

## **RACHEL K. THIET, Ph.D.**

Environmental Studies Department  
Antioch University New England  
40 Avon Street  
Keene, NH 03431  
Phone: (603) 283-2337  
E-mail: rthiet@antioch.edu

### **TEACHING APPROACH**

Throughout my career as a science educator and mentor I have developed very strong skills of delivering complex science content to students with highly variable skill sets and experiences in the sciences, and I teach science from an explicitly interdisciplinary standpoint. I value immensely this interdisciplinary approach to teaching and learning, because students learn and practice ecology and conservation science as they truly occur – with and within human communities that have unique histories, perspectives, and needs. Further, many conservation professionals are also called upon as educators; thus, I model strong skills of science communication and integrate science communication skills development into all of my courses regardless of subject. I optimize student learning by modeling curiosity and humanity as ways of being, creating an emotionally safe learning environment in which students can take risks, and expressing care for my students as individuals.

### **RESEARCH ACTIVITY**

I am a systems ecologist with broad interests in coastal restoration, sediment and soil ecology, plant ecology, invertebrate ecology, aboveground-belowground interactions, and biogeochemistry. My research in inland, terrestrial ecosystems is focused primarily on the interactions among plants, soil organisms, and above- and belowground invertebrates. My work in coastal systems is largely focused on the effects of tidal restoration on salt marsh hydrophyte reestablishment, benthic food webs, and biogeochemistry, and I have also studied the ecology of heathland and sand dune restoration.

### **EDUCATION**

Post-doctoral Research and Teaching Associate, Natural Resources (specialization: Soil Microbial Ecology), University of New Hampshire, Durham, NH  
PhD Evolution, Ecology, and Organismal Biology (specialization: Soil Microbial Ecology and Plant Ecology), The Ohio State University Advisor: Ralph E.J. Boerner, Dissertation title: Soil Microbial Community Pattern and Process: Impacts on Vascular Plant Communities in Three Ecosystems of High Conservation Value  
MS Natural Resources (specialization: Wetlands Ecology), The Ohio State University Advisor: Craig B. Davis, Thesis title: Floristic and Seed Bank Composition of Two Lake

Erie Wetlands: Differences between Diked and Undiked Freshwater Marshes  
BA Social Sciences, University of Michigan Advisor: Charlie Bright, Thesis title: Women,  
Power, Empowerment: Women as Agents of Change Throughout US History

## **RELEVANT PROFESSIONAL POSITIONS**

**Professor of Environmental Studies**, Environmental Studies Department, Antioch  
University New England, 2016-present; Associate Professor (2009-2016) and Assistant  
Professor (2003-2009)

**Director, Conservation Biology**, Antioch University New England, 2016-present  
Conservation Biology is one of six concentrations in the Master's Program

**Director, Master's Program in Environmental Studies**, Antioch University New England,  
2010-2015

The Master's Program in Environmental Studies offers degrees in Conservation  
Biology, Sustainable Development and Climate Change, Environmental Education,  
Advocacy for Social Justice and Sustainability, Science Teacher Certification, and Self-  
designed Studies.

**Co-Director, Doctoral Program in Environmental Studies**, Antioch University New  
England, 2012-2013

The Doctoral Program in Environmental Studies trains practitioner-scholars through  
interdisciplinary environmental coursework, service projects, and applied research.

**Director, Field Study Trip Program**, Environmental Studies Department, Antioch  
University New England, 2007-2012

Our field study trip courses are central to our applied, field-based curriculum. Our field  
study trips range in duration from five days to three weeks, and emphasize ecology,  
natural and cultural history, geology and geomorphology, environmental management,  
stakeholder and community involvement, and environmental justice in regions all over  
the world.

**Director, Self-Designed Studies Concentration**, Environmental Studies Department,  
Antioch University New England, 2007-2011

The Self-Designed Studies Concentration serves Environmental Studies students  
whose professional vision is best realized through a customized degree program that  
draws on coursework from various concentrations in the ES Master's Program.

**Teaching Assistant**, Departments of Biology, Natural Resources, and Evolution, Ecology,  
and Organismal Biology, The Ohio State University, various undergraduate courses,  
1996-2002

**Head Teaching Assistant**, Department of Biology, The Ohio State University, Honors  
Organismal Biology, 2001

## **COURSES TAUGHT**

### **Graduate level**

Antioch University New England, Department of Environmental Studies Master's and  
Doctoral Programs (2003-present):

Community Ecology of New England  
Comparative Ecological Analysis

Soil Ecology  
Earth Systems and Climate Change  
Research Seminar  
Wetlands Ecology  
Evolutionary Ecology  
Global Environmental Change  
Coastal Geoecology (5-day field study trip on Cape Cod)  
Desert Ecology (14-day field study trip in the Sonoran Desert)  
Tropical Ecology and Conservation: Costa Rica (14-day field study trip in Costa Rica)  
Human and Natural Landscapes of Alaska (19-day field study trip in Alaska)  
Supervised Independent Studies in Biogeochemistry and Scientific Writing  
Learning Domain II Seminar

### **Undergraduate level**

The Ohio State University (as a Teaching Assistant, 1996-2002):  
Honors Biology: Evolution of Organismal Form, Function, and Ecology  
Community Ecology and Ecosystems  
Natural Resources Statistics  
Plant Population Ecology  
Plant Biology: Plants, People, and the Environment  
Environmental Policy and Law  
Wildlife Ecology and Management  
Environmental Economics  
Environmental Education Theory and Methods

