As you can see from the signature block below, I have new responsibilities in the college and will be ending my time as chair this month. Leading the best department on campus has been a distinct pleasure, thanks to faculty colleagues, a great staff, and wonderful students. I have also enjoyed interacting with our alumni during their visits to campus or at professional meetings around the country. NREN is transitioning, too. Faculty familiar to alumni have retired over the last two years (Bill Mautz, Lyndon Goodridge, Barry Rock, and Bruce Lindsay) and others (Bob Eckert and Mimi Becker) are poised to retire in June. We have added new faculty this year (Jen Purrenhage) and are in the midst of hiring both a tenure track faculty member and another lecturer. While the people in NREN change, the department’s commitment to high quality teaching and research remains. We all, faculty, staff, students and alumni can be proud to be associated with the department.

For our older alumni, I am saddened to report that Professor Harold Hocker, Extension Forester Stan Knowles, and COLSA Assistant Dean Emery Booska passed away since our last Tally Sheet. All of them played critical roles in the education of NREN students, although their works were not often visible. Dr. Hocker was a faculty member for over thirty years and served as department chair in the 1980’s. Stan Knowles was the on-campus forest management specialist for UNH Cooperative Extension. Emery Booksa worked primarily in the college deans’ office and played a key role in the protection and management of UNH’s woodlands and natural areas, especially College Woods. Their contributions benefit past, present and future NREN students. We will miss them all.

Ted Howard, Professor, NREN Department Chair & Associate Dean for Faculty & Strategic Partnerships College of Life Sciences and Agriculture

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Professor Pete Pekins Hosts the 47th North American Moose

Northern New England and the three state wildlife agencies of Maine, New Hampshire, and Vermont co-hosted the 47th North American Moose Conference and Workshop at the Mountain View Grand Resort in Whitefield, NH on May 20-24, 2013. Professor Pete Pekins was the organizing chairperson, and through the combined efforts of his MS graduate students Haley Andreozzi, Wes Smith, Nick Fortin, and Alexej Siren, departmental and university personnel, and many UNH departmental alumni who work for NH Fish and Game Department and the White Mountain National Forest, produced an informative and fun meeting for over 100 moose biologists traveling from Alaska to Sweden. For many biologists, this was their first trip to New England.

The conference featured two themes important in New England: Moose Browsing Forest Regeneration and Diseases & Parasites. Expert panel discussions and interactive sessions were lead by regional and national leaders. There were more than 35 presentations with unprecedented participation by graduate students from the US and Canada. Ben Kilham, NH’s famous bear researcher and UNH alumnus, gave an entertaining evening presentation about his work and life with black bears. The field trip featured stops in Franconia Notch, a lobster boil on the Kancamagus Highway where USFS personnel and more UNH alumni made the group welcome and well fed, Pinkham Notch, and the scenic 13-Mile Woods above Berlin. For a surprising number, this was their first Maine lobster with a few Scandinavians actually having triple-lobster lunch!

The importance of the 47th NA Moose Conference is highlighted by the initiation of sister research projects in NH and Maine when more than 200 moose will be captured and radio-collared in January 2014 and 2015 to measure regional productivity and mortality. The NH effort will be headed at UNH by Pete Pekins in cooperation with the NH Fish and Game Department. In Maine, moose project leader Lee Kantar (UNH wildlife alumnus) will lead the efforts by the Maine Department of Inland Fisheries and Wildlife. Combined, this will be the biggest field research effort with moose in the lower 48 states.

Professor John Carroll’s Update of his journey on “The Canadian”

Following up on last year’s Via Rail Canada trip on “The Ocean” (Montreal-Halifax), Professor John Carroll took Via Rail’s “The Canadian” from Montreal to the Pacific, traveling the “Skeena Route” across northern British Columbia to Prince Rupert. He found that what one can learn about natural resources, forestry, agriculture, water resources and, obviously, the landscape and its ecosystems across the continent, and much else on such a trip is unique to the nature of long-distance rail travel. Such travel can be deeply insightful and John recommends it. This September, John’s daughter, Abigail, published her new book, Three Squares: The Invention of the American Meal (Basic Books, 2013), a book receiving widespread acclaim in the Wall Street Journal, New York Times, Huffington Post, the New Yorker, and many other outlets. To keep up with his daughter, John is finishing his new work, Live Free and Farm: Food and Independence in the Granite State.
FACULTY IN THE NEWS

PROFESSOR BRUCE LINDSAY RETIRES ~ 38 YRS. TEACHING EXCELLENCE

This past fall marked the retirement of Professor Bruce Lindsay, after 38 years of research, teaching, and administration at the UNH. Bruce’s tenure at UNH saw his “home” change many times over the years with college restructuring, as he was a member of the Institute for Natural and Environmental Research (INER), the Department of Resource Economics and Community Development, the Department of Resource Economics and Development (where he served as chair), and finally our current Department of Natural Resources and the Environment. Bruce’s course offerings and research varied widely over the years, but mostly focused on the areas of community and environmental economics. He was an active and engaged faculty member, and served as mentor to many graduate and undergraduate students over his long career. He also used his expertise as an active member of town government, serving on the school board and city council for the City of Rochester, New Hampshire. While we will miss him, he will continue to stay active as Police Commissioner of Rochester. However, if you want to visit him, I am sure he would rather it be not in his official capacity. Happy trails, Bruce!

