November, 2014

Read stories this month in these UNH research areas:

- Agriculture & Biosciences
- Business & Technology
- Engineering & Physical Sciences
- Health, Behavioral & Social Sciences
- Humanities & the Arts
- Marine & Ocean Sciences
- Sustainability & the Environment

A Great Day To Be a Bobcat: UNH study finds the fierce feline’s population is strong

A research team led by John Litvaitis, professor of natural resources and the environment, has found that bobcat populations in New Hampshire are expanding. In a study funded by the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture, and the New Hampshire Agricultural Experiment station, nineteen bobcats were temporarily captured for DNA sampling and then tracked using radio collars with built-in GPS. Citizen scientists from across the state also contributed to the research by submitting stories and pictures of recent bobcat sightings in their communities. Litvaitis’ team has found that bobcat populations have risen from 100-150 in the mid-1980s to a current estimate of 800-1,200. Bobcats can now be found in southeastern New Hampshire, a region formerly depleted of the iconic species.

http://www.unh.edu/unhtoday/2014/11/great-day-be-bobcat
http://www.unh.edu/news/releases/2014/11/bp06bobcat.cfm

Bringing the U. to You: UNH Cooperative Extension celebrates a century of service to the Granite State

UNH Cooperative Extension is celebrating 100 years of service to the state of New Hampshire this year. UNH Cooperative Extension was established in 1914 in response to the Smith-Lever Act, federal legislation requiring land grant universities to take innovative agricultural education to local farms. Ken La Valley, Cooperative Extension dean and director, explained: “The great idea that has kept Cooperative Extension relevant for 100 years is taking our know-how out to the people who can’t afford the time to come to Durham. Bringing information to the people is still how it works today.” Recent UNH Cooperative Extension projects include successfully addressing the invasive spotted wing Drosophila fruit fly, exploring the use of high and low tunnels to expand the New England produce growing season, and recycling solar energy to heat greenhouses sustainably.

http://www.unh.edu/unhtoday/2014/11/bringing-u-you
Heat Pumps Show Promise for Reducing Greenhouse Heating Oil Consumption

Preliminary results of a study led by Brian Krug, UNH Cooperative Extension associate professor, indicate that excess greenhouse heat can be recycled through the use of heat pumps. In the UNH heat pump system, two air-to-water heat pumps and an insulated thermal water holding tank are used to capture excess heat in greenhouses which is then used to warm the greenhouses when needed. Storing the extra energy this way would allow growers to save money on fuel and operate through the entire heating season while reducing the environmental footprint of their greenhouses.

http://colsa.unh.edu/aes/article/nhaes/heatpumps

UNH Fairchild Dairy Produces ‘Gold’ Standard of Milk

The Dairy Farmers of America (DFA) awarded a 2014 Gold Quality Award to the NH Agricultural Experiment Station’s Fairchild Dairy Teaching and Research Center. The award recognizes Fairchild Dairy’s continued attention to herd health, hygiene, and sanitation, and will ensure that the dairy will receive the highest possible price for its milk. Tim Riel, area supervisor for DFA, spoke highly of operations at Fairchild Dairy: “UNH Fairchild Dairy staff Jon Whitehouse and John Weeks do a masterful job making high quality milk for DFA.” DFA is the leading national milk cooperative, with nearly 13,000 dairy producers in 48 states.

http://colsa.unh.edu/aes/article/2014dfaaward

UNH Hosts Popular Poinsettia Open House Dec. 4-6: Poinsettia trials bring research to breeders, growers, and public

On December 4-6, 2014, the Macfarlane Greenhouses played host to the 9th annual Poinsettia Trials Open House. The collaborative event brings research to breeders, growers, and the public, showcasing unique varieties of the popular holiday plant. Visitors to the trials assist in research by recording their favorites from among new and different varieties, or cultivars. Similar trials take place at universities and commercial greenhouses across the country, allowing breeders and growers to evaluate regional differences in the growth and performance of the new cultivars. This information provides a basis for choosing the best cultivars for a particular growing environment and market.

http://colsa.unh.edu/aes/article/2014poinsettiaopenhouse

Business & Technology

Be Part of Our Newest Consortium - G.fast

The UNH InterOperability Laboratory (UNH-IOL) was selected to serve as the official test site for the international Broadband Forum’s G.fast certification program. UNH-IOL is in the process of accepting companies as founding members of this new consortium. G.fast is a new communications technology that drastically increases speed over copper wire by using wider frequency profiles than earlier versions of DSL used. The selection of UNH-IOL as the world’s first and only test site for the G.fast certification program reflects the UNH-IOL’s reputation for running neutral tests of networking technologies in partnership with the business community.