### **Community level**

Geoecology of New Hampshire Soils, Harris Center for Conservation Education, Hancock, NH, 2011

## **GRADUATE STUDENT CAPSTONE PROJECT ADVISING**

### **Current master's and doctoral advisees**

Jodi Curtin (MS), Horseshoe crab spawning dynamics in a partially restored back-barrier salt marsh lagoon on Cape Cod, MA  
Andrew Taylor (MS), Restoring giant clam communities to enhance finfish productivity in the Philippines  
Brienne Fagan (MS), The effect of water turbidity on electropositive deterrent success in sandbar sharks (*Carcharhinus plumbeus*) and implications for bycatch mitigation  
Katie Kibler (PhD), A participatory assessment of household agricultural resilience to food insecurity: The case of food access in Bikotiba, Togo, West Africa  
Frank Kahoun (PhD), The evolutionary ecology and niche utilization of invasive Cuban anoles in southern Florida, USA  
Debby Geltner (MS), Designing rural and suburban residential landscapes to optimize wild biodiversity  
Micki Colbeck (MS), Mapping natural and recreational resource type and distribution in a

central NH residential community  
Juniper Kozlowski (MS), An illustrated guidebook to the medicinal uses of common  
freshwater wetland plants of VT

### **Graduated master's and doctoral advisees**

Olivia Uyizeye, Sustainable Development and Climate Change concentration (2018), The effectiveness of biochar and compost for remediating petroleum-polluted soils in NH  
Elena Pousland, Conservation Biology concentration (2018), Shoreline habitat assessment of horseshoe crab nesting areas in Great Bay Estuary, Durham, NH  
Krystal House, Conservation Biology concentration (2017), Horseshoe crab population structure in a partially restored back-barrier salt marsh lagoon on Cape Cod National Seashore, MA  
Hillary Ballantine, Conservation Biology concentration (2017), The effect of whale-watch trips on participants' pro-environmental behaviors  
Lara Hooper, Environmental Education concentration (2017), Soil science: What gardeners should know – A script for the New Hampshire Master Gardeners Speaker's Bureau  
Isis Lawson, Conservation Biology concentration (2017), The effects of invasive earthworms on small burrowing mammals in New England forests  
Joshua Lipkowitz, Conservation Biology concentration (2016), The effect of oyster aquaculture on finfish community diversity and productivity in the Damariscotta River Estuary, ME  
Heather Conkerton, Conservation Biology concentration (2016), Invasive green crab (*Carcinus maenas*) abundance, distribution, and prey preferences in a New England back-barrier salt marsh lagoon on Cape Cod National Seashore, MA  
Kelly Garner, Conservation Biology concentration (2015), The effect of educational programs on New England vernal pool ecology  
Tiffany Gillen, Environmental Education concentration (2015), Herbal medicinal remedies: A curriculum project  
Elizabeth Pascale, Conservation Biology concentration (2014), The role of ants in reaching federal recovery goals for Karner blue butterfly (*Lycaeides melissa samuelis*) in the restored pine barrens of Concord, NH  
Erin Hilley, Conservation Biology concentration (2014), Ant myrmecochory and seed dispersal of endangered broom crowberry (*Corema conradii*) in restored heathlands on Cape Cod, MA  
Dave Janas, Conservation Biology concentration (2014), Tropical plant propagation and conservation in Hawai'i  
Stephanie Putnam, Conservation Biology concentration (2014), Comparing hydroperiod and animal use of natural and anthropogenic vernal pools in Big Darby Headwaters Preserve, OH  
Octavia Salisbury, Conservation Biology concentration (2013), Marine ecology interpretation manual for the Boston Aquarium  
Larry Clarfeld, Conservation Biology concentration (2013), Conservation and environmental advocacy implications of citizen science amphibian crossing guard programs  
Rebecca Clark, Conservation Biology concentration (2012), The role of soft shell clams in

facilitating macroalgal blooms in restored New England salt marshes

Erica Kidd, Conservation Biology concentration (2012), Molluscan community recovery in a restored salt marsh on Cape Cod, MA

Alexis Doshas, Conservation Biology concentration (2012), Effects of biological soil crusts on germination and productivity of key successional dune plants *Deschampsia flexuosa* and *Morella pennsylvanica* on Cape Cod, MA

Anthony Krutiak, Advocacy for Social Justice and Sustainability concentration (2012), Developing social justice and poverty curricula for US high school students

Chadd Meerbergen, Self-designed Studies concentration (2012), Integrating the construction and woodworking trades with public school math and environmental science education

Allen Tate, Conservation Biology concentration (2012), Monitoring finfish species abundance on oyster reef restoration areas of coastal Mississippi

Victoria Rubino, Conservation Biology concentration (2011), Evaluating mollusk-algae feedbacks underlying macroalgal blooms in East Harbor, a partially restored, back-barrier salt marsh lagoon on Cape Cod, MA

Megan Boyle, Conservation Biology concentration (2011), The effectiveness of seeding native halophyte species in restored salt marsh sediments on Cape Cod, MA

Elizabeth Finn, Conservation Biology concentration graduate (2011), The composition and functions of biological soil crusts in three coastal ecosystems of the northeastern US