NREN WELCOMES JENNIFER PURRENHAGE, PH.D, LECTURER, ECS

My graduate & postdoctoral research focused on the impacts of variations in aquatic and terrestrial habitat quality on pond-breeding amphibians (mostly spotted salamanders and American toads) and was always conceived in a conservation context. I have used a wide range of experimental approaches —from molecular analyses and small-scale behavioral studies to large, landscape-scale field experiments— to study the ecological implications of habitat alteration for amphibians. By observing how populations and communities respond along environmental gradients we can: (1) deepen our understanding of how systems function and (2) make predictions about how communities will respond to future environmental alterations caused by global climate change and changes in land use. http://nre.unh.edu/faculty/purrenhage

PROFESSOR JOHN ABER RETURNS TO NREN FACULTY POST JUNE 2013

Professor John Aber, on leave for Fall ’13 semester following four years as Provost, gave talks on Sustainability at UNH and our Sustainable Agriculture programs at the University of Bolzano in Italy in October, and at the Harvard Forest in November. In late September he presented an introduction on biogeochemistry in ecosystems to the Board of the Environmental Defense Fund in New York City. In 2003, Aber was ranked 11th in the world in the field of ecology/environmental science by the Institute for Scientific Information (ISI), an organization that measures how frequently a scientist’s work is cited by other researchers. In 2009 he was named a University Professor, UNH’s highest form of recognition for excellence in teaching, scholarship and engagement, and just last year he received the Wilbur Lucius Cross Medal from Yale University. The medal is Yale’s highest graduate alumni honor. “John Aber’s commitment to and passion for UNH are surpassed only by his incredible contributions to higher education and science around the world,” President Mark Huddleston said. “While I will miss his presence in Thompson Hall I am pleased he is returning to the classroom and his research for the benefit of our students and his colleagues around the globe.
Amanda Daly collects soil samples from a corn field in Rock Springs, PA.

Amanda Daly, 3rd Yr. Ph.D. student in Natural Resources, whose goal is to improve agricultural sustainability by improving our understanding of how to reduce nutrient loss from farm soils. Her current research seeks to determine how roots, symbiotic root fungi, and soil microbes act to make vital soil nutrients available to plants, and to evaluate whether this is influenced by agricultural management. Daly has been busy at UNH in the lab of her advisor, Dr. Stuart Grandy, measuring nutrient availability and characterizing microbes from soils she collected during a successful summer field season at Penn State University's research farm in Rock Springs, PA. Daly attended the Soil Ecology Society (SES) biennial meeting in Camden, NJ, where she presented a poster, "Variation in microarthropod enzyme activities across host groups and ecosystems," and became the graduate student representative to the SES board, as well as their official tweeter (@soilecol). She received a travel grant to attend Argonne National Labs' Annual Soil Metagenomics Meeting in Bloomingdale, IL, where she attended workshops on state-of-the-art microbial methods and received helpful feedback on her research in progress while presenting the poster "Proposed methodology for investigating plant-microbe controls on nitrogen priming in an agroecosystem." She won a competitive scholarship to attend the Microbial Diversity summer course offered by the Marine Biological Laboratory at the Woods Hole Oceanographic Institute, which she declined due to field season conflicts. This year, as part of a team with her advisor and faculty from NREN and other UNH departments, Daly helped write a grant proposal that won nearly $500,000 in research funds from the US Department of Agriculture.

Cynthia Kallenbach won two highly competitive graduate student awards: the NIFA (National Institute of Food & Agriculture) - USDA Pre-doctoral Fellowship and the Doctoral Dissertation Improvement Grant from the National Science Foundation.

Post-doctoral researcher Kyle Wickings, who worked with Dr. Stuart Grandy in Natural Resources, accepted a tenure-track faculty position at Cornell University which he began in August ’13.

Post-doctoral researcher Lisa Tiemann, also part of Dr. Grandy's group, continued research she began last year seeking to understand soil fertility losses in Uganda with funding from a prestigious Science, Engineering, and Education for Sustainability fellowship from the National Science Foundation. This summer, she was joined in Uganda by Dr. Grandy and undergraduate Environmental Conservation major Michael Casazza, who won funding from UNH's International Research Opportunities Program for the trip.

Dr. Lisa Tiemann presents soil fertility findings to farmers in Uganda.
STUDENTS IN THE NEWS

Mark Anthony, M.S., Soil Microbial Ecology Lab
Advisor: Serita Frey
Mark is interested in soil microbes at the interface between microbiology & ecosystems ecology. Mark’s research aims to address how soil fungi respond to biotic and abiotic environmental stressors (e.g. climate warming & invasive species). His research capitalizes on the use of next generation sequencing (e.g. metagenomics, metatranscriptomics) to query the response of soil microbial communities and the genes microbes express under different climatic manipulations. Mark is currently studying how *Alliara petiolata* (garlic mustard) influences soil fungi from simulated warming and nitrogen fertilization experiments. Specifically, this research aims to understand how soil organic matter transformations (e.g. nutrient availability, greenhouse gas emissions) will be influenced by global change.

Bianca Rodriguez-Cardona, M.S., Soil & Water Resources Management
Advisor: Bill McDowell
Title: Nitrate dynamics in streams: Is the carbon the driver?
Description: How carbon availability affects nitrate uptake in the Lamprey river watershed by comparing whole stream addition experiments at a low carbon high NO3 site and a high carbon low NO3 site.

