Whether in virtual or real conversations I often hear our alumni say, “I haven’t been on campus for years.” I can guarantee that unless you graduated within the last three or four years, the campus will look considerably different than it did in your student days. Of course, not all changes are of the bricks and mortar variety. People and programs transition as well.

Since our last newsletter, four faculty members have closed their academic careers. Barry Rock, Bill Mautz and Lyndon Goodridge have officially retired and Andy Rosenberg is now a program director at the Union of Concerned Scientists. Our administrative manager, Nancy Brown, has also retired and we have changed our office staff as noted inside this issue.

This past academic year marked the 100th anniversary of the Forestry program. You can see the video at http://www.youtube.com/watch?v=eJEXlcjFKME. UNH also celebrated the 50th anniversary of the Thompson School of Applied Science’s Forest Technology program and the 50th anniversary of the College Woods Natural Area.

Among our academic programs, Wildlife & Conservation Biology has made some important changes. Students in the W&CB major can now choose to focus their advanced courses in either wildlife ecology or conservation biology. With the addition of new faculty, W&CB is planning to expand undergraduate enrollment. Overall, NREN now has 433 majors enrolled in seven undergraduate programs. There are over sixty students working on their masters degrees and about two dozen students working with NREN faculty on doctoral programs.

In response to severe reductions in state support of higher education, every academic department at UNH was reviewed during this past spring semester. In nearly all measures of productivity and efficiency in teaching and research, our department was well-above UNH averages and challenging the leaders in many categories. As an economist, I know that production and efficiency are not the only important measures. I know that we also have high quality programs and provide our students with excellent educational opportunities.

Although NREN is a great department, by all measures, we do face many challenges. As UNH expands to meet the growing state population’s needs for higher education, campus lands important to our education mission have been threatened. We were able to bring about revisions in the Campus Master Plan that protected some of those threatened areas. We will also be challenged to maintain high quality programs as we face restricted budgets and the looming retirements of several faculty members. I am confident that the faculty, staff, students, alumni and friends of the department can meet those challenges. I invite you, as alumni and friends, to visit UNH to see how you might help and to see how we’ve changed since your days as a UNH Wildcat.

Ted Howard, Professor and Chair

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Professor Serita Frey at BIOGEO MON-2012 & Professor Scott Ollinger on EPSCoR Project

SERITA D. FREY
Professor of Natural Resources & the Environment
College of Life Sciences and Agriculture

Dr. Frey gave invited presentations at BIOGEO MON 2012, the Ecological Society of America Annual Meeting and the Soil Science Society of America Annual Meeting that synthesized work in the Frey Lab to examine the ecosystem responses to long-term soil warming and nitrogen fertilization. Dr. Frey has also been appointed as Editor-in-Chief of Issues in Ecology, a publication of the Ecological Society of America that aims to build public understanding of the importance of the products and services provided by the environment to society.

SCOTT OLLINGER
Professor of Natural Resources & the Environment, Earth Systems Research Center

As part of the New Hampshire EPSCoR project on ecosystem services we acquired high spectral resolution remote sensing imagery over the entire Oyster River watershed in July, as well as several watersheds in the White Mountain region. The imagery will be combined with field data on plant nitrogen concentrations as well as data on soils and stream water being collected by other labs in NREN led by Serita Frey, Bill McDowell and Wil Wolheim.

Professor John Carroll Prepares for a New Publication on New England Farming and Food Security & Professor Ted Howard chairs ECANUSA Conference at UNH

JOHN CARROLL
Professor of Natural Resources

Dr. Carroll presented a paper on the revolution in local New England food and farming to the Montreal International Conference on De-Growth in May and is preparing a new course on “Oil, Food and De-Growth” as a joint NREN/WSBE course for spring semester. John skirted northern New England by rail this summer, traveling on VIA RAIL CANADA’s “The Ocean”, train service from Montreal to Halifax and return. (In Halifax he located and visited the home of New Hampshire’s last Royal Governor, Sir John Wentworth, who became Nova Scotia’s Royal Governor after the Revolution.) John is preparing a new publication updating his trilogy of books on New England farming and food security. He continues service on both the Durham Town Agricultural Commission and the Oyster River School District’s Food and Nutrition and Sustainability.

