Caliper
Newsletter of the Department of Natural Resources and the Environment
University of Connecticut
2014-2015

Contents

D.L. Civco, Editor

Heads Up

By John Volin, NRE Department Head

Recently I had the pleasure of writing the dreaded annual report. Every year I make a vow that the next time I will be amazingly organized, which of course would make the compilation of the report a breeze. Alas, for some indiscernible reason, year after year I never quite finish it until late June…hmm. Regardless, even though it probably gets as much readership as this "Heads Up" note, I find it (in the end) to be a worthwhile exercise. It never ceases to amaze me just how much the Department accomplishes in a year, and so these forced reflections are ultimately a good thing. This year's "Caliper" highlights many of the Department's accomplishments and notable events. A highlight of the last year is the four new faculty members who have joined our Department and the two who will join us in January. Drs. Anita Morzillo and Melissa McKinney, both tenure-track Assistant Professors, were hired as part of the "Climate and Sustainable Water Resources" cluster we started a few years ago as part of a collaboration with the Departments of Agricultural Resource Economics and Civil and Environmental Engineering, and the Center for Environmental Sciences and Engineering (CESE). Dr. Laura Cisneros, an Assistant Extension Educator, was hired as the new Program Coordinator for the Natural Resources Conservation Academy (nrca.uconn.edu). Dr. Denis Roy, joined NRE and CESE as an Assistant Research Professor in evolutionary ecology. He primarily works with marine and freshwater fishes focusing his research on how ecological forces shape speciation events. Unfortunately, this past January Dr. Mark Rudnicki, who had been with NRE since 2004, returned home to the upper peninsula of Michigan. Mark left halfway through the academic year and we feared losing this important position. However, the administration at all levels was extremely supportive of our Department needs and I am very happy to report that this past week we hired Dr. Robert Fahey to fill the Forest Landscape Ecology position. We also hired Dr. Beth Lawrence, a wetland ecologist, as a new tenure-track Assistant Professor. Like Dr. McKinney, Drs. Fahey and Lawrence both will hold joint appointments in NRE and CESE. I encourage you to read on to learn more about these individuals, and you'll get a glimpse as to why we are all so excited that they are joining us. You will also get a taste of the many terrific happenings and accomplishments that have occurred over the year. As always, please feel free to reach out: we would love to hear from you.

Anita Morzillo joined the NRE Faculty in Fall 2014 as an Assistant Professor in Human Dimensions. Anita grew up in northeastern New York, on the edge of the Adirondack Mountains. She received her B.S. in Biological Sciences from SUNY Plattsburgh, where she participated in research focused on thermoregulation in arctic versus temperate bumblebees. She then spent two years working in the corporate sector in the New York City area, and a summer backpacking around Europe. Anita earned her M.S. in Zoology from Southern Illinois University Carbondale, where she studied nesting and movement behavior of the golden mouse. At this point, her curiosity in human-natural resource interactions led her to Michigan State University, where she completed a dual-degree Ph.D. in Fisheries and Wildlife, and Ecology, Evolutionary Biology, and Behavior. Her dissertation focused on integrating ecology and social science to understand factors affecting potential success of a black bear population recovery in east Texas. Seeking further experience outside of academics, Anita served as a Biologist with the US Environmental Protection Agency in Corvallis, Oregon, where she studied non-target impacts of pesticides on wildlife with particular focus on human rodent control behavior. She then spent four years as an assistant professor at Oregon State University, where her research focused on wildlife habitat modeling and human dimensions of natural resources. At UConn, her position focuses on human dimensions of natural resources, which investigates how humans make decisions about natural resources, and the characteristics of humans that influence those decisions. Anita's research interests are broad, and include wildlife management, urban ecosystems, water resources, landscape ecology, the wildland-urban interface, urban-rural interactions, and recreation.

