

Laurie Anderson	Ohio Wesleyan University
Chris Bloch	Bridgewater State University
David Bowne	Elizabethtown College
Randy Chambers	College of William and Mary
Sandra Cooke	High Point University
April Ann Torres Conkey	Texas A&M Kingsville
Patrick Cumrine	Rowan University
Jerald Dosch	Macalaster College
Dan Drunckenbrod	Rider College
Richard Durtsche	Northern Kentucky University
Greg Eaton	Lynchburg College
Fernando E. Nieto-Fernandez	SUNY College at Old Westbury
Danielle Garneau	SUNY Plattsburgh
Kristen S. Genet	Anoka Ramsey Community College

Chris Ivey	California State University Chico
Peter Kish	Moravian Academy
Mary Beth Kolozsvary	Siena College
Frank Kuserk	Moravian College
Erin Lindquist	Meredith College
Jamie March	Washington & Jefferson College
Timothy Muir	Augustana College
Carol Mankiewicz	Augustana College
Tim McCay	Colgate University
Todd Fredericksen	Ferrum College
Lynn Moseley	Guilford College
Greg Murray	Hope College
Chris Olsen	SUNY College at Old Westbury
Alysa Remsburg	Unity College
Kathleen Shea	St. Olaf College
Jeffery Simmons	Mount St. Mary's University
Peter Smallwood	University of Richmond
Kathy Winnett-Murray	Hope College
Rebecca Urban	Lebanon Valley College
Craig Zimmermann	Rogers State University

### c. Aquatic and Terrestrial Leaf Decomposition

*Lead Scientists: Carolyn L. Thomas, [cthomas@ferrum.edu](mailto:cthomas@ferrum.edu), Ferrum College, VA, and Tracy Gartner, [tgartner@carthage.edu](mailto:tgartner@carthage.edu), Carthage College, WI.*

This project will evaluate leaf decomposition rates in paired terrestrial and aquatic systems and compare native and invasive plant species decomposition rates in different climatic conditions and geographic locations. There are currently 31 members from 28 different institutions involved in this project.

Laura Altfeld	Wilson College
Laurie Anderson	Ohio Wesleyan University
Kevin Barry	West Virginia State University
Kim Bjorgo-Thorne	West Virginia Wesleyan College
Larry Blumer	Morehouse College
Richard Boyce	Northern Kentucky University
Jerald Dosch	Macalester College
Greg Eaton	Lynchburg College
Tracy Gartner	Carthage College
Kevin Geedey	Augustana College
Sharon Gillies	University of the Fraser Valley
Matthew Heard	Winthrop University

Suzanne Hoepfner	Babson College
Dan Hornbach	Macalester College
Alida Janmaat	University of the Fraser Valley
Eric Keeling	Bard College
Kelly Lyons	Trinity University
Jose-Luis Machado	Swarthmore College
Carol Mankiewicz	Beloit College
Andrew McCall	Denison University
Tim McCay	Colgate University
Greg Murray	Hope College
Fernando Nieto-Fernandez	SUNY College at Old Westbury
Bob Pohlad	Ferrum College
Rachel Schultz	SUNY Plattsburgh
Kathy Shea	St. Olaf College
Carolyn Thomas	Ferrum College
Rebecca Trueman	Concordia University Chicago
Becky Urban	Labanon Valley College
Amity Wilczek	Deep Springs College
Craig Zimmerman	Rogers State University

#### d. Stream Temperature Project

*Lead Scientist: Jeffery Simmons, [simmons@msmary.edu](mailto:simmons@msmary.edu), Mount St. Mary's University, MD.*

The primary objective of this project is to quantify the extent and nature of change in stream temperature regime caused by the presence of vegetated riparian zones (with respect to streams with no riparian vegetation). There are 16 members from 13 institutions.

Michelle Anderson	University of Montana Western
Panvini Darlene	Belmont University
Bill Dress	Robert Morris University
Jennifer Frick-Ruppert	Brevard College
Catie Hanna	Robert Morris University
Dan Hornbach	Macalester College
Alida Janmaat	University of the Fraser Valley
Frank Kuserk	Moravian College
Jamie March	Washington and Jefferson College
Tom Murray	Elizabethtown College
John Niedzwiecki	Belmont University
Bob Pohlad	Ferrum College
Jeffery Simmons	Mount St. Mary's University
Carolyn Thomas	Ferrum College
Liette Vasseur	Brock University
Craig Zimmerman	Rogers State University

## e. New Member Project: Distribution of North American Earthworms

Lead Scientist: *Tim McCay*, [tmccay@colgate.edu](mailto:tmccay@colgate.edu), Colgate University, NY.