Tessa B. Wheeler, M.S., Natural Resources
Advisor: Rich Smith, Agroecology Lab
2nd year M.S. Student
Thesis topic: Effects of High Tunnel Production on Greenhouse Gas Emissions
(High Tunnel Production is a form of agricultural season extension)
B.S. University of Virginia, Civil and Environmental Engineering (Charlottesville, VA), graduated 2009
(Senior thesis: Solar Hot Water Heating Systems: *A Comparative Analysis of Evacuated Tube vs. Flat Panel Designs*)
Originally from Philadelphia, PA
**STUDENTS IN THE NEWS**

**Andy Maguire, M.S., Wildlife & Conservation Biology**
Advisor: Dr. Rebecca Rowe

Graduated from Colby College in 2011 ~ double major in Biology and Environmental Science. Andy’s research focuses on the ecology of small mammal communities on the arctic tundra in northern Alaska. Andy spent the summer of 2013 conducting field research at the Toolik Field Station, AK. His broader interests include the ecological impacts of small mammals on vegetative communities and the effects of diverse tundra habitats on the distribution and abundance of small mammals in a changing climate.

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**Nicholas Shonka, M.S., Soil & Water Resources Management**
Advisor: Dr. Bill McDowell

Current Project: Sediment loading and transport associated with land-use change in the Lamprey River Watershed

Prior Education:
B.A. University of Colorado - Boulder

[http://wrrc.unh.edu/nicholas-shonka](http://wrrc.unh.edu/nicholas-shonka)

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**Rory Carroll M.S., Wildlife and Conservation Biology**
Advisor: Dr. Marian Litvaitis

Rory’s current project uses landscape genetic techniques to explore the population structure and connectivity of bobcats in New Hampshire. He hopes to incorporate his work into conservation policy as well as public and educational forums.

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**Henry Jones, M.S., Wildlife & Conservation Biology**
Advisor: Dr. Peter J. Pekins

Research Topic: Mortality and productivity of moose in northern NH. He is a master's student at UNH in the Wildlife Ecology program. The research project I am working on is a cooperative project between UNH and New Hampshire Fish and Game Department investigating mortality and productivity of moose in northern NH.
Project Summary: Tracking changes in the types and amounts of algae present allows scientists to quantify the effects of changes in climate and human impacts on New Hampshire's Great Bay Estuary over time. This research project uses three approaches to measure variations in macroalgal communities: 1) assessing the species of macroalgae present along transects located at sites that have been studied previously, 2) assessing macroalgal cover at random locations in conjunction with aerial photography of the estuary, and 3) analyzing nitrogen isotope ratios in macroalgal tissue to trace nutrient sources. A protocol for monitoring macroalgae is a much-needed management tool to maintain Great Bay Estuary as a National Estuarine Research Reserve that supports healthy estuarine communities and provides the environmental services upon which many New Hampshire communities rely, especially the assimilation of wastewater.

Morgan Crowley, M.S., Natural Resources
Advisor: Dr. Russ Congalton
Research Topic: Community engagement and human migration in disturbance-prone working landscapes of the Inland West

Morgan Crowley stands with the 19th century water pump in London, England identified by physician John Snow as the distributor of cholera in the 1854 Soho epidemic by physician John Snow. Snow used point mapping and spatial statistics to establish the center point of cholera outbreak clustering. This is considered the founding event of epidemiology, and an influential event in Geographic Information Sciences (GIS), geography, and health studies.

Myers Shaiyen, M.S., Natural Resources
Advisor: Dr. Richard Smith
B.S., The Pennsylvania State University
Research Topic: Genotypic Diversity in Perennial Rye Grass

My current project involves using gynotypically diverse cultivar mixtures of perennial rye grass to investigate the ecological effects it has compared to planting single cultivars. Some research has been done looking at yield and biomass but there is a lot of evidence showing gynotypic diversity can greatly influence insect communities and decrease herbivore numbers which is what I am mainly interested in together with improving plant productivity.

Nicholas Dowhaniuk, M.S., Natural Resources
Advisor: Dr. Russell Congalton
Research Topic: Assessing the Impact of Resource Extraction in a Ugandan National Park

Nick is studying the effect that resource extraction is having on the landscape of Murchison Falls National Park in Western Uganda. Murchison Falls National Park is located in the Albertine Rift, a biodiversity hotspot known for its numerous globally and regionally threatened species, as well as its extraordinary human population growth and land conversion to agriculture. The surrounding human population consists of over 55 distinct ethnic groups. Nick’s research revolves around two questions, (1) how has the population grown and where are localized hotspots of population growth since resource extraction has begun, (2) what are the impacts from resource extraction on spatial pattern and landscape level change?
Cameron McIntire,  NRESS, Ph.D., Student
Advisor: Dr. Heidi Asbjornsen

Cameron recently graduated with a BS from the University of Utah in Biology. While an undergraduate he worked in a plant genetics lab, maintained the university greenhouse, and co-managed the campus organic garden program. As research was focused on the tropical paleoecology of Tortola, British Virgin Islands. Using lake sediment cores he reconstructed a fire history through charcoal analysis and also made observations of plant communities using persevered pollen.