Melissa McKinney joined the NRE Faculty in Spring 2015 as an Assistant Professor in Ecotoxicoloy. Melissa researches how biological and ecological factors influence contaminant accumulation and associated health risks in Arctic marine species. She is particularly interested in how climate change-induced ecological shifts alter contaminant levels and dynamics in Arctic marine mammals such as polar bears and beluga whales. Melissa received her BSc in chemistry from the University of British Columbia. She acquired her MSc from the Great Lakes Institute for Environmental Research at the University of Windsor, studying brominated flame retardant exposure and biotransformation in Arctic and St. Lawrence River Estuary beluga whales. Her PhD was obtained from the National Wildlife Research Center at Carleton University, where she researched diet and diet change effects on regional and temporal variation in chlorinated and brominated contaminant levels across circumpolar polar bear subpopulations. She recently completed her postdoctoral research at the University of Windsor and at Dalhousie University, during which she studied long-term and large-scale ecological changes occurring in Arctic marine ecosystems, through research on polar bears from Alaska and Greenland to prey fish and full food webs in the Canadian Arctic. Melissa is happy to be getting started now in her new position in NRE, with a cross appointment in the Center for Environmental Sciences and Engineering (CESE).

Denis Roy is a new cross-appointment to NRE and CESE. He hold's a BSc from Queen's University and both an MSc and PhD in biological sciences from the University of Windsor. His work uses both empirical and theoretical frameworks to show that changes to ecological settings have significant impacts on a species evolutionary potential, biocomplexity and integrity. This work has spanned Arctic, temperate and tropical regions and has included both marine and freshwater environments. As a research fellow in the Marine Gene Probe Laboratory at Dalhousie University, Denis clarified the population structure of exploited fish species and related this to environmental conditions in landscape genetic approaches. This work has been used to better identify Ecological/Evolutionary Significant Units among at risk species and to direct future research in other economically relevant ones. While at the Swiss Federal Institute for Aquatic Sciences and Technology (EAWAG), Denis developed and helped establish long-term ecological research programs cataloguing the changing biodiversity of Swiss aquatic ecosystems. One study in particular, featured in the journal Nature, showed perhaps one of the best examples of human induced ecological changes (eutrophication) linked to repeated evolutionary responses (reverse speciation) of a fish species complex (Coregonids) in large lakes. Denis's recent work also demonstrates that intraspecific factors, other than interpopulation variation, can reduce the impetus for species to diverge, and that hybrid "superswarms" can be important catalysts to rapid speciation and adaptation. Denis joins CESE and the NRE, to further clarify ecology's role in evolutionary processes using genomics and bioinformatics.

Laura Cisneros became Program Coordinator for the Natural Resources Conservation Academy (NRCA) in Summer 2014. Laura is a native of Ann Arbor, Michigan. She received a B.S. in Zoology at Michigan State University, and a Ph.D. in Ecology and Evolutionary Biology at the University of Connecticut. Her research and teaching interests focus on understanding how human activities affect ecosystems and using this understanding to inform students and citizens about the intimate role that we play in global sustainability. Laura's Ph.D. research explored the effects of human-modified landscapes on bat communities in Costa Rica, and identified landscape characteristics that promote biodiversity and vital services provided by bats (e.g. pollination, seed dispersal). Throughout Laura's career she has strived to play an integral role in environmental education to the general public, and has been involved with a number of environmental education/outreach programs in Michigan, Connecticut and Costa Rica. This past July, Laura joined NRE as the Coordinator of Natural Resources Conservation Academy (NRCA) and an Assistant Extension Educator. As coordinator, Laura looks forward to integrating research with community outreach via involvement with student mentorship and citizen science projects.

Robert Fahey will join the NRE faculty in January 2016 as an Assistant Professor in Forest Landscape Ecology with a cross appointment in the Center for Environmental Sciences and Engineering (CESE). Bob is a native of the Finger Lakes region in central New York. His research focuses on urban forest landscape ecology, linkages between canopy structure and forest ecosystem functioning, understanding forest resilience through dendroecology, and promoting forest resilience through silvicultural restoration. He received his B.S. in Natural Resources from Cornell University and M.S. in Forest Science from Oregon State University, where his research focused on silvicultural restoration of young Douglas-fir forests. Bob earned his Ph.D. in Forest Ecology and Management from the University of Wisconsin-Madison where his dissertation focused on the landscape dynamics and restoration of eastern white pine as a component of mesic hemlock-hardwood forests in the Great Lakes region. After completing his graduate work he spent four years as a research scientist at The Morton Arboretum outside Chicago, where he focused on the ecology and management of urban forest landscapes. He also conducts research and is on the teaching faculty at the University of Michigan Biological Station in northern Michigan. In addition to these research activities, he is a leader in multiple regional and national collaborations focused on increasing the resilience of urban forests to climate change and other threats. Bob looks forward to further developing research and outreach programs at UConn focused on managing forests in human dominated landscapes.