Among others, he is overseeing an NRES doctoral student, Joe Orifice, a member of the faculty at Paul Smith’s College in New York, in research on silvopasture practice in New York and New England. And among his other doctoral students is the former Chair of the Board of the Maine Organic Farmers and Gardeners Association (MOFGA), Amanda Beal, who is doing research on food security in Maine and New England.

TED HOWARD
Professor of Forestry Economics & Chair of Natural Resources & the Environment

For the first time, the University of New Hampshire’s Department of Natural Resources and the Environment hosted the (ECANUSA) Forest Science Conference in Durham in early November. Over 70 researchers from northeastern US states and eastern Canadian provinces presented papers and posters focusing on how forest science can address the ecological, social and economic issues affecting forests at the region’s urban-rural interface. Topics ranged from forest soil chemistry to timber production, ecology to economics, with healthy doses of history, sociology and philosophy. The conference finale was a field tour of the Massabesic Experimental Forest led by the USDA Forest Service. The conference was co-sponsored by the Northern States Research Cooperative, the Ruth Farrington Forestry Fund and the Canadian Consulate (Boston). Proceedings and abstracts will be available on-line in 2013.

Professor Pete Pekins traveled to the 7th International Moose Conference in Poland

PETE PEKINS
Professor of Wildlife Conservation Biology
Professor Pete Pekins travelled to the 7th International Moose Conference in Poland to discuss research and management issues concerning moose that range west from Eastern Europe through North America. The Białowieza National Park and Forest is a UNESCO World Heritage Site and is one of the largest remaining primeval forests in Europe. We were extremely fortunate to view sections of the Forest closed to tourists. Our walk was shorter than expected given the great pride and experance of our guides in answering our questions—to view a forest of such magnificent oaks, ashes, spruce, and lime (linden) trees with international colleagues was indeed special. However, beyond this immensity all was not perfect: Rooting by wild boar and heavy browsing by bison, red deer, and roe deer were taking their toll on forest regeneration; a similar story with elk and deer plays out in many of our National Parks. Preserved wooden crosses appearing sporadically in the forest were somber reminders of the horrific persecution of Polish Jews in WWII, when 20% of the Polish population was lost. I asked a young guide how this could be forgiven; looking away, he replied that one must not and could not forget, but it is a new generation and it is important that all Europeans pull together to ensure that such atrocities are never repeated. Having married into a Jewish family originally from Eastern Europe, I knew it wasn’t as easy as it sounded.
Amanda Daly & Sarah Andrews posing by sculpture during the ESA meeting in Portland, OR

I traveled to the annual ESA (Ecological Society of America) meeting in Portland, OR in the beginning of August this year, and was lucky enough to be awarded funding from the Graduate School travel fund, as well as the Farrington fund, in order to travel there. It was my first conference I'd ever attended that relates to my PhD research, so I was very enthusiastic to be there!

I presented a poster: "Enzyme activities of mesofaunal endosymbionts across host species and ecosystem." Sarah Andrews presented a talk titled "Studio Soils: Student performance in a newly restructured introductory soil science course".

Amanda Daly, Ph.D. Student & Sarah Andrews, Ph.D. Candidate, NRESS

This summer, I did some field research here in New Hampshire, sampling soil and plant litter from six different New Hampshire farms. I'll be comparing characteristics of the microbial communities in the soil, litter, and in the guts of microinvertebrates to better understand how these gut microbes are functioning and whether they're influenced by microbes in the surrounding environment.”

Lesley Atwood, 1st Yr. Ph.D. Student, NRESS

"This summer, I did some field research here in New Hampshire, sampling soil and plant litter from six different New Hampshire farms. I'll be comparing characteristics of the microbial communities in the soil, litter, and in the guts of microinvertebrates to better understand how these gut microbes are functioning and whether they're influenced by microbes in the surrounding environment.”