He is now a PhD student under the direction of Dr. Heidi Asbjornsen. His main research interest is linking climate change with forest and agricultural land management in order to model and predict water/carbon budgets in the northeastern US. Cameron is currently working on a project addressing white pine needle damage (WPND) as it relates to water uptake and annual growth using sap flow and dendrochronology techniques. This disease is thought to be propagated by wet springs and warmer temperatures and has been a major issue in the region since 2010. He is hoping to expand the data collection for this project to include more sites and climate variables in order to quantify the impacts of WPND on a large scale across four climatic zones in New England.

http://www.ecohydro.sr.unh.edu/

Jessica Veysey – Ph.D., University of New Hampshire, Wildlife Ecology and Environmental Studies
Awarded Switzer Environmental Fellowship Summer 2013

2013 SWITZER FELLOWSHIPS

Each year, at least 20 promising environmental leaders are awarded $15,000 each to complete masters and doctoral degrees to advance their skills and develop their expertise to address critical environmental challenges. Nearly $14 million in grants has been invested in Switzer Fellows over a 27-year period.

Jessica Veysey studies wetland ecology and policy. She has contributed important ecological information to the New Hampshire Wildlife Action Plan, and to New Hampshire’s best management practices for timber harvests near vernal pools. Jessica will pursue an outreach-oriented professorship that will allow her to pursue both teaching and practical research.

The Robert and Patricia Switzer Foundation is a results-driven family foundation that invests in individuals and organizations that drive positive environmental change. Founded in 1986 the Foundation is a grantmaking organization that mobilizes leaders from diverse disciplines who focus on integrated solutions to environmental problems. Over 13 million dollars has been given through the Switzer Environmental Fellowship Program and related grants, the Foundation supports a network of over 500 Fellows who are leaders in nonprofit, public policy, business, academic and government sectors working to solve today’s environmental challenges.

The 2014 TIDES cohort (Training in the Integration of Decision-making and Ecosystem Science) has been interning at research reserves within the National Estuarine Research Reserves System (NERRS). From the east coast to the west coast, each of the following students is supporting projects specially designed to bring the intended users of science into the research process. Ensuring practical application of project results to a particular problem is central to the TIDES program.

Cristina Bourassa supports efforts at the Tijuana River NERR in California to develop a framework that will guide the use of scientific tools, products, and knowledge, to set and achieve wetland recovery goals under changing, uncertain conditions. She has written numerous summary reports to memorialize the stakeholder process, engaged in workshop design planning, has facilitated meetings, and developed outreach materials.

In Maryland, Natallia Leuchanka’s work supports the Chesapeake Bay-MD NERR project to promote marsh and community resilience through the integration of social and ecological research. Natallia has assisted with stakeholder engagement activities including the development of science communication and outreach products, had a lead role in performing a socio-economic assessment of ecosystem services, and provided geospatial analysis and mapping support.

Christos Tsiamis is assisting the Southeast Land Trust of New Hampshire in Exeter to provide local municipalities with a menu of conservation easement provisions, such as those that address potential impacts of sea level rise on conserved agricultural lands; and provisions protecting conserved lands from adverse impacts of mineral extraction activities, like fracking.

Will Brown is focused on addressing the impacts of stormwater runoff in the Lake Erie basin in order to implement an innovative stormwater management plan that utilizes credits and incentives, in Old Woman Creek NERR, Ohio. To support this effort, Will has interviewed practitioners and developed a series of informative case studies to be compiled into a guidance/educational report for technical and municipal audiences.

Abbie Sherwin is working with the Mission-Aransas NERR in Texas to help resource managers establish improved freshwater inflow requirements to support healthy and productive estuaries in the face of climate change. She has developed science communication and outreach products, assisted with estuarine research, and contributed to workshop planning and implementation.

TIDES Interns are learning valuable lessons from the professional world to compliment their academic insights. Natallia & Cristina will represent their work and project with poster presentations in the November Coastal & Estuarine Research Federation (CERF) Conference. To learn more about the 2014 TIDES cohort, visit www.outgoingtides.org and look out for their graduate portfolio presentations in May, 2014.
**ALUMNI NEWS**

Victoria Aviles, ’04 B.S.,

I did graduate from UNH in 2004 and now work for one of the fastest growing marketing software companies in the country, HubSpot.com, and noticed some immediate changes you folks could make to attract more alumni and keep them engaged over the year.

Celeste Philbrick Barr, ’81, B.S., ECS

Celeste is Director of Education and Community Affairs at Beaver Brook Nature Center in Hollis NH. Beaver Brook is a nonprofit environmental education organization that will celebrate its 50th birthday in 2014. The Nature Center encompasses 2200 acres of land under conservation easement & stewardship in Hollis, Brookline & Milford NH. Over 6000 NH & MA school students attend field programs at Beaver Brook each year. In addition programs for families and adults are offered year round such as full moon snowshoeing, fitness hiking, orienteering, wildlife education, survival skills, gardening and more. BBA runs a nature summer camp each year as well. The 35 miles of trails, gardens and property are open to the public 365 days a year. Maps and trail guides are available at www.beaverbrook.org. Drop in to say hi or like us on Facebook to stay in touch with all the activities and events.

Bruce Douglas, ’80 B.S., Hydrology

Currently working at Natural Systems Utilities, in Fall River, MA - recycling water and energy from wastewater and food processing by-products.

Wayne Millen, ’80, M.S., Forest Management

Retired from White Mountain National Forest in May of 2012.