Beth Lawrence will be joining the NRE faculty in January 2016 as an Assistant Professor, and will hold a joint appointment with the Center for Environmental Sciences and Engineering (CESE). Beth's research explores multiple dimensions of plant population, community, and ecosystem ecology, and aims to enhance the management of natural systems by elucidating mechanisms that sustain biodiversity and ecosystem function. Her research focuses on wetland ecosystems where she uses a combination of field observations, manipulative experiments, and laboratory analyses to investigate carbon cycling and the consequences of plant invasion in the context of ecological restoration. She received her BS in Natural Resources from Cornell University, and an MS from Oregon State University. Her dissertation work at the University of Wisconsin-Madison focused on *Carex stricta* tussock formation, persistence and potential for carbon sequestration. Her recent work in Great Lakes coastal wetlands examines the consequences of hybrid cattail (*Typha* x *glauca*) invasion on greenhouse gas flux and how mechanical harvest of this invasive species can promote biodiversity, mitigate eutrophication, and create a source for bioenergy. She has been an Assistant Professor at DePaul University since 2012, where she has been investigating the carbon dynamics along a restoration chronosequence and how vegetation structure impacts habitat usage by urban wildlife. Beth looks forward to developing research projects at UConn focused on coastal salt marsh restoration.

Natural Resources Conservation Academy 2014-2015

Getting Young Scientists Involved in Local Environmental Projects that Benefit CT Communities

NRCA Class of 2014-2015 at CCNR in March 2015

March 16th 2015 marked the culumination of another very exciting year of the Natural Resources Conservation Academy (NRCA) at the Connecticut Conference on Natural Resources (CCNR). This past July, the NRCA began working with its third class of high school students during a one-week intensive field experience, where the 22 students were introduced to a variety of environmental and natural resource conservation issues and topics. Following the field experience, each student returned to their hometown and began working on a seven-month community conservation project. These projects addressed a wide range of environmental topics and issues, such as development of forestry management plans, efforts to help restore declining bat populations, biological control of purple loosestrife, and monitoring wildlife or aquatic fauna to guide restoration activities. As a result, the students have produced valuable products and results that benefit their local communities, ranging from informational videos and field guides to green infrastructure, such as rain gardens, to important baseline data that will help guide management of Connecticut forests and rivers. The enthusiasm and motivation of this year's cohort lead to the completion of 21 community projects, with 19 of the students presenting their work at the 2015 CCNR and officially graduating as Connecticut Conservation Ambassadors. To date, 52 community conservation projects have been completed throughout Connecticut. And as we get ready to welcome the fourth NRCA cohort, we are excited to see how the students will continue to explore innovative ways at addressing a variety of environmental and natural resource conservation issues throughout Connecticut.

