

BRIDGING THE GAP:
CONNECTING ECOLOGICAL RESEARCH AND RESTORATION PRACTICE

Ecological Society of America and Society for Ecological Restoration
Mid-Atlantic Chapters

The College of New Jersey, March 13-14, 2009

Meeting Program

– *Meeting at a Glance* –

Morning activities

8:00 – 8:45	Registration and Continental Breakfast Poster Set-Up	Music lobby BIO 1 st floor
8:45	Welcome (J. Morrison / C. Bresnahan / D. Burton)	Music Concert Hall
8:55	<u>Opening Plenary Presentations</u> (S. Handel / C. Franklin / P. Groffman / F. Rutkosky)	Music Concert Hall
10:35	<i>Walk to Biology Building and Science Complex / Coffee Break</i>	BIO & SCP lobbies
10:35	Exhibits and scientific posters on display until 6:30 pm	BIO 1 st floor
10:55	<u>Concurrent Sessions I:</u> Invited Speakers – Forest Systems Contributed Papers – Urban Ecology Contributed Papers – Ecological Restoration of Rivers & Estuaries Contributed Papers – Wetland Ecology and Restoration	SCP-101 SCP-117 BIO-208 BIO-209

Mid-day activities

12:15	Lunch pick-up ESA Mid-Atlantic Chapter Business Meeting SER Mid-Atlantic Chapter Annual Meeting Student Career Roundtable	SCP & BIO BIO-209 SCP-101 BIO-208
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Afternoon activities

1:30	<u>Concurrent Sessions II:</u> Invited Speakers – Freshwater Ecosystems Contributed Papers – Ecological Restoration of Terrestrial Ecosystems Contributed Papers – Animal/Disturbance Ecology Contributed Papers – Species Interactions	SCP-101 SCP-117 BIO-208 BIO-209
2:50	<i>Coffee Break</i>	BIO & SCP
3:05	<u>Concurrent Sessions III:</u> Invited Speakers – Estuarine Ecosystems Contributed Papers – Conservation Management Contributed Papers – Stream Ecology	SCP-101 SCP-117 BIO-208
4:15	<i>Walk to Music Building</i>	
4:25	<u>Closing Plenary Panel Discussion</u>	Music Concert Hall
5:00	<i>Walk to Biology Building</i>	
5:10	<u>Poster Pub</u>	BIO 1 st floor
6:30	<i>Walk to Brower Student Center</i>	

Evening activities

6:45	Dinner at Brower Student Center	BSC 202
7:20	After Dinner Speaker (R. Kuhns)	
8:15	Goodnight	

Saturday Field Trips

Detailed Session Program – Friday, March 13

- 8:00 – 8:45** **Registration, Continental Breakfast**
Poster Set-Up **Music Lobby**
BIO 1st floor
- 8:45** **WELCOMING REMARKS** **Music Concert Hall**
Janet Morrison, Chair, ESA Mid-Atlantic Chapter
Carol Bresnahan, Provost, The College of New Jersey
Dennis Burton, Board President, SER Mid-Atlantic Chapter
- 8:55** **OPENING PLENARY SESSION: BRIDGING THE GAP** **Music Concert Hall**
- A New Sustainable Landscape: Duke Farms Opens the Gates**
Steven Handel, Rutgers University
Carol Franklin, ASLA, Andropogon Associates
- The Bio-Geo-Socio-Chemistry of Urban Stream Restoration**
Peter Groffman, Cary Institute of Ecosystem Studies
- Build It and They Will Come**
Flavia Rutkosky, U.S. Fish & Wildlife Service
- 10:35** **Exhibits and scientific posters on display till 6:30 PM** **BIO 1st floor**
- 10:35** **Walk to Biology Building and Science Complex / Coffee Break** **BIO 2nd floor,**
SCP lobby
- 10:55–12:15** **CONCURRENT SESSION ONE :**
- 1A. Bridging the Gap: Forest Systems** **SCP-101**
- 10:55 **Atlantic white-cedar restoration and related issues**
George Zimmermann, Richard Stockton College
- 11:15 **Natural disturbance and stand development principles for ecological forest management - for use in forest restoration and regeneration as well as sustaining natural forest systems over time**
Bob Williams, Land Dimensions Engineering
- 11:35 **Ecological forestry in long unburned dwarf pine plains to restore historically open community structure and conserve broom crowberry**
Andy Windisch, New Jersey Office of Natural Lands Management
- 11:55 **Rare species inventory and management, and ecological restoration at the Franklin Parker Preserve in the New Jersey Pine Barrens**
Emile DeVito, New Jersey Conservation Foundation
- 1B. Contributed Papers : Urban Ecology** **SCP-117**
- 10:55 **Earthworms in the urban environment: Can population augmentation help improve urban forest performance?** *Danielle Gift* and P. Eric Wiseman*
- 11:15 **Using cross-system comparisons as an approach to study urban effects on soils: A case study of three urban metropolitan areas.** *Richard Pouyat*, Ian Yesilonis, Katalin Szlavecz, Csaba Csuzdi, Elizabeth Hornung, Zoltan Korsos, Jonathan Russell-Anelli, and Vincent Giorgio*