Jodie Wennemer, Conservation Biology concentration (2011), The relationship between submersed aquatic vegetation and mollusk community recovery and stability at East Harbor, a partially restored, back-barrier salt marsh lagoon on Cape Cod, MA

Angela Beltrani, Conservation Biology concentration (2010), Prevalence of congenital, juvenile cataracts among five owl species in the contiguous 48 states: A status survey

Jesse Wheeler, Conservation Biology concentration (2010), *Phragmites* elimination and halophyte re-establishment in Hatches Harbor, a restored salt marsh on Cape Cod, MA

Barbara Beers, Self-Designed Studies concentration (2010), Program development and project-based learning to engage high school students in authentic, field-based ecological work

Mandy Gaudreau, Conservation Biology concentration (2010), Incidence of *Batrachochytrium dendrobatidis* in Rhode Island anuran populations

Alexis Mullen, Conservation Biology concentration (2009), Development of an amphibian habitat conservation plan for the town of Dummerston, VT

Tim Dexter, Conservation Biology concentration (2009), Potential habitat importance of vernal pools for white-tailed deer (*Odocoileus virginianus*) and moose (*Alces alces*) in a New Hampshire wilderness area

Caroline Scully, Conservation Biology concentration (2009), Bumblebee species composition, diversity, and landscape use in the Berkshires, MA

Megan McLean, Conservation Biology concentration (2009), Predicting spadefoot toad activity and mortality on Province Lands Road, Provincetown, Cape Cod, MA

Amy Borgia, Individualized Program (2008), A plan for business: GreenGlobePublishing Sustainability Consultants

Molly Janis, Self-designed Studies concentration (2008), Business plan: Just Sustainabilities, Inc.

Kristin Jones, Self-designed Studies concentration (2008), Business plan: Studio Greening

## Outreach Los Angeles

- Corey Miles, Conservation Biology concentration (2008), The role of biological soil crusts in hydrology and nutrient cycling in the Provincelands parabolic dunes at Cape Cod National Seashore
- Nate Colbert, Conservation Biology concentration (2008), A developer-initiated conservation plan for pool-breeding amphibians in Maine, USA
- Melinda Scott, Conservation Biology concentration (2008), The effects of landscape composition and configuration on the occurrence of three mammalian carnivores in an urbanizing region of Vermont
- Brandi Bornt, Conservation Biology concentration (2007), Assessment of rocky shore environmental education programs at the Seacoast Science Center, Rye, NH
- Corinna Photos, Conservation Biology concentration (2007), Relationship between pH, hydrology, and vegetation distribution in a VT peatland
- Nada Wigand, Conservation Biology concentration (2007), Black bear population distribution and movement in the Monadnock Region, NH
- Elizabeth Rose, Conservation Biology concentration (2007), *Phragmites australis* density and distribution at Parker River National Wildlife Refuge, Plum Island, MA
- Brett Amy Thelen, Conservation Biology concentration (2006), Incorporating reliable citizen science into research and monitoring programs at Cape Cod National Seashore and Mollusk re-establishment at East Harbor, a restoring estuary on Cape Cod National Seashore
- Kelly Biedenweg, Conservation Biology concentration (2005), Assessment of the success of environmental leadership programs in Honduras
- Amos Alex Gonyaw, Resource Management and Administration Program (2005), The impact of Yankee Nuclear Power Plant effluent on Connecticut River macroinvertebrate community diversity

## Master's and doctoral committee service

- Jessica Charpentier, PhD candidate, The effects of fire on forest structure, composition, and ecosystem functions in boreal forests of Acadia National Park, ME
- Tim Holt, PhD candidate, The cultural and ecological legacy of flax production in New England
- Luanne Johnson, PhD, Skunk population structure and conservation on Martha's Vineyard, MA
- Peggy Eppig, PhD, Russell Lord: Changing methods and minds in American agriculture
- Nora Velazquez, PhD, Health and environmental risk assessment in community transitions to biodiesel use
- Lynn McNamara, MS, Invasive wild chervil abundance, distribution, and management in Vermont

## TEACHING TRAININGS ORGANIZED AND ATTENDED

- Workshop organizer, Best practices in Soil Ecology teaching, International Soil Ecology Society meetings: Moab, UT (April 2007), Burlington, VT (July 2009), and Camden, NJ (June 2013)

Leadership Teacher: Education Co-Chair for Science and Biotechnology training workshops for NH teachers to expand and improve their science and biotechnology classroom curricula

Week-long college teaching conference at The University of New Hampshire offered by the UNH Teaching Excellence Program, with day-long workshops: The Power Syllabus; Teaching Large Classes; Effective Presentation; Using Active Learning; and Effective Discussions

Various college teaching workshops at The Ohio State University offered by the OSU Office of Faculty and Teaching Associate Development and the Biology Teaching Associate Organization: Documenting your Teaching as Part of your Academic Job Search; Using your Teaching Portfolio for Promotion and Tenure; Taking the Guesswork out of Multiple Choice; Leading Effective Discussions; Effective Teaching in Large Classes; Interactive Learning in Lab Sections

Experienced-Teaching Associate Panel participant, The Ohio State University Introductory Biology Program New Graduate Teaching Associate Training

## **SERVICE AND CONSULTING ACTIVITY**

### **External**

Coordinating Editor, Restoration Ecology, September 2014-present

Reviewer for Restoration Ecology; Ecological Restoration; Journal of Malacological Research; Estuarine, Coastal, and Shelf Science; Northeastern Naturalist; Biodiversity and Conservation; Soil Biology and Biochemistry; Mycorrhiza; Plant and Soil; Soil Science Society of America Journal; Applied Soil Ecology; and Prentice Hall and Elsevier Publishers, on-going