Academy posters presented at CCNR 2015

CCNR 2015 - Another Successful Connecticut Conference on Natural Resources

By Morty Ortega

Keynote speaker Wendi Weber with John Volin, Morty Ortega, and Rick Jacobson

After a long winter with plenty of snow and cold weather we were crossing our fingers to have a spring day for our CCNR. Our wishes came true, and we had excellent weather for the over 300 participants that joined us for the 9th Conference on the UConn Storrs campus. This was the largest registration of participants with 335 people. We had an excellent keynote speaker, **Wendi Weber**, the Northeast Regional Director of the U.S. Fish & Wildlife Service. Mrs. Weber speech was entitled: *Connect and Conserve: Harnessing the Power of People and Science to Meet Future Conservation Challenges.* Her talk provided us with a great vision of what the USFWS does in northeast, but emphasized the work being done in Connecticut. **Lynn Werner** was our Connecticut Outstanding Environmental Leadership awardee. Mrs. Werner is the Executive Director of Housatonic Valley Association. An Alumnus from our Department Mrs. Werner has worked with citizens and local governments to make sure their voices were heard on regional environmental issues. She has also worked with grassroots groups, state and local agencies to appropriately conserve the Housatonic River. There were 28 scientific presentations, 33 posters, which included 17 posters on works done by students that participated in the 2014 Natural Resources Conservation Academy. There were also three workshops; one of them brought the participants to walk around campus to learn more about the green stormwater infrastructure at UConn.

Connecticut Outstanding Environmental awardee Lynn Werner with Morty Ortega and Rick Jacobson

Connecticut Conference
ON NATURAL RESOURCES
Many Resources, One Environment

Modeling the Art and Engineering of Roman Aqueducts with Lego Bricks

By Gary Robbins

Professor Gary Robbins, forever seeking new approaches to water resource related education, developed a series of models of ancient Roman aqueducts and related systems for the classroom using Lego bricks. His efforts expanded to become the first NRE faculty art exhibit at UConn. Some 30 of his models were on display at the Plaza Art Gallery in the Homer Babbage Library from July 15 to October 24, 2014. The exhibit was entitled Modeling the Art and Engineering of Roman Aqueducts with Lego Bricks. The exhibit was written up in the August 28, 2014 issue of *UConn Today* and the July 28, 2014 issue of the *Hartford Courant*. Dr. Robbins also appeared on WILI-AM with Wayne Norman on August 28, 2014. In case you missed the exhibit, it is on Youtube at (http://youtu.be/8FeC7LIgaaM). You can also view two of his water action Lego brick models on Youtube - *An ancient Roman Water Wheel* (http://youtu.be/QAmYv10rzPc) and a *Roman Watermill* (http://youtu.be/8CbHClJtiq4).

Sevilla Aqueduct

While on sabbatical in the spring semester, Dr. Robbins had an opportunity to visit a number of the aqueducts he modeled with Lego bricks This is the one in Seville, Spain that was built during the time when Julius Caesar conquered Spain in about 68 - 65 B.C. Drs. Robbins and Warner will be teaching a field course in Rome, Italy in May 2016 on the Roman contributions to modern water systems. Our students will have an opportunity to visit a numer of aqueducts during the course.

ConnecticutView expands its role in nationwide partnership

By Daniel Civco and James Hurd

Landsat 8 Optical Land Imager (OLI) mosaic, acquired April 2014. Image is displayed showing near infrared reflectance as Red, middle infrared as Green, and Red as Blue.

AmericaView (AV) is a nationwide partnership of remote sensing scientists who support the use of Landsat and other public domain remotely sensed satellite data through applied remote sensing research, K-12^{+} STEM education, workforce development, and technology transfer. Originally initiated in 1998 as a pilot project in Ohio (OhioView), the United States Geological Survey was instructed by Congress in 2000 to expand and implement the program nationwide resulting in the formation of AmericaView. To date, 39 states are participating in AmericaView. Connecticut was originally accepted as an Affiliate member of AmericaView (AV) in May 2010. Through an AV mini-grant opportunity provided during that same year, *ConnecticutView* was able to design and establish a ConnecticutView website and identify some initial goals and projects. Since then, however, with no funding available to Affiliate AV members, little activity had occurred. Through an Affiliate Development Grant opportunity, awarded in Fall 2014, ConnectictView will be able to establish a ConnecticutView Consortium and begin developing educational and outreach materials. Under the leadership of Daniel Civco (PI) and James Hurd (Coordinator), the primary activities of ConnecticutView over the next three years will be: the establishment of a ConnecticutView Partners Consortium, where members participate in determining the future direction and objectives of ConnecticutView and are actively involved in its activities; development of an online map service of Connecticut statewide mosaics of the best available Landsat (MSS, TM, ETM+, OLI) “leaf-off” and “leaf-on” imagery from the 1970’s, 1980’s, 1990’s, 2000’s, and 2014; development and presentation of remote sensing educational webinars; and update and continued maintenance of the ConnecticutView website with new educational and informational content. These activities will provide both educational outreach information and data focused on introducing ConnecticutView and AmericaView to potential consortium partners and other parties in the state that may be interested in these data and applications. It is expected that these services will become available through the ConnecticutView website (http://ctview.org/) in Spring 2015.