Daniel M. Gardoqui, ’98 M.S., ECS

My favorite part of graduate school, hands down, was teaching. I taught/TA’d Field Dendrology, Natural Resource Policy, and a few special field courses in Wildlife Conservation north of the border. Teaching’s in my blood. Nearly 15 years ago, along with my wife Kate and good friend Matt Wild, I founded White Pine Programs - a nonprofit educational organization whose mission is: to Deepen Awareness of Place, Awaken the Wild Within, and Build Resilient Community through Nature Connection & Understanding. We started off by sharing naturalist and survival skills to a half dozen homeschool kids in someone's backwoods in 1999. Today, White Pine reaches over 1000 kids and adults annually with quality nature-connection experiences and mentoring. My time in UNH's Natural Resource Department affirmed the importance of seeking out and tending to relationship - professional and personal. I've learned that healthy, honest relationships are the most valuable asset that any organization can have. For example, my first relationship in the NR Department was with Dr. Bob Eckert. Nearly 20 years later, Bob and I have a lasting friendship that enriches our lives and work. I hope to see more NR grads at some White Pine Programs soon (check out our Tuesday evening "Naturalist Nights" or weekend day programs, for example).

William Frament, ’91 M.S., Forestry

Since leaving school I am employed with the US Forest Service as a Remote Sensing specialist. I also am a member of the NH Air National Guard and am working on a ESRI web mapping project for the NH National Guard to give the Guard good situational awareness when operating or responding to state emergen-}

Aaron Kornbluth, 09 M.S., ECS

Since completing his Master's, Aaron has moved to Washington, DC, to work on water quality issues. His first year was spent as a Knauss marine policy fellow at NOAA. He then spent three years as a fellow at the EPA, supporting a 5-agency and 12-state task force to reduce nutrient pollution to the Gulf of Mexico. He is currently working for The Pew Charitable Trusts' campaign to reform industrial animal agriculture, focusing on the environmental and human health impacts of factory farming. He will be marrying his sweetheart on 11/3/13 in the shadows of the Shenandoah Mountains of Virginia. He maintains his connection to NH through LifeWise Community Projects, a seacoast nonprofit.

Perry Thomas '13 B.S., ECS

with a focus on Education. Since graduating from UNH, I moved across the country to Oakland, CA, in search of something new. I found a job at The East Bay Academy for Young Scientists (EBAYS), based out of the Lawrence Hall of Science at UC Berkeley. EBAYS' focus is to "give underserved, marginalized communities in the East Bay area access to hands-on science research".

This experience working at EBAYS has been truly eye-opening in so many ways. I'm using the skills and knowledge I received from my Environmental Conservation degree at UNH, as well as many techniques I gathered from the Education classes I took. This has been the perfect use of my degree from UNH, and I look forward to where this experience will take me in the future.
Danielle Mucciaroni, ‘04, B.S., EC, Policy Management
I recently started a new position as an Energy and Environmental Planner with the Northern Middlesex Council of Governments in Lowell, MA. Prior to that position I worked as a Science Associate at Industrial Economics, Inc., as a Watershed Scientist/Fellow with the Charles River Watershed Association and as a Watershed Bureau Assistant with the NH Department of Environmental Services. I also earned my masters degree in Environmental Science and Policy from Clark University and served for two years as an AmeriCorps OSM/VISTA as a Watershed Coordinator.

David Stone, ‘88 BS, Forestry
Still plugging away as a county forester in Louisa Virginia. Was in California late this summer working as a Division Supervisor on the Fish Fire in the Trout Wilderness high in the Sierra Nevadas in the Sequoia National Park just south of the Rim Fire in Yosemite which was in all the news. Finally had a chance to see some Sequoias words nor pictures, can convey their hugeness, especially seeing them next to a very large and ancient ponderosa pine. Astounding.

David Pilla, ‘79 B.S., Wildlife, ‘88 MS Forest Resources
I'm still working as a Wildlife Biologist/Forester for Proctor Academy in Andover, NH. In addition to managing the school's 2500-acre woodlot, I'm fortunate to teach courses in wildlife science, fisheries, and forestry. Every once in a while, I escape from this neck of the woods and do a bit of work with humpback whales in both the North Atlantic and North Pacific. Lucky to have a wonderful wife (Terry Vaccaro - UNH ‘79) and son (Kai - 12 years old) who tolerates me. Life is grand!

Erika Lea Washburn, ‘09 Ph.D., Natural Resources and Earth Systems Science

Barb Thomas Harrington
I am working for our federal government on a part of the Patient Protection and Affordable Care Act that mandated the creation of an Innovation Center designed to test and scale models of better care and better health for a lower cost. It’s been so very interesting to work as an operations manager for the Center for Medicare & Medicaid Services here in Baltimore. We’ve had a lot of bad press lately and I’d like to send kudos to all of my fed buddies around the country who work hard every day to provide much needed services. Best to all of my classmates from COLSA. I get up to VT often to visit my folks and walk the woods but haven’t been to Durham in a long time.

Jonathan Greenwood ‘70
Retired from NH fish and game with 36 year service as Andromous fish program leader. Live in Pittsfield NH Keep up the good works!

David Arscott, ‘97 M.S., Water Resources
After completing his M.S. at UNH, Arscott attended the Swiss Federal Institute for Environmental Science (ETH/EAWAG) in Zuerich Switzerland where he received his Ph.D. in Natural Sciences in 2001. Arscott is now the Asst. Dir. at Stroud Water Research Center in Avondale, PA. Arscott is a stream/watershed ecologist & worked in a variety of geographies including the Alaskan arctic, European Alps Switzerland and Italy, the Southern Alps New Zealand, Antarctica, and tropical streams Central America.