Board Member (elected): International Soil Ecology Society, 2008-2015

Webpage and Newsletter Writer, International Soil Ecology Society, 2010-2014

Conference co-organizer, 14<sup>th</sup> Biennial International Soil Ecology Society meeting, Camden, NJ, June 2013

Volunteer and voting member, Keene Cities for Climate Protection Committee, 2012-2013

Volunteer, La Isla Foundation, León and Chichigalpa, Nicaragua, 2009-2011

Volunteer consultant on state soil judging competition, Keene High School Envirothon team, 2009-2011

Conference co-organizer, 13<sup>th</sup> Biennial International Soil Ecology Society meeting, Kenowa, BC, Canada, 2011

Conference co-organizer, 12<sup>th</sup> Biennial International Soil Ecology Society meeting, Burlington, VT, 2009

Chair, Lifetime of Professional Achievement Award committee, International Soil Ecology Society, 2009

Table Leader, Educational Testing Service high school environmental science Advanced Placement exam evaluation, 2010

Reader/Evaluator, Educational Testing Service high school environmental science Advanced Placement exam evaluation, 2008, 2009, 2011

Conference program co-organizer, 11<sup>th</sup> Biennial International Soil Ecology Society meeting, Moab, UT, 2007

Contracted reviewer, best-practices curricula in Advanced Placement Environmental Studies, University of Oregon Center for Environmental Science and Policy, Washington, D.C., 2006

Contracted contributor, The Encyclopedia of the Environment, Sage Publications, 2006

Reviewer, Soil research grant proposals submitted to the National Science Foundation and the USDA Forest Service Soils and Soil Biology Division, 2004

Presider, The Ecological Society of America Soil Biogeochemistry oral session, Portland, OR, August 2004

## **Internal**

Organizer, Annual Environmental Studies Graduate Student Research Symposium, 2006, 2010, 2012, 2014, 2017 (biennial leadership role)

Co-coordinator, Annual research planning workshop for Master's International students, 2016-present

Leader and coordinator, Collaborations between the Antioch Environmental Studies Department and regional undergraduate Environmental Studies and -Science Departments, 2008-2014

Committee Member, Environmental Studies student and alumni awards committee: 2012, 2017

Committee Member, Environmental Studies curriculum committee, 2014-present

Search Committee Member, Clinical Psychology Core Faculty search committee, 2014-2015

Search Committee Chair, Environmental Studies Department Core Faculty search in Conservation Biology, 2013-2014

Steering Committee Member, Strategic planning steering committee, 2011-2012.

Search Committee Member, Vice President for Academic Affairs, 2010-2011

Working Group Member, Research, restoration/systems ecology, and independent study working groups, 2010-11

Committee Member, Student SEEDS Scholarship review committee, Center for Tropical Ecology and Conservation, 2004-2006

Committee Member, Laboratory infrastructure committee, 2008-2014

Committee Member, Bookstore transition committee, 2010- 2011

Search Committee Member, One-year faculty position in Environmental Studies, 2006

Committee Member, Faculty Colloquium planning committee, 2006

Committee Member, Switzer Foundation student fellowship committee, 2004-2006

Committee Member, Sterling Student Scholarship in Forestry review committee, 2004

Editorial Board and Faculty Advisor, Whole Terrain: A Journal of Reflective Environmental Practice, 2003-2004

Committee Member, Strategic planning steering committee, 2003-2004

## **INVITED PRESENTATIONS**

Ecology in the Anthropocene: How embracing the underdogs will help to save the world.

Featured scientist / presenter, Women in Science lecture series in celebration of Women's History Month, Keene State College, Keene, NH, March 2018.

Benthic ecology at East Harbor back-barrier lagoon: 10 years of post-restoration outcomes



in an equilibrating system. Featured scientist / presenter, Cape Cod National Seashore Science in the Seashore Symposium, August 2014.

Aboveground-belowground ecology: A sampling of New England research, Environmental Studies Department Colloquium, September 2013.

Geology and human ecology in Nicaragua: Chronic renal disease in sugarcane workers of the Pacific lowlands, Center for Tropical Ecology and Conservation seminar, March 2011.

The scientific case for action against destructive global environmental change, Step It Up! Rally for Climate Action, Keene, NH, April 2007.

Seeing the forest in the seeds: Can agroecosystems function as natural systems? University of Vermont Department of Plant and Soil Science, Burlington, VT, October 2005.

Soil microbes and nutrient cycling, Dartmouth College Department of Earth Sciences, Dartmouth, NH, April 2005.

Incorporating soil processes into conservation goals: Spatial and deterministic studies at the soil surface, Antioch New England Graduate School Doctoral Program in Environmental Studies, Keene, NH, September 2003.

The impact of soil microbes on Virginia pine (*Pinus virginiana*) invasion of eastern U.S. barrens plant communities: Ectomycorrhizal fungi as an agent for invasion, John Carroll University Department of Biology, University Heights, OH, April 2002.

Mycorrhizal fungi and global climate change, University of New Hampshire Department of Natural Resources, Durham, NH, November, 2002 and September 2003.