Bringing Wildlife to Washington D.C.

By Megan Floyd, NRE MS Student

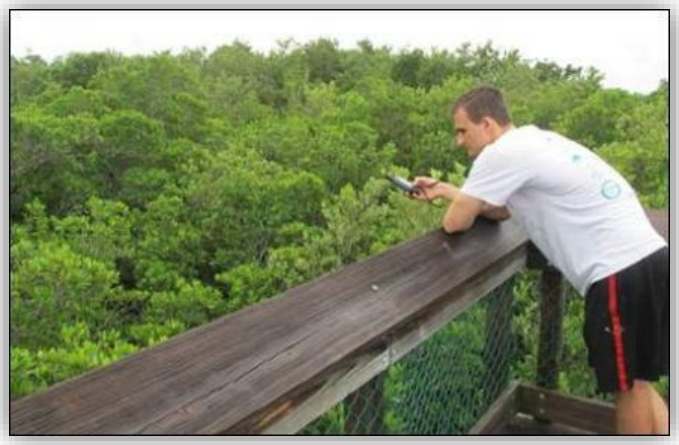
The graduate courses that I have taken typically include discussions pertaining to field work, research, ethics, etc. I assumed that NRE 5325, a graduate-level course in Wildlife Management taught by Dr. Rittenhouse, would be similar, potentially more of a seminar style series overviewing recent or notable peer-reviewed articles. What I did not expect was the eye opening perspective that can only be seen on the streets and in the buildings of Washington D.C. Many of my fellow classmates and colleagues spend most of our time outdoors collecting data, usually covered in mud or grass. However, in this course we were granted a unique opportunity to view wildlife management through a new lens. We were able to actively participate in wildlife management which really means advocating for wildlife in our interactions with people. In February 2014, we joined Richard Jacobson, Director of Wildlife Division of CT DEEP, and Jenny Dickson, supervising wildlife biologist, in Washington D.C. at the Teaming with Wildlife Fly-In Event to help procure funding to keep common species common throughout the state of Connecticut. Essentially, we helped inform our state representatives on the state of wildlife in Connecticut and advocate for their support through increased funding for Connecticut's State Wildlife Action Plan; a plan that allows researchers, both students and professionals alike, to study and gain useful knowledge on species that are of particular importance. While we may not have been in the woods, we contributed to the survival of Connecticut's species in a way that was novel to both me and my classmates. In my chosen field of study, I didn't expect to be afforded an opportunity such as this, but to be able to voice both my concern and my opinion on the validity and importance of this funding is an experience I won't soon forget.

An Inscription from Teddy Roosevelt, 1910 in the US Capitol. Michael Evans, Jason O'Connor, Megan Floyd, Jenny Dickson, and Richard Jacobson (left to right).

Meeting with Senator Blumenthal. Jenny Dickson, Sandy Breslin form CT Audubon, Kelly O'Connor, Megan Floyd, Senator Blumenthal, Michael Evans, Jason O'Connor, and Richard Jacobson (left to right).