- 11:35 Pollinator composition on native and non-native plants in an urban brownfield (Liberty State Park, NJ). *Sarah Kornbluth* and Claus Holzapfel*
- 11:55 Enhancing rain garden design to promote nitrate removal: Testing a media carbon amendment. *Emilie K. Stander*, Michael Borst, Thomas P. O'Connor, and Amy A. Rowe*

1C. Contributed Papers : Ecological Restoration of Rivers & Estuaries BIO-208

- 10:55 Development of success criteria for evaluating submerged aquatic vegetation in the habitat restoration program for the Hudson River PCBs Site. *David Glaser*, John W. Kern, Ryan Davis, Marc S. Greenberg, Alison A. Hess, Martha Gardner, Helen Chernoff, and Adam Ayers*
- 11:15 A science-based regional restoration initiative in the Delaware estuary. *Danielle Kreeger and Laura Whalen**
- 11:35 Increasing fish utilization by enhancing ecosystem complexity via the integration of subtidal & intertidal habitat components in an urban estuary. *Paul A. Cooper*, Michael Rehman*, and Mark Gallagher*
- 11:55 Decision framework for restoration of riverine habitat following remediation. *Ryan Davis* and Adam Ayers*

1D. Contributed Papers : Wetland Ecology and Restoration BIO-209

- 10:55 Paleoecological evidence for herbaceous wetland communities and their dynamics in the Delaware River floodplain. *Emily W.B. (Russell) Southgate*
- 11:15 The establishment of a flood prone wetland system on the South Branch of the Raritan River. *Mark Gallagher, Michael Rehman, and Geoff Goll*
- 11:35 A Tier III, EFH approach to evaluating the functional ecology of *Phragmites*-dominated marshes. *Michael P. Weinstein**

12:15 – 1:30 LUNCH, BUSINESS MEETINGS, STUDENT CAREER ROUNDTABLE

Pick up boxed lunch	BIO 2nd floor, SCP Lobby
ESA Business Meeting	BIO-209
SER Business Meeting	SCP-101
Student Career Roundtable	BIO-208

1:30 – 2:50 CONCURRENT SESSION TWO :

2A. Bridging the Gap : Freshwater Ecosystems

SCP-101

1:30 Is the riparian forest restoration successful? A university and nature center partnership of research for management decisions

*Fran Lawn, Schuylkill Center for Environmental Education
Anne Bower, Philadelphia University*

2:10 Integrating stream and wetland restoration as a means to provide multiple ecosystem benefits

Joe Berg, Biohabitats, Inc.

2:30 Regenerative Stormwater Conveyance (RSC) as an integrated approach to sustainable stormwater planning on linear projects

Keith Underwood, Underwood & Associates

2B. Contributed Papers : Ecological Restoration of Terrestrial Ecosystems SCP-117

1:30 Evaluating and restoring grassland resources for the regal fritillary butterfly (*Speyeria idalia* Drury).

V. Tilden, M. Swartz, J. Hovis, D. McNaughton, and N. Hoffman*

1:50 Lehigh Gap restoration project: Revegetating a Superfund site with native grasses.