Biological soil crusts: Structures, functions, and responses to a changing global climate, University of New Hampshire Department of Natural Resources, Durham, NH, November 2002 and October 2003.

## **FELLOWSHIPS, GRANTS, AND AWARDS**

Fellowships, grants, and awards to me:

National Park Service, Cape Cod National Seashore, Evaluating the role of East Harbor (Cape Cod National Seashore) as spawning and nursery habitat for horseshoe crabs (currently funded for 2019-2020, \$99,000)

National Park Service, Cape Cod National Seashore, Assessing the benthic community in a partially restored lagoon to improve management decision-making (currently funded for 2018-2019, \$151,451)

National Science Foundation Academic Research Infrastructure Program: Recovery and Reinvestment, Renovation of Existing Laboratory Facilities at Antioch University New England (not funded \$383,300)

Antioch University New England Faculty Grant, Impacts of invasive European fire ants (*Myrmica rubra*) on coastal Maine soils (funded \$3000)

Antioch University New England Faculty Grant, Composition and functions of biological soil crusts in three coastal sand plain ecosystems in the northeastern US (funded \$3000)

Antioch University New England President's Scholarship for Faculty, various research projects (\$750-\$1500 each year for four years)

The University of New Hampshire Faculty Development Grant, The relative contributions of soil bacteria and fungi to C sequestration in US agricultural soils (funded \$1500)

The Ohio State Graduate Student Alumni Research Award, A test of two landscape models

of invasion: Mycorrhizal inoculum as a mechanism for Virginia pine invasion into rare tall-grass prairie outcrops in the eastern US (funded \$1000)

Janice Carson Beatley Herbarium Research Travel Grant, A test of two landscape models of invasion: Mycorrhizal inoculum as a mechanism for Eastern red cedar invasion into rare tall-grass prairie outcrops in the eastern US (funded \$500)

The Ohio State University Ecology Graduate Student Teaching Award (not monetary)

The Ohio State University Preparing Future Faculty Fellowship (not monetary)

Fellowships and grants to my students:

Garden Club of America, The effects of biological soil crusts on seed germination, seedling establishment, and tissue chemistry of key dune plants at the Province Lands sand dunes, Cape Cod National Seashore, MA (funded \$8000)

Friends of Cape Cod National Seashore Nickerson Conservation Fellowship, The effects of fire on myrmecochory and seedling establishment of globally imperiled broom crowberry (*Corema conradii*) in restored coastal heathlands of Cape Cod National Seashore, MA (funded \$3000)

Friends of Cape Cod National Seashore Nickerson Conservation Fellowship, The effects of fire and mowing on *Phragmites* removal and halophyte reestablishment at Hatches Harbor, a restored salt marsh on Cape Cod National Seashore, MA (funded \$3000)

## **MEMBERSHIP IN HONOR AND PROFESSIONAL SOCIETIES**

Ecological Society of America

International Soil Ecology Society

National Association of Biology Teachers

Association for Environmental Studies and Sciences

Gamma Sigma Delta Honor Society of Agriculture

## **PUBLICATIONS**

\*Denotes student co-author

Thiet, R.K., A. Dawson\*, B. Fagan\*, J. Hubbard\*, T. Meier\*, S. Lamonde\*, and R. Settele\*. 2018. Advice to master's students for successfully navigating an interdisciplinary environmental studies program. In press, Bulletin of the Ecological Society of America.

Uyizeye, O.\*, R.K. Thiet, and M.A. Knorr. 2018. Use of biochar and compost to remediate petroleum-polluted soils in New Hampshire. In review, International Biodeterioration and Biodegradation.

Corbin, J. and R.K. Thiet. 2018. Biological soil crusts in the northeast – they're not just for deserts anymore. In prep, Frontiers in Ecology and the Environment.

Thiet, R.K. 2017. An interactive, instant polling exercise to allay student anxiety in science courses. The American Biology Teacher 79(6):496-498.

Thiet, R.K. and J. Karlan. 2017. Sabotaging presentations to assist learning: A dynamic, interactive presentation exercise to generate fundamental questions and integrate theory and practice. The American Biology Teacher 79(9):769-777.

Conkerton, H.\*, R.K. Thiet, M. Tyrrell, K. Medeiros, and S. Smith. 2017. Selection and