Studying beyond the borders

By Adam Chlus, NRE MS 2015



Taking advantage of research opportunities outside of the NRE Department and the University has given me the valuable opportunity to collaborate with researchers using remote sensing across a variety of disciplines. These experiences, along with the people with whom I have worked, have been instrumental in shaping and guiding my master's research as well as my future research interests. During my first summer as a graduate student I was involved in the DEVELOP program at NASA Ames Research Center in Mountain View, California. DEVELOP is an interdisciplinary research program in which student groups work with partner organizations to use Earth observation technology to help address locally-important environmental issues. Our group's project involved collaboration with U.S Fish and Wildlife Service to develop bird habitat maps that would be used for management decision making. The following year I spent several months working with Dr. Marc Simard at NASA's Jet Propulsion Laboratory developing new methods for characterizing forest structure. The research, which has become the subject of my masters' thesis, involved developing long term records of forest height and disturbance history using a combination of lidar, radar and optical remote sensing. Within the University, I have had the invaluable opportunity of working with Dr. Heidi Dierssen on novel research using hyperspectral remote sensing to monitor and characterize coastal ecosystems. Our research has involved the detection and classification of algal and seagrass debris in the Florida Keys, characterization of seagrass beds in California and most recently, the use of an imager aboard the International Space Station to identify algal blooms in Long Island Sound. [*Footnote: Adam starts his PhD graduate program in Fall 2015 in the Department of Forest and Wildlife Ecology at the University of Wisconsin-Madison working with Dr. Phil Townsend in the area of Forest Remote Sensing and Spatial Analysis*]

Proud to have been an NRE Undergraduate

By Rebecca Trueman, NRE BS 2012

Rebecca Trueman completed her bachelor's degree with UConn's NRE department in the spring of 2012. Rebecca consistently finds herself showing her husky pride by sharing how proud she is of the education she received. UConn was a special time where she was given an array of opportunities she has become increasingly appreciative of post-graduation. Rebecca was a part of multiple research projects where she was trusted enough to take the lead in aspects of data collection, organization and analysis. The accumulation of these involvements gave her a sense of confidence as a young scientist that has been vital to her success throughout her masters, in performing research at a more independent level. Rebecca has been working on her master's degree with the University of Rhode Island's Biological and Environmental Sciences program for the past year and a half. Her major advisor, Yeqiao Wang, in fact, received his MS and PhD degrees from UConn NRE with the guidance of Dr. Civco. Rebecca is very grateful for the NRE facility who did an excellent job of helping her find her passion for geospatial sciences and hydrology. Additionally, it is their effectiveness in communication that she attempts to replicate in her job as a teaching assistant and in presentations of her research at professional conferences. Rebecca considers herself to be very much a person who seeks opportunities and feels that in her four years with the NRS department, "The opportunities were continuous and invaluable. Every day walking up Horsebarn Hill to the Young Building had meaning." Rebecca completed her MS degree at URI in May 2015 and is working for the Rhode Island NEMO project for the summer.

NRE says farewell to a loyal assistant

Kara Anderson has been an office assistant in NRE since 2011, her first year at UConn. Kara graduates in Spring 2015 with a BS in Allied Health Sciences and a minor in Psychology, and is planning to pursue a career in Physical Therapy. Kara has provided invaluable assistance to faculty, staff and students in NRE throughout her four years in the office. Suzie Arildsen, NRE Secretary had this to say about Kara: "*Kara has been such a joy to work with, always willing to please and invaluable when it comes to her experience with all of the NRE postings on the monitor, in our catalog, and any other publications that we need. Her experience with Web master has been a huge plus for our department. Kara is very responsible and capable of any task that she is assigned to do. She has assumed her responsibilities seamlessly. Her personality is upbeat and infectious; she is very mature and always follows through with whatever task she is given. She will be missed by all but we know that no matter where she goes she will be successful, we wish her the very best.*" From all those in NRE, thank you, Kara, and good luck !

2014 Summer Undergraduate Research Fund (SURF) Awards

The UConn Summer Undergraduate Research Fund (SURF) supports University of Connecticut full-time undergraduate students in summer research or creative projects. Congratulations to the NRE students who received two of the fifty-nine UConn undergraduates offered SURF Awards for Summer 2014!