Dan Kunkle, Diane W. Husic, and John Dickerson*

2:10 Stand thinning and the reintroduction of a diverse assemblage of native tree species in a young secondary forest in the Peruvian Amazon. *Eric Weiner**

2:30 2009: The critical year for addressing global warming by reducing tropical deforestation. *Douglas H. Boucher**

2C. Contributed Papers : Animal/Disturbance Ecology

BIO-208

1:30 The impact of commercial logging operations on Timber Rattlesnakes (*Crotalus horridus*). *Howard K. Reinert**

1:50 Relaxation rate: A consistent metric for linking habitat fragmentation to extinction threat. *Jessica Schnell and Gareth J. Russell*

2:10 The effects of tail loss on escape behavior in *Sceloporus jarrovii*: Aerial righting and vertical run-speed. *Christopher Agard*, Michael J. Cericola, and George Middendorf*

2:30 Claw Morphology in *Sceloporus* spp. *William Webb, Christopher R. Agard, and George Middendorf*

2D. Contributed Papers : Species Interactions

BIO-209

1:30 Deceptive chemical signals induced by a plant virus attract insect vectors to inferior hosts. *Kerry E. Mauck*, Mark C. Mescher, and Consuelo De Morales*

1:50 Maintenance of Eastern hemlock forests: Pre-infestation silvicultural treatments to reduce vulnerability to hemlock woolly adelgid. *Mary Ann Fajvan**

- 2:10 Community evolution: Individual responses to neighborhood change.
Mark June-Wells and Claus Holzapfel*
- 2:30 Windstorms, white-tailed deer, exotic plants, and bigger trees: the perfect invasion.
John L. Snitzer, Kai L.A. Caraher, and Douglas H. Boucher*

2:50 – 3:05 Coffee Break **BIO 2nd floor, SCP Lobby**

3:05 – 4:15 CONCURRENT SESSION THREE :

3A. Bridging the Gap : Estuarine Ecosystems **SCP-101**

- 3:05 **The role of monitoring in shellfish restoration - a case study of a hard clam (*Mercenaria mercenaria*) restoration effort in Long Island, New York**
Mike Doall, Functional Ecology Lab, Stony Brook University
- 3:25 **Attempts to bring the Great South Bay hard clam population back from the brink – lessons learned from four years of restoration**
Carl Lobue, Marine Resources, The Nature Conservancy, LI
- 3:45 **Large scale wetland restoration in the Delaware Estuary – integrating science and practice**
Ken Strait, PSE&G Estuary Enhancement Program
- 4:00 **Large scale wetland restoration in the Delaware Estuary – biological monitoring to support adaptive management**
Ray Hinkle, USR Corp.

3B. Contributed Papers : Conservation Management **SCP-117**

- 3:05 What are the milestones in recovery of forest communities after deer control is implemented? *Eugene R. Meyer**
- 3:25 A GIS model of wildlife habitat at scales appropriate for land use planners.
John B. Davis and George Robinson*
- 3:45 Early detection, rapid response at work in Maryland forests: A case study of wavyleaf basketgrass. *Kerrie L. Kyde*, Betty H. Marose, and Lane Heimer*

3C. Contributed Papers : Stream Ecology **BIO-208**

- 3:05 Silk filaments facilitate larval dispersal through freshwater stream pools.
Jonathan Fingerhut, Lindsay Schamel, Anthony Faugno, Michele Mestrinaro, and Piotr Haldas.*
- 3:25 Urban stream continuums and gutter subsidies: the effects of upland riparian zones and engineered “urban karst” on organic matter and lotic ecology. *Kenneth Belt*, Suha Kaushal, Christopher Swan, William Stack, Richard Pouyat, and Peter Groffman*
- 3:45 Distribution of Rusty Crayfish (*Orconectes rusticus*) in the Monocacy River, MD, in relation to water quality variables. *Jeffrey A. Simmons* and Jay Kilian*

4:15 Walk to Music Building for plenary session

4:25 – 5:00 CLOSING PLENARY PANEL : BRIDGING THE GAP Music Concert Hall
Janet Morrison, Department of Biology, The College of New Jersey (ESA)
Michael Leff, Pennsylvania Horticultural Society (SER)
and speakers from the day