Neil Kessler, Ph.D. Candidate NRESS

Neil Kessler is a Ph.D. Candidate in the NRESS program with a focus on environmental studies. “I’m currently working on my dissertation, tentatively titled ‘A Prolegomena of Close Relational Ontology for Human-Nature Relationships.’ I also recently had an article accepted for publication in the journal The Trumpeter called ‘Chaos or Relationalism? A Pragmatist Metaphysical Foundation for Human-Nature Relationships.’

Paul Pellisier, MS Student, Forestry

My current research aims to create a calibration equation which relates the foliar nitrogen of grasses and maze canopies to their respective spectral properties. This equation would then be applied to remotely sensed imagery in hopes of mapping foliar N of these canopy cover types at the watershed scale.

Recently, I have been working on the preprocessing of field collected reflectance spectra of non-forested cover types at 14 sites located within New Hampshire’s Lamprey River Watershed (LRW). Over 2500 spectra of grass and maze canopies were collected using the ASD Field Spec 4 hi-resolution spectrometer. Grass canopies were grouped as fallow fields, hayfields, pastures, or residential lawns according to their management regime. Biomass sample were also collected in conjunction with the spectra at each site. The nitrogen content of each biomass sample will be assessed at a later date by a method yet to be determined (gas chromatography, mass spectrometry, the method outlined by Bolster et al. 1996, or combination thereof).

Presuming that both that foliar N and reflectance covary significantly with cover type, the creation of the calibration curve should be rather straight forward. With this in mind I have been preprocessing the spectra to determine which part of the spectrum (350-2500nm) differs the most significantly between cover types. The results shown below represent a rough first look aimed at addressing this question. I have been focusing on the Near-Infrared (NIR) region (750-1350nm) due to its significance in similar work done with forest canopies.

Results:

Figure 1. The Comparison of Mean Spectral Reflectance by Cover Type: The spectra shown here represent the means of all samples collected for a given cover type.

Statistics:

The mean spectra of each cover type were compared across the total spectrum, total NIR plateau (750-1350nm), and segments of the NIR plateau (750-920nm, 921-1150nm, 1151-1350nm). Using the Tukey-Kramer HSD test it was determined that all cover types were significantly different from all others (alpha=0.05, p-value<0.003) in the 921-1151nm region. The 750-920nm region also varied significantly but to a lesser degree (p-value<.02).
Alumni News

Bill Perry ’64, Forestry (11/2011)
It’s great to see the Tally sheet again. I seem to have lost contact with it for a few decades. I’ve retired from forestry after 28 years in the BC forest industry and ten more as a consulting (silviculture) forester. Now I’m a full-time ski instructor during the winter. I particularly enjoyed the article by James Barrett, my one-time forest mensuration professor and mention of the names of Clark Stevens and Paul Bruns, both of whom I remember well.

Dave Eastman ’65, Forestry (11/2011)
I continue to give talks on Bluebirds and Cavity Nesters at AMC and other places. Also the Wildlife Forage Shrub. Recently the Conway Historical Society had me give my talk on my tour in Vietnam during ’66 & ’67. There I flew Huey helicopters with the 175th Outlaws and have written a book with Peter Randall Publisher on that tour. Tim Chruchard has had me down on the UNH campus a couple of times for his education class where I give that VN talk to young people studying development. My home here in Tamworth is finally showing up some dogwood and viburnum berry crops after being here since 2005 and buying these shrubs from the state nursery in Boscawen. My son is in Switzerland with his wife and child and does third world development around the globe in scary places…!

George Frame ’70, Forestry Management (11/2011)
In November 2010, I became Senior Director of Forestry at the Society for the Protection of New Hampshire Forests, managing 51,000 acres located in over 100 towns throughout the State. My assistant in this effort is Wendy Weisiger, who graduated with a BS in Forest Management from UNH, Class of 2001.