- availability of shellfish prey for invasive European green crabs [*Carcinus maenas* (Linnaeus 1758)] in a partially restored back-barrier salt marsh lagoon on Cape Cod, Massachusetts. *Journal of Shellfish Research* 36(1):189-199.
- Baum, J.\* and R.K. Thiet. 2016. Using Soil Organisms to Explore Ecosystem Functioning, Services, and Sustainability. Chapter 11 (pp. 97-103) in: *Learner-Centered Teaching Activities for Environmental and Sustainability Studies* (L.B. Byrne, editor), Springer International Publishing, Switzerland.
- Byrne, L., R.K. Thiet, and B. Chaudhary. 2016. Pedagogy for the Pedosphere. *Frontiers in Ecology and the Environment* 14(5):238-240.
- Pascale, E.\* and R.K. Thiet. 2016. The relationship between ants and *Lycaeides melissa samuelis* (Lepidoptera: Lycaenidae) at Concord Pine Barrens, NH, USA. *Environmental Entomology* 45(3):633-641.
- Hilley, E.\* and R.K. Thiet. 2015. Vulnerable broom crowberry (*Corema conradii*) benefits from ant seed dispersal in coastal US heathlands. *Plant Ecology* 216(7):493-503.
- Thiet, R.K., S.M. Smith, V. Rubino\*, R. Clark\*, J. Oset, and K. Lee. 2014. Soft shell clams (*Mya arenaria*) contribute to macroalgal blooms in a partially restored Gulf of Maine back-barrier lagoon. *Ecological Restoration* 32(1):46-58.
- Thiet, R.K., A. Doshas\*, and S.M. Smith. 2014. The effect of biological soil crusts on germination and productivity of two early-successional dune plants *Deschampsia flexuosa* and *Morella pennsylvanica* on Cape Cod, MA. *Plant and Soil* 377(1):235-244.
- Thiet, R.K., E. Kidd\*, J.M. Wennemer\*, and S.M. Smith. 2014. Molluscan community recovery in a New England back-barrier salt marsh lagoon 10 years after partial restoration. *Restoration Ecology* 22(4):447-455.
- Thiet, R.K. 2014. Students dig deep for the Mystery Soil Lab: An inquiry-based, problem-solving soil ecology laboratory project. *The American Biology Teacher* 76(1):47-52.
- Wheeler, J.\*, R.K. Thiet, and S.M. Smith. 2013. Enhancing habitat for native halophytes through removal of *Phragmites australis* in a restored salt marsh on Cape Cod, Massachusetts. *The Journal of Park Science* 29(2):42-48.
- Colbert, N.\*, R. Baldwin, and R.K. Thiet. 2011. A developer-initiated conservation plan for pool-breeding amphibians in Maine, USA. *Journal of Conservation Planning* 7:27-38.
- Thelen, B.A\*. and R.K. Thiet. 2009. Molluscan community recovery following partial tidal restoration of a New England estuary. *Restoration Ecology* 17(5):695-703.
- Thelen, B.A\*. and R.K. Thiet. 2008. Cultivating connection: Incorporating meaningful citizen science into Cape Cod National Seashore's estuarine research and monitoring programs. *The Journal of Park Science* 25(1):74-80.
- Thiet, R.K. and R.E.J. Boerner. 2007. Spatial pattern of ectomycorrhizal fungal inoculum in arbuscular mycorrhizal barrens communities: Implications for controlling invasion by *Pinus virginiana*. *Mycorrhiza* 17:507-517.
- Thiet, R.K. 2007. Loess. In: P. Robbins (Ed.), *Encyclopedia of Environment and Society* (pp. 1065-1066). SAGE Publications, Thousand Oaks, CA.
- Thiet, R.K. 2007. Dust. In: P. Robbins (Ed.), *Encyclopedia of Environment and Society* (p. 494). SAGE Publications, Thousand Oaks, CA.
- Thiet, R.K. 2007. Decomposition. In: P. Robbins (Ed.), *Encyclopedia of Environment and Society* (pp. 418-419). SAGE Publications, Thousand Oaks, CA.
- Thiet, R.K., S.D. Frey, and J. Six. 2006. Do growth yield efficiencies differ between soil microbial communities differing in fungal:bacterial ratios? Reality check and

- methodological issues. *Soil Biology and Biochemistry* 38:837-844.
- Six, J., S.D. Frey, R.K. Thiet, and K. Batten. 2006. Bacterial and fungal contributions to carbon sequestration in agroecosystems. *Soil Science Society of America Journal* 70:555-569.
- Thiet, R.K., R.E.J. Boerner, M. Nagy\*, and R. Jardine. 2005. The effect of biological soil crusts on rainwater and nitrogen infiltration into Lake Michigan sand dune soils. *Plant and Soil* 278:235-252.
- Simpson, R.T.\*, S.D. Frey, J. Six, and R.K. Thiet. 2004. Preferential stabilization of microbial-derived carbon in microaggregates contained in macroaggregates of no-tillage soils. *Soil Science Society of America Journal* 68:1249-1255.
- Thiet, R.K. 2002. Diversity comparisons between diked and undiked coastal freshwater marshes on Lake Erie during a high-water year. *Journal of Great Lakes Research* 28:285-298.
- Smith, S.M., K. Chapman, K. Lee, M. Tyrrell, J. Wennemer\*, and R.K. Thiet. 2008. Annual Report on Estuarine Restoration at East Harbor (Truro, MA), Cape Cod National Seashore, 2008. NPS Technical Report, Cape Cod National Seashore, Wellfleet, MA.
- Wennemer, J.\* and R.K. Thiet. 2007. Chapter 8: Shellfish. In: Portnoy, J., S.M. Smith, K. Lee, K. Chapman, M. Galvin, E. Gwilliam, P. Lyons, and C. Thornber. Annual Report on Estuarine Restoration at East Harbor (Truro, MA), Cape Cod National Seashore, 2007. NPS Technical Report, Cape Cod National Seashore, Wellfleet, MA.