5:00 Walk back to Biology Building

5:10 – 6:30 POSTER PUB BIO Lobby, BIO 1st floor corridors

Numbered Posters 1- 34 :

Animal Ecology -- South Corridor

1. Translocation negatively impacts the genetic structure of populations of the Timber Rattlesnake, *Crotalus horridus*. *Sisi Gao, Howard K. Reinert, and Laretta M. Bushar**
2. Differences in the acclimation response of Gray Treefrogs (*Hyla versicolor*) from northern and southern populations. *Isabell Chang* and Howard K. Reinert*
3. Behavioral responses of a dietary specialist, *Regina septem-vittata*, to potential chemoattractants released by its prey. *Sara L. Jackrel and Howard K. Reinert**
4. Comparative thermal ecology of sympatric pond turtles and water snakes. *Crystal Wall* and Howard K. Reinert*
5. Tree selection by foraging, male red-eyed vireos (*Vireo olivaceus*) in a New Jersey Highlands forest. *Melanie Klein* and Eric Wiener*
6. Avian diversity and Wood Thrush habitat quality in small riparian forests of Delaware's Coastal Plain. *Roger Masse* and Kevina Vulinec*
7. Mystery of the blue dot: Is it a sexually selected trait in *Uca pugnax*? *Mollie E. Barnard, Ariana R. Strandburg-Peshkin*, Ian R. Yarett*, Rachel A. Merz*
8. Utility of fluctuating asymmetry in caddisflies (Trichoptera) as an indicator of coastal wetland health in Lake Erie. *Jennifer R. Milligan* and Joe B. Keiper*
9. Freshwater mussels of the eastern Congo River, Africa: Preliminary results of genetic variation in three common taxa. *Liron Bendor, Larissa Caraballo, and Curt L. Elderkin**

Aquatic Ecology and Restoration -- South Corridor

10. Geographic Information Systems augment ecological monitoring in dam removal project. *Alan Griffith* and Damon Lowery*
11. Dam removal, geomorphic response and restoration design. *Paul M. Woodworth* and Jacob E. Helminiak*
12. Pursel Mill Dam removal: Balancing ecological restoration and historic preservation. *Paul Woodworth and Geoffrey M. Goll*
13. Clonal diversity and resistance to invasion in remnant salt marsh patches dominated by *Spartina patens*. *Tingmin Wu*, John Francois, Edward G. Kirby, and Claus Holzapfel*

Plant Ecology -- South Corridor

14. Trends in tree species composition across vertical strata in a mixed hardwood forest in the New Jersey Highlands. *Kimberly Camargo**, *Kimberly Rogers**, *Eric Weiner*, *Michael Clark*, *Vincent Napolitano*, *Andrew Collins*, *Steven Libert*
15. Plant-pathogen interactions in an anthropogenic landscape: contrasting effects of undisturbed succession and mowing. *Robert Doherty**, *Lauren Frazee**, *Jacqueline Harth*, and *Janet A. Morrison*
16. Optimizing direct polymerase chain reaction (PCR) with germinated smut fungus (*Sporisorium ellisii*) teliospores, for use in ecological studies. *Emily M. Nowicki** and *Janet A. Morrison*
17. Conservation status and fire dynamics of high elevation pitch pine on Panther Knob, eastern West Virginia. *Lauren F. Howard**
18. Native vegetation classification system (nvcs): On-the-ground application of the nvcs and planning for the future. *Laura Whalen** and *Danielle Kreeger*

