I. Greetings from the EREN Coordinator’s Office

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.

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.
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 and click on the “Research” tab for more details.
a. Permanent Forest Plot Project

**Lead Scientists:** Karen Kuers, kkuers@sewanee.edu, Sewanee: University of the South, TN, and Erin Lindquist, 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
b. TURTLEPOP: Population Structure of Freshwater Turtles along an Urbanization Gradient

Lead Scientist: David R. Bowne, bowned@etown.edu, Elizabethtown 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
c. Aquatic and Terrestrial Leaf Decomposition

Lead Scientists: Carolyn L. Thomas, cthomas@ferrum.edu, Ferrum College, VA, and Tracy Gartner, 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
d. Stream Temperature Project

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

Lead Scientist: Tim McCay, tmccay@colgate.edu, Colgate University, NY.
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.