## **PRESENTATIONS AT PROFESSIONAL MEETINGS**

- Corbin, J. and R.K. Thiet. Biological soil crusts in the northeast – they’re not just for deserts anymore. Northeast Natural History Conference, Burlington, VT, April 2018.
- Chitayat, O.\* and R.K. Thiet. 2017. Bioremediation of diesel-polluted soil. Poster presentations: 33<sup>rd</sup> Annual International Conference on Soils, Sediments, Water, and Energy, Amherst, MA, October 2017 and 14<sup>th</sup> International Phytotechnologies Conference, Montréal, Canada, September 2017.
- Kahoun, F.\* and R.K. Thiet. 2017. Structural microhabitat utilization by invasive Cuban brown anoles (*Anolis sagrei*) in a naturalized habitat of south Florida. Abstract and poster presentation: Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL, April 2017.
- Curtin, J.\*, K. House\*, R.K. Thiet, M.J. James-Pirri, and K. Medeiros. 2016 and 2017. Population structure and spawning habits of the American horseshoe crab (*Limulus polyphemus*) in East Harbor, MA, after partial tidal restoration. Abstracts and poster presentations: Society for Ecological Restoration, New England Chapter, Durham, NH, October 2016; and Northeast Ecosystem Research Cooperative, Saratoga Springs, NY, March 2017.
- Ballantine, H.\*, R.K. Thiet, and C. McInnis. 2016. Whale watching in Stellwagen Bank National Marine Sanctuary: Do specific whale behaviors affect passenger behaviors? Abstract and poster presentation: 15<sup>th</sup> International Conference, American Cetacean Society, Monterey, CA, November 2016.
- Lawson, I.\* and R.K. Thiet. 2016. Impacts of invasive earthworms on small burrowing mammals in New England forests. Abstract and oral presentation: 72<sup>nd</sup> Annual Northeast Fish and Wildlife Conference, Annapolis, MD, April 2016.

- Thiet, R.K., S.M. Smith, V. Rubino\*, R. Clark\*, J. Oset, and K. Lee. 2014. Benthic ecology at East Harbor back-barrier lagoon: 10 years of post-restoration outcomes in an equilibrating system." Cape Cod National Seashore Science in the Seashore Symposium, August 2014.
- Conkerton, H.\*, R.K. Thiet, and M. Tyrell. 2014. Invasive green crab abundance, distribution, and prey preferences in a New England back-barrier salt marsh lagoon. New England Chapter of the Society for Ecological Restoration conference, Amherst, MA, April 2014.
- Janas, D.\* and R.K. Thiet. 2013. Restoring dryland forests from the soil up. Abstract and oral presentation: 21<sup>st</sup> Annual Hawai'i Conservation Conference, Honolulu, HI, July 2013.
- Hilley, E.\* and R.K. Thiet. 2013. Ant myrmecochory and seed dispersal of a rare heathland plant, broom crowberry (*Corema conradii*), on Cape Cod, MA. Abstract and oral presentation: Northeast Natural History Conference, Springfield, MA, April 2013.
- Doshas, A.\*, R.K. Thiet, S.M. Smith, and K. Lee. 2011 and 2012. Effects of biological soil crusts on germination and productivity of key successional dune plants *Deschampsia flexuosa* and *Morella pennsylvanica* on Cape Cod, MA. Abstract and poster presentation: 16<sup>th</sup> Annual Cape Cod Natural History Conference, W. Barnstable, MA, March, 2011; and oral presentation: 17<sup>th</sup> Annual Cape Cod Natural History Conference, W. Barnstable, MA, March, 2012.
- Gaudreau, M.M.\*, R.K. Thiet, and L. Perrotti. 2011. Incidence of *Batrachochytrium dendrobatidis* in Rhode Island anuran populations. Abstracts and oral presentations: Northeast Natural History Conference, Albany, NY, April 2011; Northeast Partners in Amphibian and Reptile Conservation Conference, Acadia, ME, August, 2010; and Rhode Island Natural History Survey Conference, North Kingston, RI, April, 2010.
- Clark, R.\*, V. Rubino\*, R.K. Thiet, S.M. Smith, K. Lee, and J. Oset. 2011. The effect of soft shell clams on macroalgal blooms in restored salt marshes of coastal Massachusetts, USA. Abstract and poster presentation: 16<sup>th</sup> Annual Cape Cod Natural History Conference, W. Barnstable, MA, March, 2011.
- Wheeler, J.\*, R.K. Thiet, and S.M. Smith. 2009. Evaluating suitable habitat for native halophyte establishment using prescribed burning in a restored salt marsh on Cape Cod, MA. Abstract and oral presentation: Nantucket Biodiversity Institute, Nantucket, MA, September, 2009.
- Thiet, R.K., B.M. Dempsey\*, N. Gertz-Young\*, L. Schottenfeld\*, J. Skinner\*, V. Snowdon\*, and M.F. Vinson\*. 2009. The Earth beneath our feet: Soil Ecology graduate students tackle the Mystery Soil Lab. Abstract and poster presentation: Proceedings of the 12th Biennial International Soil Ecology Conference, Burlington, VT, USA, July 2009.
- Lin, M.T.\* and R.K. Thiet. 2009. The effect of the invasive European fire ant (*Myrmica rubra*) on coastal New England soils. Abstract and oral presentation: Proceedings of the 12th Biennial International Soil Ecology Conference, Burlington, VT, USA, July 2009.
- Finn, E.S.\* and R.K. Thiet. 2009. The composition and functions of biological soil crusts in the Northeastern U.S. Abstract and poster presentation: Proceedings of the 12th Biennial International Soil Ecology Conference, Burlington, VT, USA, July 2009.
- McLean, M.\*, R.K. Thiet, R. Cook, and B. Timm\*. 2009. Environmental factors as predictors for amphibian movements and occurrence on the Province Lands Road, Cape Cod National Seashore. Abstract and presentations: (poster) Massachusetts Audubon Society 14<sup>th</sup> Annual Cape Cod National History Conference, West Barnstable, MA, March 2009 and (oral presentation) The International Symposium on Urban Wildlife and the