Jaron Kolek

Using Distance Sampling to Estimate Density of Newly Metamorphosed Amphibians

Faculty Mentor: Dr. Tracy Rittenhouse

Amphibian research and conservation tends to focus on aquatic life history and the protection of wetlands. While these areas are essential for reproduction, survival in the terrestrial life stage also affects population dynamics. Population characteristics, such as density and gender ratios, may have large impacts, but these factors are poorly understood and techniques for studying terrestrial life stages are limited. To determine the effectiveness of distance sampling as a means of estimating juvenile wood frog and spring peeper densities, we initiated a study to compare population characteristics from Program DISTANCE to mark-recapture estimates calculated using Schnabel estimator. We used two sampling locations, Industrial Tract and Beaver Pond, within the University of Connecticut forest system and conducted a total of 15 sampling events over the course of 10 weeks resulting in over 5 km of sampling and 315 captures. We calculated a density of 0.0059 frogs/m^2 at Industrial Tract and 0.0164 frogs/m^2 at Beaver Pond. Using Schnabel mark recapture analysis, we calculated frog density to be 0.25 frogs/m^2 at Industrial Tract and 0.66 frogs/m^2 at Beaver Pond. The density estimates using distance sampling methods were unrealistically low and the estimates of detection probability suggest that only 8.8% of the population was observed at the Industrial Tract, and only 2.6% at Beaver Pond. Our results indicate that distance sampling is not an effective method for estimating densities of juvenile pond breading amphibians. Additional research is needed to identify an effective protocol for estimating densities of juvenile amphibians.

Wood Frog

https://uconnladybug.files.wordpress.com/2011/05/wood-frog.jpg

Emily McInerney

How Do water Table Fluctuations Affect Greenhouse Gas Emissions from Created Wetlands?

Faculty Mentor: Dr. Ashley Helton

Wetlands are typically considered large carbon (C) sinks because of high carbon dioxide (CO_2) fixation rates by plants and C accumulation in sediments. However, wetlands are also the single largest natural source of CH_4, which has a global warming potential 25-34 times stronger than CO2 (over a period of 100 years). The propensity for CH_4 and CO_2 fluxes to offset C accumulation depends on both microbial- and plant-mediated production and consumption of C gases. The purpose of this research was to quantify carbon dioxide (CO_2) and methane (CH_4) fluxes from three adjacent, experimental wetlands in the presence and absence of vascular plants (cattails species: *Typha angustifolia* and *Typha latifolia*) across a gradient of soil moisture. The median (± std error) CH4 flux was 1.27 mg $m^{-2}h^{-1}$ (±0.579) and the median CO_2 flux was 704 mg m-2h-1 (±80). Similar to previous research, CO_2 fluxes were higher in experimental plots with plants across the moisture gradient. Average CO_2 fluxes increased with maximum plant height (r^2 = 0.58; $p<0.05$). Average CH4 fluxes were positively correlated with soil moisture (r^2 = 0.26; $p<0.05$), with CH_4 fluxes increasing from 0.79 mg $m^{-2}h^{-1}$ (±0.42) in the driest to 3.88 mg $m^{-2}h^{-1}$ (±1.37) in the wettest wetland. Fluxes of CH_4 were not significantly related to the presence of vegetation within experimental plots. However, previous work shows that *Typha angustifolia* releases substantially less CH_4 relative to other herbaceous wetland species, which suggests that populating constructed wetlands with low CH_4 emitting vegetation may help balance carbon fluxes.

A surface-flow wetland, designed by the USDA–Natural Resources Conservation Service (NRCS) was constructed on the University of Connecticut's Storrs campus in 1994.

Mark Rudnicki joins Michigan Technological University

In August 2004, Mark Rudnicki joined NRE as an assistant professor of forest ecology, and had built a research program centered on understanding catastrophic and chronic wind interactions with forest ecosystems. Mark was the co-founder of the annual Connecticut Conference on Natural Resources and was instrumental in helping to establish *Stormwise*, a forest vegetation management program with the goal of reducing the risk of tree-related storm damage to power lines. In January 2015, after more than a decade of successful efforts at UConn, Mark accepted a position at Michigan Technological University as Professor of Practice in Forest Biomaterials and Executive Director of the Michigan Forest Biomaterials Initiative. Mark reflects on "Life After UConn".