http://us8.campaign-archive2.com/?u=2dda639777f7c7a1a13630863&id=e56a294724
UNH Research Finds Growth in U.S. Angel Investor Market, Decrease in Deal Size

The UNH Center for Venture Research has observed continued moderate growth coupled with a decrease in deal size for the U.S. angel investor market in the first two quarters of 2014. There were increases in the number of ventures receiving funding and the total number of active investors, but these numbers remain lower than those recorded prior to 2008. “Historically, angels have been the major source of seed and start-up capital for entrepreneurs, and while this stabilization is an encouraging sign, it has remained consistently below the pre-2008 peak of 55 percent, signifying that there continues to be a need for seed and start-up capital for both new venture formation and job creation,” said Jeffrey Sohl, director of the Center.


Engineering & Physical Sciences

CAREER Builder: Three UNH faculty members receive prestigious awards

Three UNH faculty members received prestigious CAREER awards from the National Science Foundation (NSF). Margaret Boettcher, assistant professor of geophysics, will continue her study of earthquake processes and prediction by monitoring frequently active oceanic transform faults. Gonghu Li, assistant professor of chemistry, plans to further his efforts toward recycling carbon dioxide into fuel. Tom Weber, assistant professor of mechanical engineering, will expand his research using underwater acoustics to measure methane bubbles in bodies of water. The NSF CAREER award is given to recognize and support junior faculty members who exemplify the role of teacher-scholar through outstanding research, excellent education, and the integration of education and research within the context of the mission of their universities.


Health, Behavioral & Social Sciences

10 New SWIFT in 60 Mini-films Showing Inclusive Educational Practices

UNH Institute on Disability filmmaker Dan Habib created 10 mini-films to showcase the positive effects of inclusive educational practices. The mini-films were created for SWIFT (Schoolwide Integrated Framework for Transformation), a national technical assistance center for academic and behavioral support. The films show inclusive schools in action so that others can learn more about the key SWIFT features, such as strong and positive school culture, inclusive academic instruction, and family partnerships. Each film is under two minutes in length and is available to be viewed on YouTube or Vimeo.

http://iod.unh.edu/About/visionandvoice/Fall2014/SWIFT_in_60.aspx

Credit: UNH Institute on Disability
Beyond Borders: Some of the most interesting subjects know no bounds
The Master of Arts in Liberal Studies (MALS) program at UNH allows intellectually curious students to plan their own unique interdisciplinary programs of graduate-level research. Kelly LaBrecque ’08G used her background in graphic design to evaluate the various artistic forms present in World War I propaganda posters. Geoffrey Clark ’11G studied the disturbing survival story and legacy of Arctic explorer Adolphus Greely; Andrew Bills ’09 will research the Vatican’s recent embrace of the Internet and social media; and Emma Baillargeon ’09 is exploring the professional and personal experiences of 19th century “freak show” performers with noticeable anatomical differences. The MALS program serves as a springboard for doctoral level research and for interdisciplinary academic enrichment.

http://www.unh.edu/unhtoday/2014/11/beyond-borders

Cellular Sleuth
Caelie Kern ’16, a neuroscience and behavior major, is working with professor of molecular, cellular, and biomedical sciences Chuck Walker to study the role of protein p53 in cancer development. Kern’s work focuses on understanding the causes of human acute myelogenous leukemia (AML) by investigating whether p53, a protein involved in gene expression, is inactivated in an AML cell line and samples from a clinical population of AML patients. Walker’s research project is funded by a grant from the National Institutes of Health’s National Cancer Institute; Kern has received additional funding from the UNH Hamel Center for Undergraduate Research through a Research Experience and Apprenticeship Program scholarship and a Summer Undergraduate Research Fellowship.


David Hagner Joins the AAIDD Delegation to Poland
Research professor David Hagner of the UNH Institute on Disability traveled to Poland with a delegation sponsored by the American Association on Intellectual and Developmental Disabilities and the College of Advancing and Professional Studies at the University of Massachusetts, Boston. In Poland, Hagner studied the country’s support systems for people with intellectual and developmental disabilities and explored ideas for future collaborative projects with Polish researchers. Hagner also presented “Current Practices in the U.S. on Employment for People with Disabilities” at the John Paul II Catholic University of Lublin and at the Jagellonian University in Krakow.

http://iod.unh.edu/About/visionandvoice/Fall2014/AAIDD_PolandDelegation.aspx

Did You Know? Disability and Poverty
Research describing the correlation between disability and poverty was presented in three articles by UNH Institute on Disability researchers in 2014. Project director Debra Brucker and director of research Andrew Houtenville published articles in the Journal of Disability Policy Studies and the Journal of Vocational Rehabilitation on the national use of public safety net programs among persons with disabilities. Debra Brucker co-authored a paper in Social Science Quarterly with a team of Fordham University researchers that uses different measures of poverty to illustrate how working-age citizens with disabilities experience poverty.