Donna F. Pohli, ‘12 B.S. Tourism, Planning & Development, ‘13 M.S. Public Administration
I worked as a Fellow and then Management Analyst for the City of Dover working on the City's CIP, Gateway Rezoning Project and other large scale projects for a year while getting my Master's. Now I am the Assistant Planner in Merrimack, NH advising the Planning Board and Zoning Board, working with businesses that want to come into town and residents who want to do work on their house or have any issues they want addressed by the Town.

Julie Renaud Evans, ‘85 B.S. Forest Management, ‘05 M.A., Environmental Education
works across northern New England assisting communities in acquiring and managing forestland. She enjoys the combination of community and forest conservation in her Community Forest projects.

Bruce Williamson, ‘78 B.S., Forestry
Chief, Bureau of Private Land Services, Division of Lands & Forests, NYSDEC, 625 Broadway Albany, NY 12233-4253 (518) 402-9425
Kirsten A. Nelson, ‘07 B.S. ECS
I am currently a M.S. student with the Department of Natural Resources and Environmental Science (NRESS) at the University of Illinois at Champaign-Urbana. For my research, I conduct experiments between invasive and native fishes to examine their competitive interactions and community influences.

Richard Calnan, ’75 Forestry
Retired from US GEOLOGICAL Survey this year after a 37 year federal career in international science. Rich ran the USGS International Programs Office until 2009. His final assignment was managing the Secretariat of an international geoscience organization called IUGS, which coordinated geoscience cooperation among hundreds of regional, national, and international organizations like UNESCO. Rich is now a part time international consultant. He lives in Rockport, MA with his wife Rita. Reported from Kathmandu.

Cathy Bozek, ‘03 B.S., Water Resource Management
After seven years working on habitat restoration projects at NOAA, I began a new job as an Aquatic Ecologist at The Nature Conservancy in Massachusetts last yr. My work focuses on removing dams to restore rivers, and finding better ways to manage stormwater to benefit in-stream habitat.

Danny Badger, ’07, M.S., NR, Marine Program
Current Work: Supervisor of Youth Development Programs at the New England Aquarium; providing in-depth marine science experiences for pre-teens through young adults, as well as working with citizen science bio-monitoring projects.

Kristine Stepenuck, ‘95, B.S., Water Resources Management
I also hold an M.S. in aquatic entomology from the University of Wisconsin-Stevens Point. I recently successfully defended my dissertation to earn my PhD at the Nelson Institute of Environmental Studies at the University of Wisconsin-Madison in the Environment and Resources Program. (I'm doing final edits now, and plan on turning it in the first week of December, so I assume by the time the Tally Sheet comes out, I'll be completely finished with it.) I also work full time for the University of Wisconsin-Extension and the Wisconsin Department of Natural Resources coordinating the statewide volunteer stream monitoring program for Wisconsin. Another aspect of my job is to coordinate the national Extension Volunteer Monitoring Network that helps programs develop and share resources. I have held this position since 2001. I opted to focus my PhD research on aspects of my job. The goal of my research was to improve understanding of outcomes and credibility of volunteer water monitoring programs.

Margo Mosher, ‘07 B.S., ECS
I graduated from UNH in May 2007 with the B.S. in Environmental Conservation. Later on I went to the Yale School of Forestry and Environmental Studies where I received a Master's of Environmental Management in May 2012. I'm currently living in Brooklyn, New York where I work for SustainAbility, a corporate sustainability strategy consulting form and think tank.

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I also hold an M.S. in aquatic entomology from the University of Wisconsin-Stevens Point. I recently successfully defended my dissertation to earn my PhD at the Nelson Institute of Environmental Studies at the University of Wisconsin-Madison in the Environment and Resources Program. (I'm doing final edits now, and plan on turning it in the first week of December, so I assume by the time the Tally Sheet comes out, I'll be completely finished with it.) I also work full time for the University of Wisconsin-Extension and the Wisconsin Department of Natural Resources coordinating the statewide volunteer stream monitoring program for Wisconsin. Another aspect of my job is to coordinate the national Extension Volunteer Monitoring Network that helps programs develop and share resources. I have held this position since 2001. I opted to focus my PhD research on aspects of my job. The goal of my research was to improve understanding of outcomes and credibility of volunteer water monitoring programs.

Margo Mosher, ‘07 B.S., ECS
I graduated from UNH in May 2007 with the B.S. in Environmental Conservation. Later on I went to the Yale School of Forestry and Environmental Studies where I received a Master's of Environmental Management in May 2012. I'm currently living in Brooklyn, New York where I work for SustainAbility, a corporate sustainability strategy consulting form and think tank.

Kaitlyn Allen, ’11, B.S., ECS
This year (May 2014) I am graduating from Pace Law School with a Certificate in Environmental Law. While at Pace Law, I worked in the Water and General Law Branch at the Environmental Protection Agency Region II in New York City, interned for a judge at the Westchester County Supreme Court, and was an Editor of the Pace Environmental Law Review. summer, I am taking the Bar Exam in New York and Massachusetts.

Henri Bisson, ’73 B.S., Forestry
We moved to Arizona where I obtained an MS degree in Watershed Management from the University of Arizona. In September of 1974, I began a 34 1/2 year career with the Bureau of Land Management. I started as a forester in Redding, Ca and took on more responsibility along the way with stops in Grand Junction and Montrose, Co; Washington, DC; Phoenix, AZ; Riverside, CA; back to DC: Anchorage, AK as BLM State Director; and finally retiring in February of 2009 as BLM’s Deputy Director and Senior Advisor on Alaska Affairs for DOI Secretary Kempthorn. Pam and I now live in Tucson, AZ, where I remain active in consulting on natural resource issues and am on several Boards of Directors and advisory groups. We travel frequently; I fish in Alaska and in Mexico as much as possible; and, we are enjoying ourselves immensely. Not sure where I would be without my experience at UNH and the guidance I received from Paul Bruns, Dick Weyrick, Harold Hocker and so many others!