Suburban/Urban Ecology and Restoration -- North Corridor

19. Options for managing a population of the invasive herb *Aegopodium podagraria* (goutweed): A pilot study looking at three control techniques in Prospect Park. *Jessica M. DiCicco* and *John Jordan*
20. Initial riparian restoration along an urban stream gradient, Onondaga Creek, New York. *Catherine Landis** and *Donald J. Leopold*
21. Characterization of nitrogen dynamics in urban restored streams: an evaluation of wetlands and engineered floodplain features. *Melanie Harrison** and *Peter M. Groffman*
22. The status of an exotic ant (*Paratrechina flavipes*) in the greater Cleveland area and its potential impact on regional natural resources. *Kaloyan Ivanov** and *Owen M. Lockhart*
23. Preliminary comparisons of local greenroof runoff to traditional roof runoff for storms of varying size. *Olyssa Starry** and *Richard Pouyat*
24. Source sink dynamics of anurans in stormwater basins of the New Jersey coastal plain. *Kathleen McCarthy** and *Richard G. Lathrop*
25. Urban ecology in miniature: spatial analysis of antibiotic resistance in *Enterobacter* spp. isolates gathered from soils of Lancaster City. *Ryan McDonald**, *David Bowne*, and *Debra Wohl*
26. Urban soil characteristics in Baltimore County (URDL), and how they compare with soils in Baltimore City and Washington, D.C. *Emma Noonan*, *Ian Yesilonis*, and *Richard Pouyat*
27. Comparison of two methods for rapid assessment of herbivory by white-tailed deer. *Amanda DiBartolo**, *Brian Corbett** and *Janet A. Morrison*
28. Human accessibility affects habitat use preferences and movement patterns of suburban white-tailed deer. *Eugene Potapov**, *Allen Bedford*, *Fredrik Bryntesson*, *Sherri Cooper*, *Brad Nyholm*, *David Robertson*, *Bracken Brown*, *Dallas Hendricks*, and *Eric A Rothla*
29. Habitat restoration in a suburban preserve from the perspective of white-tailed deer. *Eugene Potapov**, *Brad Nyholm*, *David Robertson*, *Allen Bedford*, *Fredrik Bryntesson*, *Sherri Cooper*, *Bracken Brown*, *Dallas Hendricks*, and *Eric A Rothla*

Terrestrial Ecology/Restoration and Education -- North Corridor

30. Find resources to teach undergraduate ecology using EcoEd Digital Library.

Kenneth Klemow and Jennifer Riem

31. Can Japanese knotweed serve as a source of biomass energy? *Rachel Curtis**, *Jeffrey Bauman*, *Allison Perini*, *Jake Mancuso*, *Arpita Patel*, *William Terzaghi*, and *Kenneth Klemow*

32. The central role of plants in the remediation and ecological monitoring of a metal-contaminated site in eastern Pennsylvania. *Diane W. Husic**, *Sarabeth Brockley*, *Yi Li*, *Gregory Niehoff*, and *Dan Kunkle*

33. Prioritization of ecological restoration sites: planning at the landscape scale using habitat analysis modeling. *Peter Jensen**, *John Sullivan*, and *Damian Preziosi*

34. Assessment and habitat/host plant restoration for Lepidoptera species of concern in the New Jersey Pine Barrens. *William J. Cromartie**

6:30 Walk to Brower Student Center

6:45 – 8:15

DINNER AND EVENING SPEAKER

Student Center 202

6:45

Welcome

Janet Morrison, Chair, ESA Mid-Atlantic Chapter

~ 7:20

Introduction of the Speaker

Bill Young, Young Environmental, LLC

Can We Achieve Sustainability? - Understanding Time, Scale and Change

Roger Kuhn, Geologist, Black & Veatch

8:15

Goodnight !

Field Trips – Saturday, March 14

HABITAT REGENERATION AT DUKE FARMS Hillsborough, NJ

Leaders: *Thom Almendinger and Brian Clough (Natural Resources Team, Duke Farms),
Dr. Steven Handel and students (Rutgers University Center for Urban Restoration Ecology).*

Time: 10:00 am – 3:30 pm

TIDAL FRESHWATER RESTORATION AT THE HAMILTON-TRENTON MARSH

Bordentown, NJ

Leader: *Mary Allesio Leck (Emeritus Professor of Biology, Rider University).*

Time: 9:00 – 11:30 am

ECOLOGICAL RESTORATION IN THE NEW JERSEY PINE BARRENS Southern New Jersey

Leaders: *Jamie Cromartie (Richard Stockton College), Bob Williams (Land Dimensions Engineering),
Emile DeVito (NJ Conservation Foundation), Andy Windisch (NJ Office of Natural Lands Management)*

Time: 9:00 am – 5:00 pm