http://iod.unh.edu/About/visionandvoice/Fall2014/Did_You_Know.aspx
I'm Sorry, So Sorry: Professor examines apologies and the law in latest book

Nick Smith, professor of philosophy, has published a book examining the role of public apologies in the context of civil and criminal law. *Justice Through Apologies: Remorse, Reform, and Punishment* explores how the 24-hour news cycle and the widespread use of social media has altered the way apologies are presented and interpreted by the public. According to Smith, “We talk about values and morality in the context of someone’s apology. That’s now the most common secular way we publically discuss our principles.” Smith recently shared his passion for philosophy at the Future Leaders Institute, a residential summer camp for New Hampshire high school students.


Credit: UNH Communications and Public Affairs

Jennie Marinucci Receives International Research Opportunities Program (IROP) Grant

Jennie Marinucci ’16, biomedical science major and anthropology minor, has received a UNH International Research Opportunities Program (IROP) grant to study cultural definitions of successful aging in Thailand during the summer of 2015. In her project, “Cross-Cultural Gerontology: Exploring Successful Aging in Thailand from a Health Professional View,” Marinucci will explore how biomedical policy and practice work together to advance cultural competency. Marinucci is advised by assistant professor of anthropology Natalie Porter and Chulanee Thianthai, associate professor of anthropology at Chulalongkorn University in Thailand.

http://cola.unh.edu/article/2014/11/jennie-marinucci-receives-international-research-opportunities-program-irop-grant

New Hampshire Disability Statistics

The UNH Institute on Disability (IOD) has published two reports of hard-to-find statistical data on people in the State of New Hampshire who are affected by disabilities. *Facts & Figures: The 2014 Annual Report on Disability in New Hampshire* is a reference guide to government publications on disability in the state. *To The Point: An Introduction to Disability in the Granite State* presents statistics on the population of NH residents who experience a disability, compares NH data with data from neighboring states and with national averages, and features statistics from *Facts & Figures*.

http://iod.unh.edu/About/visionandvoice/Fall2014/NH_Disability_Stats.aspx

Social Connections, Safety, and Local Environment in Three Manchester, New Hampshire Neighborhoods

The Carsey School of Public Policy at UNH has published a fact sheet detailing residents’ perceptions of social connections, safety, and local environments in three distinct neighborhoods of Manchester, NH. The fact sheet reports survey data obtained from citizens living in the Bakersville, Beech Street, and Gossler Park neighborhoods. Justin Young, research assistant in the Carsey School of Public Policy and doctoral candidate in sociology, conducted the study.

http://campaign.r20.constantcontact.com/render?ca=0dc40a01-3ad4-4534-99b7-dc6f3f05f51b&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
The Lost Cinemas: A walking tour of Manchester

Seven communication arts students at UNH Manchester designed and conducted a walking tour highlighting the locations of nine former historic cinemas in downtown Manchester. “The Lost Cinemas: A Walking Tour of Manchester” was the capstone project for a film history class taught by Jeff Klenotic, associate professor of communication. Organizing the 90-minute tour required the students to complete original research at the Manchester Historical Society and the UNH Manchester library. Klenotic also is the creator of mappingmovies.org, a website that uses GIS mapping to mark the locations of former cinemas.

http://manchester.unh.edu/blog/campus-news/lost-cinemas-walking-tour-manchester

UNH Anthropologist Publishes Book on Women and Islam

Svetlana Peshkova, assistant professor of anthropology, has published a pioneering ethnographic study analyzing the role of “otinchalar,” female religious leaders in a conservative Muslim community located in the Fergana Valley of Uzbekistan. In Women, Islam, and Identity: Public Life in Private Spaces, Peshkova draws upon several years of fieldwork to chronicle both daily life and structures of social power for Muslim women in Uzbekistan.

http://cola.unh.edu/article/2014/11/s-peshkova-women-islam

UNH History Professor Receives National Award From D.A.R.