David Eastman, ’64, B.S., FOR
My health continues to deteriorate, but I am now a 100% disabled vet so the compensation pays the bills. I have a radio show on WMWV-FM 4 times a week, and this can be listened to anywhere with the online streaming from the Conway station. Also have a Saturday evening column in the Conway Daily Sun: "Country Ecology" which is environmental education over the media in both regards. Same material delivered in a timely fashion with whatever the birds and plant life is doing on the calendar. Residing in Tamworth and continuing to refurbish my 1836 farmhouse.

Elise Avallon, ’12 B.S., ECS
I am currently working in North American Marine Environment Protection Association as an Education and Outreach Coordinator.
STAFF IN THE NEWS

Dr. Serita Frey and her lab group outside James Hall. Their research focuses on how human activities are impacting terrestrial ecosystems, with an emphasis on soil biota and nutrient cycling processes.

We are happy to welcome our new Office Assistant, Rebecca Jacobson, to the Department of Natural Resources & the Environment. Rebecca is an M.S. Natural Resources: TIDES student and will be with us for duration of the year. She earned her B.S in Environmental Science & Policy from Plymouth State University. Rebecca comes to us with prior experience as she was an Office Assistant for three years in her department at Plymouth State University. We are excited to have Rebecca as an addition to our office team!

NREN ADMINISTRATIVE STAFF

**Wendy Rose**, *NREN Administrative Manager II*
James Hall 114E, Wendy.Rose@unh.edu
Wendy provides administrative support to the Graduate Program coordinator, monitor’s departments financial affairs and budget preparation, acting as primary liaison to COLSA BSC, and coordinates departmental space/office assignments/facilities repairs, key assignments as well as building maintenance and repairs with both facilities and the energy department.

**Marlene Norton**, *NREN Senior Administrative Assistant*
James Hall 114B, Marlene.Norton@unh.edu
Marlene is responsible for maintaining Undergraduate Academic student records; assisting department chairperson/faculty and students while serving as Time and Room Coordinator for Fall/Spring semester, Summer session and J-term. In addition, Marlene assists in preparing Faculty Promotion/Tenure materials for Departmental and College review.

**Judith O’Donnell**, *NREN Administrative Assistant III*
James Hall 114, Judith.odonnell@unh.edu
Jude provides support to the Department Chair, students, faculty & staff. Coordinates and schedules department events, creates /designs annual newsletter publications and program brochures, updates department website, and maintains Undergraduate Academic student records.
James Hall Gingko Tree
Data and research of James Hall Gingko Tree
Courtesy of Professor Serita Frey

The average drop day for the 35-year record is Oct 23 (dashed line). The drop day has been later than that for 12 of the past 17 years (since 1988).

JAMES HALL
### Graduate & Undergraduate Student Awards

- **Ruth E. Farrington Forestry Scholarship**
  - Emma Congalton
  - Peter Fournier
  - Gabriel Horton
  - Joshua Kozikowski
  - Pavel Pluhar
  - Emily Spognardi
  - Sarah Tierney
  - Shersingh Joseph Tumber-Davila

- **College Woods Scholarship**
  - Emma Congalton
  - Alexandra Philip
  - Justin Williams

- **Outstanding Graduate Student Award / Society of American Foresters - Granit State Division**
  - Katherine Sinacore
  - Richards A. Andrews Award
  - Nicole D'Alessio

- **Clark L. Stevens Scholarship**
  - Peter Fournier
  - Denyelle Surrell

- **Edward Cass Adams Scholarship**
  - Josh Megyesy
  - Allison Scagel
  - Erin Smith
  - Katherine Wisniewski

- **Lloyd W. Hawkensen Scholarship**
  - ECS
  - Rachel Orzechowski
  - Danielle Poirier
  - Shersingh Joseph Tumber-Davila
  - Sarah Tierney

- **Class of 1974 Scholarship**
  - Joshua Megyesy

- **Nancy Coutu Memorial Scholarship Fund**
  - Emily Johnson
  - Edith Converse Neff & Allen Whitaker Neff Forestry Scholarship

- **James Earley**
  - Peter Fournier
  - Gabriel Horton

### Undergraduate Student of the Year
- **Donald Tucker**

### Honorable Mention for NSF Graduate Research Fellowship Award
- Katrina Papanastassiou

### Outstanding Undergraduate Students Awards
- **Environmental Conservation Studies**
  - Lawrence K. Smith Scholarship
  - Hannah Blondin
  - Anna Dooley

### Environmental Resources and Economics
- **Annie’s Organics Sustainable Agriculture Scholarship**
  - Lesley Atwood

### Surfr Fellowships
- Nicholas Bates
- Sophia Burke
- Sarah Dudek
- Cam Duquette
- Evan Ehrlich
- Parker Gage
- Peter Goode
- Charlene Higgins
- Molly Hunt
- Thomas Ilaria
- Emily Johnson
- Caleb Maney
- Mathew Morris
- Elizabeth Natola
- Nathan Roe
- Shawn Ryan
- Patrick Sargent
- Elizabeth Sterndale
- Jonathan Trudeau
- Kelsey Wellington

### Special Recognition to Faculty
- Richard de Seve
- Inaugural Chase Faculty Scholar
- Adrienne Kovach
- Jere A. Chase Award
- Ben Trolio
- UNH Rowland H. O’Neil Professor
- A. Stuart Grandy
Professor Pete Pekins receives the Natural Resources and the Environment OUTSTANDING TEACHER OF THE YEAR award from the Xi Sigma Pi Student Organization.