- Environment, UMASS Amherst, June 2009.
- Wheeler, J.\*, R.K. Thiet, and S.M. Smith. 2009. Evaluating suitable habitat for native halophyte establishment using prescribed burning in a restored salt marsh on Cape Cod, MA. Abstract and presentation: Massachusetts Audubon Society 14<sup>th</sup> Annual Cape Cod National History Conference, West Barnstable, MA, March 2009.
- Wennemer, J.\* and R.K. Thiet. 2009. Mollusk community composition and distribution in a restored salt marsh on Cape Cod, MA, six years post-restoration. Abstract and presentation: Massachusetts Audubon Society 14<sup>th</sup> Annual Cape Cod National History Conference, West Barnstable, MA, March 2009.
- Colbert, N.\*, R. Baldwin, and R.K. Thiet. 2008. A developer-initiated conservation plan for pool-breeding amphibians in Maine, USA. Abstract and presentation: Society for Conservation Biology meeting, Nashville, TN, July 2008.
- Dexter, T.\*, R. Baldwin, and R.K. Thiet. 2008. Potential habitat importance of vernal pools for white-tailed deer (*Odocoileus virginianus*) and moose (*Alces alces*) in a New Hampshire wilderness area. Abstract and presentation: Society for Conservation Biology meeting, Nashville, TN, July 2008.
- Prescott, C.L.\* and R.K. Thiet. 2007. The effects of biological soil crusts on runoff and infiltration in the Province Lands sand dunes, Cape Cod, Massachusetts. Abstract and presentation: Proceedings of the 10th Biennial International Soil Ecology Conference, (Coleman, D.C., ed.), Moab, UT.
- Thiet, R.K., S.D. Frey, and J. Six. 2004. Examining fungal and bacterial growth yield efficiencies using <sup>13</sup>C substrate-induced respiration. Abstract and presentation: Bulletin of the Ecological Society of America 89th Annual Meeting Supplement: 503.
- Simpson, R.T.\*, S.D. Frey, J. Six, and R.K. Thiet. 2003. Location of microbial-derived amino sugars in aggregates isolated from agricultural soils. Abstract and poster: Soil Science Society of America Meeting, Denver, CO.
- Simpson, R.T.\*, S.D. Frey, J. Six, and R.K. Thiet. 2003. Location of bacterial- and fungal-derived organic matter within the soil aggregate structure. Abstract and poster: Proceedings of the 9th Biennial International Soil Ecology Conference (Coleman, D.C., ed.), Palm Springs, CA.
- Thiet, R.K., S.D. Frey, and J. Six. 2003. Examining fungal vs. bacterial growth yield efficiencies: does the myth hold up? Abstracts: Northeast Evolution and Ecology Conference, Rutgers, NJ, (poster) and Proceedings of the 9th Biennial International Soil Ecology Conference (Coleman, D.C., ed.), Palm Springs, CA (presentation).
- Thiet, R.K. and R.E.J. Boerner. 2001. Microbiotic crusts and surface soil characteristics affect water and N infiltration in American beachgrass stands. Ecological Society of America Meeting, Madison, WI. Abstract and presentation: Bulletin of the Ecological Society of America 89th Annual Meeting Supplement: 219.
- Thiet, R.K. and R.E.J. Boerner. 2001. Spatial distribution and dispersal of ectomycorrhizal fungal inoculum in an alkaline oak barren/pine forest complex in southern Ohio. International Soil Ecology Society Meeting, Callaway Gardens, GA. Abstract and presentation: Proceedings of the 8th Biennial International Soil Ecology Society Conference, (Coleman, D.C., ed.): 27.
- Knorr, M.A., J.A. Brinkman, W.J. Dress, R.K. Thiet, R. Strachan\*, B. Swinehart\*, and R.E.J. Boerner. 2001. Analysis of soil enzyme activities as an indicator of microbial community activity at three spatial scales in an Ohio deciduous forest landscape.

- International Soil Ecology Society Meeting, Callaway Gardens, GA. Abstract and poster: Proceedings of the 8th Biennial Soil Ecology Society Conference, (Coleman, D.C., ed.): 45.
- Knorr, M.A., J.A. Brinkman, W.J. Dress, R.K. Thiet, R. Strachan\*, B. Swinehart\*, and R.E.J. Boerner. 2001. Analysis of soil microbial activity at three spatial scales in an Ohio deciduous forest landscape. Ecological Society of America Meeting, Madison, WI. Abstract and poster: Bulletin of the Ecological Society of America 86th Annual Meeting Supplement: 304.
- Thiet, R.K. and C.B. Davis. 1999. Composition and guild structure of the seed bank of a natural freshwater marsh in the western basin of Lake Erie, Ohio International Soil Ecology Society Meeting, Chicago, IL. Abstract and poster: Proceedings of the 7th Biennial Soil Ecology Society Conference, (Coleman, D.C., ed.): 48.
- Thiet, R.K. and C.B. Davis. 1999. Floristic and seed bank differences between natural and constructed, managed wetlands on the Lake Erie shoreline. Ecological Society of America Meeting, Spokane, WA. Abstract and poster: Bulletin of the Ecological Society of America 84th Annual Meeting Supplement:314.