UNH Receives Grant to Expand Bystander Intervention Education to High Schools

UNH Prevention Innovations has received a grant from the Centers for Disease Control and Prevention to extend its highly-successful Bringing in the Bystander® program to high school students. The adapted training program will teach teenaged bystanders how to safely engage in behaviors that aim to discourage sexual assault and dating violence among their peer groups. “The study has the potential to contribute substantially to the prevention of sexual assault and relationship violence among youth in the U.S. by adding a novel and evidence-based bystander prevention program to the repertoire of existing school-based prevention tools,” explained Prevention Innovations’ Katie Edwards, assistant professor of psychology and women’s studies and leader of the study.

http://cola.unh.edu/article/2014/11/unh-receives-grant-expand-bystander-intervention-education-high-schools

UNH Senior Jennifer Allen Receives URA Award

Jennifer Allen ’15, biomedical sciences: medical and veterinary sciences major, has received a UNH Undergraduate Research Award to support her study “How Patients Think: An Assessment of Clinician Competence Based on Patients’ Past Experiences.” Allen will examine patient-clinician interaction through the lens of the patient to understand if past experiences are used to gauge clinician competence. Allen’s advisor for the research is Natalie Porter, assistant professor of anthropology.

http://cola.unh.edu/article/2014/11/unh-senior-jennifer-allen-receives-ura-award
2014 John C. Rouman Lecture: Video Now Available
The 2014 John C. Rouman Classical Lecture is now available to watch via online video. “The Psychology of Greed: Ancient and Modern Reflections” was presented by Ryan Balot, professor of political science at the University of Toronto. The John C. Rouman Classical Lecture Series, named in honor of UNH Classics Professor Emeritus John C. Rouman, is intended to promote and enhance the study of the classics in New Hampshire and around the world.

http://cola.unh.edu/article/2014/11/ryan-balot

Grandpa, We Don’t Pahk the Cah Anymore
The New Hampshire Language and Life Project is examining how regional dialects in New England continue to change over time. Maya Ravindranath, assistant professor of linguistics, has engaged her sociolinguistics students to interview family and friends to discover how “traditional New England speech” varies by generation. The students have found that speakers in Southeast New Hampshire, where most of the data have been collected, tend to distance themselves from the speech of both Boston and Maine speakers and ally themselves with the speech of Vermonters. The early results of the study also suggest a shift among younger generations away from regional speech and toward a form of general American speech.


New Collection Explores Asian American Graphic Narratives
Monica Chiu, professor of English, has edited a book of essays exploring Asian-American graphic narratives through a transnational lens. Drawing New Color Lines: Transnational Asian American Graphic Narratives explores manga, comics, and other visual representations to understand how ideas of “Asian” and “American” have changed in graphic art narratives over time. With contributions from experts based in North America and Asia, the book will be of interest to scholars in a variety of disciplines, including Asian-American studies, cultural and literary studies, comics, and visual studies. Drawing New Color Lines is part of the Global Connections series published by Hong Kong University Press.

http://cola.unh.edu/article/2014/11/chiu-color-lines

The Curious Case of the Vanishing Poet
While conducting research for a book about Juan Luis Martínez, assistant professor of Spanish Scott Weintraub uncovered a literary trick played by the iconic Chilean poet famous for his use of metaphysical vanishing acts throughout his writing. In Juan Luis Martínez’s Final Trick: Not Only Being Other but also Writing the Other’s Work, published by Cuarto Propio in Chile, Weintraub revealed how Martínez translated and re-published poems by a Swiss-Catalan poet also named Juan Luis Martínez, effectively taking credit for the other poet’s work. Weintraub’s discovery has caused a stir in the Chilean literary community, with many questioning the poet’s controversial move, citing it as a form of plagiarism. Weintraub’s book that served as the catalyst for the discovery, Juan Luis Martínez’s Philosophical Poetics, was published by Bucknell University Press in November.

UNH Poet Awarded the Jerome J. Shestack Prize from the American Poetry Review

UNH poet and professor of English David Rivard was awarded the prestigious J. Shestack Prize by the American Poetry Review. The award recognizes Rivard’s work as the best collection of poems published by the magazine in 2013. The 13 poems are included in his new book, Standoff, which will be published in early 2016 by Graywolf Press.


Marine & Ocean Sciences

Regional Fisheries Catch Topic for Podcasts

A series of online podcasts will highlight the current struggles of commercial fishermen in New England. Hosted by Erik Chapman, UNH Cooperative Extension and New Hampshire Sea Grant fisheries specialist, the podcasts will explore the shifting professional options within the local fishing industry. The series will feature interviews with fishermen, researchers, managers, and others dedicated to the preservation and resilience of New England’s marine heritage and economy.