Richard Lutz ’75, Wildlife Management (11/2011)
Richard is now the Executive Director of the New Hampshire Association of Conservation Districts

Paul Dolan ’77, MS Forestry (11/2011)
Presently Paul Dolan is the Deputy State Forester with the State of Rhode Island.

John Walkowiak ’84, MS Forestry
John Walkowiak works for the Washington State Department of Revenue and was recently elected to Council of the Society of American Foresters.

Bruce Allen ’87 Forestry & Pat Shaw-Allen ’87 Wildlife (4/2012)
Bruce and Pat and their daughter moved back to NH a couple of years ago. Pat is a Biologist for Marine Fisheries, NOAA and I am a Research Fellow at Fox Forest.

Dan Tatem ’96, BS Wildlife Management & Soil Science (12/2012)
I worked for several materials testing companies right out of college (PSI, R.W. Gillespie & John Turner Consulting. I am a licensed septic designer and have designed over 100 residential and commercial septic designs. I have also done a fair amount of part time land surveying (but I am not a licensed surveyor). I live in Northwood, have 5 kids and enjoy doing stuff with them, hunting fishing, hiking, raising chicken and pig. I also like Nascar and some professional sports. I am active in the Church where I am a member.

Derek Robinson ’99, Water Resources Management (2/2012)
Moved to Washington, D. C. over seven years ago now, where I currently reside on Capitol Hill with my fiance and our two dogs, Ris Tazman and Pedro. I originally was working for an engineering company before being recruited to work for IBM in the area of Project Management. I have since spent the last six years working as a Government Contractor with both NASA and NOAA, where I help manage three instrument contracts totaling over a billion dollars on the next series of weather satellites, the GOES-R Series. Working with NASA is a childhood dream come true and being able to learn many different areas of aeronautical engineering (electrical, mechanical and thermal to name a few) free of charge is also a plus! Though I truly miss working in the areas of Natural Sciences, I am happy to be contributing to a cause where my effort and work will have a direct impact on our nation as well as positive outlook for our population as a whole. I miss the Northeast greatly, especially the coast of Maine… but with my work, it permits to travel the world extensively.

Mike Dolbow ’97 Forestry (11/2011)
On October 6, 2011 Mike was selected to be a recipient of the Polaris Leadership Award from the Minnesota GIS/LIS Consortium, which recognizes active, established leaders in the geospatial community who are inspiring and leading through their contributions, energy, and creativity.

Allison Keating ’02, Wildlife Management” (11/2011)
Since 2000 Allison has worked at the NH Fish & Game Dept. Her first 2 yrs. were in Marine Fisheries conducting surveys of recreational saltwater anglers, performing seine surveys for juvenile finfish & maintaining fish ladders around the seacoast. Since 2002 Allison has been with the Nongame & Endangered Wildlife Program working with state endangered and federally threatened piping plovers that nest along Hampton and Seabrook beaches, is the writer of the Nongame Program’s newsletter, Wildlines, which has received multiple awards from the National Assoc. for Conservation Information, and was a contributing author to the NH Wildlife Action Plan. In the past year, Allison has traveled to Spain and Portugal and most recently Canada where she went on a week long moose hunt in northern Quebec with her father. In Fall 2011 Allison returned to UNH to begin her MS in Natural Resources-Wildlife and will be working under Dr. Pete Pekins on a project looking at online surveys and wild turkey management in N.H.