The newest of the EREN member projects is now up and running for the sampling of earthworms and environmental variables potentially important to determining their presence, abundance, and diversity. There are currently 16 members from 15 institutions.

Laurie Anderson	Ohio Wesleyan University
Kim Bjorgo-Thorne	West Virginia Wesleyan College
Christopher Bloch	Bridgewater State University
Rachel Collins	Roanoke College
Benjamin Dolan	The University of Findlay
Amy Downing	Ohio Wesleyan University
Kristine Hopfensperger	Northern Kentucky University
Sarah Johnson	Northland College
Kathleen LoGiudice	Union College
José-Luis Machado	Swarthmore College
Carol Mankiewicz	Beloit College
Jamie March	Washington & Jefferson College
Kathleen Shea	St. Olaf College
Jeffery Simmons	Mount St. Mary's University
Glen Stevens	Ferrum College
Craig Zimmerman	Rogers State University



## V. Featured EREN Member: Tim McCay

*Tim McCay is lead scientist on the recently proposed EREN project titled Distribution of North American Earthworms. Tim is associate professor of Biology and Environmental Studies at Colgate University in Hamilton, New York, where he has been teaching since 2000. He just completed a three-year term as director of the Environmental Studies Program at Colgate.*

Tim's research focuses at the forest floor and how it is affected by forest management, pollution, and invasive species. He is completing a 5-year interdisciplinary project to better understand the effect of acid deposition and mitigative liming on the animal community of the soil and litter in Adirondack forests. Among the animals strongly affected by acid deposition and liming are earthworms, and this has led Tim into more detailed work on that group. Prior to the work on acid rain, Tim worked on invasion by European buckthorn in Central New York and the effect of dead-wood removal on animals in southeastern forests. He is particularly fond of the shrews and studies their ecology whenever possible.

Tim teaches *Conservation Biology, Vertebrate Zoology, Biostatistics, and Evolution, Ecology, and Diversity* at Colgate. There is an emphasis on undergraduate research at Colgate, which has no graduate program in the sciences, and Tim has enjoyed opportunities to work, present, and publish with Colgate students.

Tim graduated from the University of Florida with a degree in Wildlife Ecology and from Penn State with an M.S. in Wildlife and Fisheries Science. He obtained a Ph.D. in Ecology from the Institute of Ecology at the University of Georgia and an M.S. in statistics while serving as a post-doctoral research scientist the year after graduation. While at Georgia, Tim was housed at the Georgia Museum of Natural history under the direction of the late Joshua Laerm.



## VI. Ecologist's Toolbox

We would like to thank EREN Member Timothy Menzel for this submission to the Ecologist's Toolbox. Dr. Menzel is an assistant professor of biology and environmental science at Piedmont College.

### The Hypotenuser

When delineating a square sample plot, protocols typically call for beginning measurement at one corner and proceeding to mark of each corner successively from that starting location. An example of this is in the protocol for EREN's permanent forest plot project. There are several problems with methods such as this.

- 1) They require more than one person to be done accurately
- 2) The most significant position within a survey plot is the center, which is the single set of coordinates that best describes the plot's location. The center is therefore a better starting point and the location to which all other points should be related.
- 3) Any error in measurement is compounded as successive corners are marked.

I was conducting a research project where I needed to set up plots along transects deep within a national forest, often by myself. I needed a way to delineate plots that did not require a second person and required minimal equipment. I used a walking stick with a pointy tip and a string affixed which was the length of the hypotenuse of my plot divided by two. For a twenty meter square this string would be 14.14 meters. The stick (or "hypotenuser") is jabbed into the ground at the center of the plot. The first corner is sighted using a compass and the researcher walks in that direction (315 degrees for the north-west corner) to the end of the string and plants a flag. The researcher then returns to the center and repeats the walk in the northeast (45 degrees), southeast (135 degrees) and southwest (225 degrees) directions, creating a square with four sides facing in the four cardinal directions. This method can be done solo, requires only a walking stick, string and compass, and each measurement from the center is independent so error is not compounded.