http://extension.unh.edu/articles/Regional-Fisheries-Catch-Topic-Podcasts

Sustainability & the Environment

A River Runs Through It

Danielle Grogan, a Ph.D. candidate in natural resources and environmental studies, spent 10 weeks studying hydrologic models in Japan with support from the National Science Foundation’s (NSF) East Asia and Pacific Summer Institutes for U.S. Graduate Students program. Grogan became involved in this area of research while working on an NSF-funded research project led by Steve Frolking. Frolking is a biogeochemical modeler and research professor with joint appointments in the Earth sciences department and the Earth Systems Research Center/UNH Institute for the Study of Earth, Oceans, and Space. Grogan, who also holds a prestigious NSF Graduate Research Fellowship, will use the results of the modeling work she completed in Japan to help the New Hampshire EPSCoR Ecosystems and Society research team develop scenarios that will provide projections of how land cover and climate might change across New Hampshire over the next 50 years.

http://www.eos.unh.edu/Spheres_1114/grogan.shtml

Carbon Bomb with a Long Fuse

Claire Treat ‘14G, now a postdoctoral researcher at the University of Alaska and the U.S. Geological Survey in Menlo Park, California, will build on the research she completed at UNH by exploring fossilized wetland vegetation datasets to better understand panarctic peatland and species composition. Treat will examine how peat samples provide evidence indicative of high methane emissions during the Holocene Epoch. Treat is collaborating with Steve Frolking, a biogeochemical modeler and research professor with joint appointments in the Earth sciences department and the Earth Systems Research Center/UNH Institute for the Study of Earth, Oceans, and Space, who served as a member of Treat’s Ph.D. dissertation committee.

http://www.eos.unh.edu/Spheres_1114/treat2.shtml
Have Funding, Will Travel
Sophia Burke ’13, Ph.D. candidate in the natural resources and Earth system science program, has received a Fulbright Fellowship to study at the University of Waikato in New Zealand. “I’ll be learning about peatlands that formed in a vastly different climate than what I’m used to – that is, subtropical versus subarctic,” said Burke. “And I’ll also learn about different ways that carbon flux is monitored in peatland ecosystems by taking measurements from a flux tower for the first time as well as doing incubation work.” As an undergraduate, Burke spent time in New Zealand through the EcoQuest program and traveled to Sweden three times with the Northern Ecosystems Research for Undergraduates (NERU) program, which is sponsored by the National Science Foundation and the American-Swedish Institute. Ruth Varner, associate professor of biogeochemistry and Earth sciences and director of NERU, is Burke’s advisor.

http://www.eos.unh.edu/Spheres_1114/burke.shtml

Increased Crop Productivity Has Deepened Atmospheric "Breathing"
A team of researchers that includes an Earth system scientist from UNH has found that a previously unexplained increase in Earth's annual atmospheric "breathing" cycle over the last 50 years is due, in part, to a dramatic rise in agricultural productivity in the Northern Hemisphere. Using production statistics and a carbon accounting model, the team showed that increases in maize, wheat, rice, and soybean production explain as much as a quarter of the observed changes in atmospheric carbon dioxide seasonality. Steve Frolking, a biogeochemical modeler and research professor with joint appointments in the Earth sciences department and the Earth Systems Research Center/UNH Institute for the Study of Earth, Oceans, and Space, is a member of the research team and co-author of the recent Nature article reporting this research.


Keeping New Hampshire Waters Fresh
The New Hampshire Lakes Lay Monitoring Program is a 2014 winner of the W.K. Kellogg Foundation Engagement Scholarship Award. The award recognizes the outreach and engagement partnership efforts of four-year public universities, particularly those that have redesigned their learning, discovery, and engagement functions to become even more involved with their communities. The New Hampshire Lakes Lay Monitoring Program is a citizen-scientist partnership program that started in 1978 as a UNH student project and now is overseen by UNH Cooperative Extension. Its program model has informed the creation of similar groups nationwide.

http://extension.unh.edu/articles/Keeping-New-Hampshire-Waters-Fresh

Pinpointing a Pint-sized Pest From On High
With the support of the U.S. Forest Service’s mentorship-based Pathways Program, master’s student Justin Williams devised a way to use satellite imagery to track the hemlock woolly adelgid, an invasive Asian insect that is the single greatest threat to hemlock health and sustainability in the eastern U.S. “[Williams] has documented the ability to remotely detect hemlock woolly adelgid infestation using remote sensing methods and, most importantly, also showed there is an initial increase in needle chlorophyll concentrations before the trees eventually succumb to the disease, which appears to be the initial response in the trees’ attempt to ‘fight off’ the infection,” explained Barry Rock, professor emeritus of natural resources and the environment and Williams’ advisor. As a participant in the Pathways Program, Williams was employed full-time and paired with a mentor from the Forest Service, giving him access to Forest Services resources such as vehicles and scientific instruments to use while conducting his research as a graduate student at UNH.

http://www.eos.unh.edu/Spheres_1114/williams.shtml