Dick de Seve receives the FACULTY SPECIAL RECOGNITION award from the Department of Natural Resources.

Professor Bob Eckert presents the OUTSTANDING STUDENT award in Environmental Conservation Studies to Max E. Garfinkle & Hilary B. Simpson.
Professor Rob Robertson presents the OUTSTANDING STUDENT award in Tourism to Zachary Porter.

Professor John Halstead presents the OUTSTANDING STUDENT award in Environmental and Resource Economics to Nichole D’Alessio.

Professor Alberto Manalo presents the FARRINGTON FUND award to students: (L to R) Shersingh Joseph Tumber-Davila, Sarah Tierney, Pavel Pulhar, Gabe Horton, Josh Kozikowski & Professor Alberto Manalo.
Welcome to College Woods, A Living Laboratory

UNH students, especially those in the Department of Natural Resources and the Environment, enjoy invaluable learning experiences in College Woods, UNH’s Living Laboratory. Each year, thousands of students study and learn in College Woods.

College Woods protects our water supply, offers opportunity for nature observation, reflective thinking, and provides recreational activities such as walking, jogging, biking (in selected areas), and cross-country skiing to the academic and local communities.

Our Goal:

The Coalition is an organization of stakeholders - a user group - that is working with UNH administration to permanently protect and manage College Woods and other UNH outdoor classrooms so that they can remain an integral part of the educational and recreational experience of UNH and the Durham community.

The Many Benefits of College Woods:

- Education and Extension - Hundreds of students use the campus woodlands for convenient outdoor classes in forestry, earth sciences, wildlife, kinesiology, biology, ROTC, watershed ecology, and many other subjects.
- Recreation - Miles of heavily-used recreational trails weave through College Woods and other nearby UNH woodlands, supporting jogging, walking, cross country skiing, snowshoeing, birding, and, in some cases, trail biking. A trail for wheelchair use is being established in College Woods.
- Athletics - College Woods is regularly used for cross-country and orienteering competitions. These sports bring various groups, such as scouts and homeschooled students, to the UNH campus.
- Research - Students use the woodlands for research projects every year, including both undergraduate and long-term environmental monitoring studies.
- Watershed Protection - A 1-mile stretch of the Oyster River winds through College Woods and provides drinking water for the University and town.
- Scenic Surroundings - College Woods provides an easily accessible "wilderness" area for the University of New Hampshire - the refreshing, uplifting, and relaxing values of the College Woods are literally invaluable to all who experience them.

The new UNH Master Plan states, "Significant natural assets surround the core... These natural assets are a microcosm of the New England landscape, living laboratories for the University, and opportunities for community use... They give the University an incredible asset that should be maintained as open space."

The College Woods Coalition seeks to ensure this vision is perpetuated.

Become a Supporter of the College Woods Coalition

Are you a user / lover of College Woods and other UNH Woodlands?

Join the College Woods Coalition in its efforts to obtain permanent legal protection for all of College Woods and recognition and support for the value of adjacent woodlands.

Please log on to the following link to print and fill-out the donor form: http://nre.unh.edu/sites/nre.unh.edu/files/CWCmembershipform.pdf

Send completed form and check to:
Department of Natural Resources & the Environment
114 James Hall, 56 College Road
Durham, NH 03824

~ Thank you for your support ~
Vision:
The Department will be known for excellence in education, research and outreach that focuses on the function of environmental systems and interactions with society.

Mission:
The Department of Natural Resources and the Environment is New Hampshire’s educational center for the scholarly study of environmental and social sciences, and their application to the policy and management of natural resources from local to global scales. The Department does this through education, research and outreach.

Education:
Our goal is to maintain a stimulating learning community that produces society-ready graduates that have the knowledge and skills necessary to become leaders in the stewardship of the world’s natural resources. Our students will:

- Become knowledgeable and skilled in science, policy, and sustainable resource management
- Learn to analyze complex problems at multiple scales and to make connections systematically
- Learn to ask probing questions by acquiring skills as critical thinkers
- Become effective communicators
- Become versed in use of current qualitative, quantitative and technical skills to achieve excellence in their discipline

Research:
Our goal is to be a leader in environmental and social science research with respect to natural resources at local, national and global scales. The Department will provide a stimulating intellectual environment and engage in research that improves understanding of environmental systems and interactions with society. Our faculty will be leaders in their individual disciplines. We will provide significant opportunities for undergraduate and graduate students to engage in research and scholarship.

Outreach:
Our goal is to value and encourage outreach by faculty, staff and students in the Department. We will foster collaborations among UNH Cooperative Extension faculty, research faculty and tenure-track faculty to maximize the effectiveness and efficiency of our outreach efforts at local, state, national and international levels.

We are on the Web:
http://www.nre.unh.edu

Please keep in touch.
We look forward to hearing back from our Alumni!

Feel free to email:
Tally.Sheet@unh.edu