Wow! It's been 3 months of rapid changes and huge adjustments. Resigning my position was very scary and full of mixed emotions. Great departments (not to mention tenured positions) are hard to come by, and the NRE family was so good to me, many parts of leaving felt just downright unnatural. The departure was on such a short time line, only now have things really settled in – though the rest of the family seems to make the adjustments much easier – especially the kids. The new job here at Michigan Tech may be a bit unusual for a professor as I am working on a statewide initiative in forest biomaterials which includes meeting with government, industry leaders, other universities and legislators across the state. Lots of time is spent on the road and in the air. I am heading to Germany in a few weeks for the largest woodworking and forestry machinery show in the world. This is primarily reconnaissance to share the latest technology with regional sawmills wood processers. So I guess you could say my job is really mostly extension, but will transition to include teaching and research next year. Hopefully while I am in Germany I will get some tips and tricks for my own woodworking efforts. Speaking of which, I have plans for a new woodworking shop, but still have some waiting to do for the snow to melt before I can break ground on it (hopefully before May). But the best part is the reward that our kids are around their grandparents and for me having family with snowplows (which is a Godsend around these parts).

We all wish the best of luck to Mark and his family!

Volin receives the Blick Award

John Volin received the 2015 David Blick Science Education Award given through the Neag School of Education and recognizes those who have contributed significantly to its mission. Sponsored by David James Blick, Jr., the award is given to "Neag School of Education faculty, alumnus or alumna of school, or a member of the faculty of another school or college at the University" who have "demonstrated, during the year prior to the Award, a record of exceptional performance in science education." Congratulations to Dr. Volin!

In the News

Wood frogs http://naturally.uconn.edu/2014/03/18/wood-frogs/	Jason O'Connor Naturally@UConn March 18, 2014
Meet a CANHR undergrad http://naturally.uconn.edu/2014/04/02/meet-undergraduate-student-annie-stupik/	Annie Stupik Natually@UConn April 2, 2014
Studying wetlands as a producer of greenhouse gases http://today.uconn.edu/blog/2014/07/wetlands-good-or-bad-for-the-environment/	Emily McInerney UConn Today July 21, 2014
Landscape ecologist works to conserve New England cottontail habitat http://naturally.uconn.edu/2014/07/22/landscape-ecologist-chad-rittenhouse-works-to-conserve-new-england-cottontail-habitat/	Chad Rittenhouse Naturally@UConn July 22, 2014
Muddy forests, shorter winters present challenge for loggers http://www.sciencecodex.com/muddy_forests_shorter_winters_present_challenges_for_loggers-148010	Chad Rittenhouse Science Codex Dec 23, 2014
There's no place like home http://naturally.uconn.edu/2015/01/20/theres-no-place-like-home/	Tracy Rittenhouse Naturally@UConn Jan 20, 2015
Yanking state conservation money now Is foolhardy http://www.courant.com/opinion/op-ed/hc-op-arnold-connecticut-land-conservation-critical-0503-20150501-story.html)	C. Arnold & J. Volin Hartford Courant May 3, 2015
Sport fishing makes fish harder to catch http://www.cbc.ca/radio/quirks/quirks-quarks-for-june-13-2015-1.3111320/sport-fishing-makes-fish-harder-to-catch-1.3111480	Jan-Micheal Hessenauer CBC Radio June 13, 2015
UConn's Natural Resources Conservation Academy Students Learn Through Community Projects http://www.courant.com/news/connecticut/hc-uconn-nrca-bridge-0717-20150726-story.html	Hartford Courant July 26, 2015

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Let's Hear from You

We want to hear from our friends and alumni. Please drop us a line and tell us about your life, occupation and how things have progressed since leaving UConn for the Alumni and Friends News section of the next newsletter.

nre@uconn.edu

http://nre.uconn.edu/

Your Contributions Go Far

If you would like to contribute to a scholarship or to the general NRE fund, please complete the information below.

__ I/we would like to contribute to the NRE department in the amount of:

□ $25 □ $50 □ $100 □ $250 □ $ _____

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Beth Sheldon, University of Connecticut, Department of Natural Resources and the Environment, 1376 Storrs Rd., Storrs, CT 06269-4087 (860) 486-2840. Beth.sheldon@uconn.edu.

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