Ethan Gyles ’06, Environmental Sciences: Soil & Watershed Management (12/2011)
I completed my M.S. in Civil (Environmental) Engineering at UNH in 2009 with a thesis on drinking water biofiltration titled “Assessing the Role of Protists in Removing E.Coli in Slow Sand Filters.” I now work as an environmental engineer and project manager for global environmental consulting firm Environmental Resources Management (ER) focusing primarily on contaminated site remediation.
Brian Godbois  
Senior Lab Technician

We have been designing and building a soil sensor system that we are deploying across the state as part of the New Hampshire EPSCoR project on ecosystem services. This soil sensor network is co-located with in-stream sensors from Bill McDowell’s and Wil Wolheim’s labs, as well as with foliar chemistry and remote sensing imagery from Scott Ollinger’s lab to link terrestrial and aquatic processes. This soil system specifically monitors trace gas fluxes using sampling methods adopted from Ruth Varner’s lab and adds new soil sensors through the profile collecting moisture, temperature, and electrical conductivity data which will then help to quantify terrestrial ecosystem processes. The data are streamed back to UNH and used by scientists to create models to try and predict future scenarios here in New Hampshire.
GRADUATE & UNDERGRADUATE
STUDENT AWARDS

Ruth E. Farrington Forestry Scholarship
Justin P. Williams,
Joshua G. Kozikowski
Nicholas Haskell
Pavel Pluhar
Emma Congalton
Elizabeth Sterndale

College Woods Scholarship
Greg Reed
Nathan Roe
Katelyn E. Porter
Kelsey Wellington
Olivia Cushing

Richard B. Johnston Memorial Award-
Cayla Compton
Corrine Lemieux

Natural Resources Alumni Scholarship (ECS)
Benjamin Trolio
Madeline O’Neil
Jacqueline Amante
Felicia Hatch

Natural Resources Alumni Scholarship (ES)
Jacqueline Amante

Natural Resources Alumni Scholarship (FORESTRY)
Felicia Hatch

Natural Resources Alumni Scholarship (Wildlife Conservation Biology)
Kelsey Wellington

Natural Resources Alumni Scholarship (EREC)
Evan Girard
Nicole D’Allesio

Clark L. Stevens Scholarship
Danielle Poirier
Corrine Lemieux
Emily Johnson
Adam Marquis

Edward Cass Adams Scholarship
Peter Good

Lloyd W. Hawkensen Scholarship (ECS)
Bethany Lafebre
Jonathon Guzcek
Michael O’Malley

Lloyd W. Hawkensen Scholarship (ES)
Katherine Swan

George Frick Fellowship
Stephen Canale
Idiko Losonci

Nancy Coutu Memorial Scholarship Fund
Danette Perez

Neff Forestry Scholarship
Nicholas Haskell
Michael Richard

Richard A. Andrews Memorial Award
Jessica Giguere

Charles W. & Jacqueline F. Thompson Forestry Scholarship
James Earley
Gian Andrea Noonan

Robert N. Colwell Memorial Fellowship from the American Society of Photogrammetry & Remote Sensing
Meghan Graham MacLean

Honorable Mention Teaching Award by the UNH Graduate School
Meghan Graham MacLean

Northeast SARE Grant/Silvopasture Research
Joseph Orefice

Miriam Jackson Memorial Scholarship
Melissa Bolton

General Endowment Fund Award/Society of Freshwater Science
Nathaniel Morse

International Student Scholarship
Sidian Lan

Dickie Family Scholarship
Sidian Lan

Award for Superior Work in Third Year Modern Greek
Sidian Lan

NH Federation of Garden Clubs Scholarship
Emily Spognardi

OUTSTANDING STUDENT AWARDS

Emily Fesette ~ CEP
Lisa Graichen ~ ECS
Jackie Amante ~ ES
Nicole D’Alessio ~ EREC
Ethan Belair ~ Forestry
Donna Pohli ~ TOUR
Peter Abdu ~ WCB

FACULTY & ALUMNI AWARDS

Teacher of The Year Award:
Dr. Tom Lee

Distinguished Alumni Award:
Elisabeth H. Blaisdell, ’99 BS Environmental Science & International Affairs

Award Ceremony
Natural Resources & the Environment
Barbeque May 2012
COMMENCEMENT BREAKFAST 2012

May 19, 2012

Sponsored by Natural Resources & the Environment
Attended by students, parents, faculty & NREN staff

JAMES HALL
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 homeschoolers, 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.

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

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