September, 2015

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

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Agriculture & Biosciences

Decision About New England Cottontails Could Have Big Impact in Region

Thanks to the concentrated effort of UNH and UNH Cooperative Extension faculty and staff in cooperation with the N.H. Fish and Game Department, the U.S. Natural Resource Conservation Service, and many other partners, the U.S. Fish and Wildlife Service announced in September that New England cottontail numbers have increased enough that the rabbit would not need to be added to the Endangered Species List. Such a designation would have conferred special federal protections to safeguard New England cottontail habitats and prevent interference with their breeding and behavioral activities, likely resulting in a major effect on some businesses, landowners, and communities in New Hampshire and neighboring states. The New England Cottontail conservation team was recognized for developing a coordinated six-state conservation effort to increase New England cottontail numbers through educational programs, technical assistance, research, and habitat improvements.


NIH Grant Boosts NH’s Biomedical Research Capacity

The National Institutes of Health (NIH) has awarded a second, five-year grant to the New Hampshire IDeA Network of Biomedical Research Excellence (NH-INBRE), a statewide partnership led by UNH and Dartmouth’s Geisel School of Medicine to expand biomedical research capacity and training in New Hampshire. The grant will support the NH-INBRE network of shared resources that serve undergraduate student and faculty biomedical researchers at colleges and universities across the state. UNH’s Hubbard Center for Genome Studies serves as the program’s bioinformatics core, responsible for supporting the analysis of data generated by biomedical research projects at any of the NH-INBRE partner schools.

http://www.unh.edu/unhtoday/2015/09/nih-grant-boosts-nhs-biomedical-research-capacity

Credit: UNH Cooperative Extension
Public Welcome to Visit New Facility for NH Veterinary Diagnostic Laboratory

UNH and the State of New Hampshire will celebrate the opening of a new facility for the New Hampshire Veterinary Diagnostic Laboratory (NHVDL) on October 14, 2015. The new conveniently located 6,500-square-foot building will allow the NHVDL to more effectively provide essential diagnostic services to the state’s agricultural, veterinary, wildlife, and public health communities and will provide more teaching and research opportunities for students in UNH’s biomedical sciences and pre-veterinary medicine programs. The NHVDL is co-managed and co-funded by the New Hampshire Department of Agriculture, Markets & Food and the UNH College of Life Sciences and Agriculture.

http://colsa.unh.edu/aes/nhvdlopenhouse
http://www.unh.edu/news/releases/2015/09/lw17nhvdl.cfm

UNH Melon Research Produces Higher Yields

Research at the NH Agricultural Experimentation Station at UNH suggests that grafting melons onto rootstocks of hybrid squash can substantially increase the production of melons. Brent Loy, professor emeritus of plant biology and genetics, and graduate student Janel Martin have gathered preliminary data supporting the use of this method that may help improve cold tolerance and resistance to soil borne diseases such as sudden wilt. This innovative approach, if Loy and Martin can refine it so it can be adopted widely, would be expected to increase farm revenues and provide local produce with a reduced environmental impact.

http://colsa.unh.edu/aes/graftedmelons
http://www.unh.edu/news/releases/2015/09/lw30melons.cfm

UNH Scientist Develops New Cherry Tomato

A new cherry tomato, Rambling Rose, designed to grow in hanging baskets in greenhouses, has been developed at UNH. The tomato with a never-before-available attractive pink color was designed with the aesthetics of vegetative growth in mind, as well as yield, by Becky Sideman, extension professor of sustainable horticulture production, and collaborators Elisabeth Hodgdon at the University of Vermont and Jennifer Noseworthy of Gordon College. Hodgdon and Noseworthy are former UNH graduate students who worked on the development of Rambling Rose while at UNH. Trials at UNH demonstrated that the Rambling Rose cherry tomato has a comparable or better yield than that of commercially available cultivars.

http://colsa.unh.edu/aes/ramblingrose
http://www.unh.edu/news/releases/2015/09/lw29tomatos.cfm

UNH Scientist Discovers New Approach to Managing Parasitic Roundworms

Each year, over $100 billion in global crop damage is caused by the roundworm parasite, but Rick Cote, professor and chair of the Department of Molecular, Cellular, and Biomedical Sciences, has discovered a way to potentially disrupt the motility and reproduction of these plant parasitic nematodes. For five years, Cote has been studying the application of the phosphodiesterase enzyme (PDE) to plant nematodes, finding that the enzyme has the potential to combat
roundworm infestations of crops such as corn, cotton, wheat, soybean, rice, and potato. Cote and his team are optimistic that their research will be the foundation for the development of commercially-available compounds that can precisely target plant parasitic nematodes without adverse effects on the agricultural ecosystem: farmers, crops, and wildlife.

http://colsa.unh.edu/aes/nematodes  
http://www.unh.edu/news/releases/2015/09/lw09nhaes.cfm

**What Happens Here Stays Here: How Research at UNH’s Organic Dairy is Helping Farmers with Energy Independence**

Since 2008, researchers at UNH’s Organic Dairy Research Farm, the nation’s only operational-scale organic dairy research farm, have been working on a groundbreaking project that seeks to make the dairy a fully-sustainable closed system, creating energy independence and closing the loop on greenhouse gases and nutrients such as nitrogen and carbon. Under the guidance of John Aber, University Professor of natural resources, and Ph.D. student Matt Smith ’08, the USDA-funded initiative combines an elegant composting system with local, cost-effective bedding materials. Just halfway through the project, the researchers have already shown that their approach can improve finances, close the carbon and nitrogen cycles, and produce excess energy and revenue. The research has implications beyond the farm as well: As many New England municipalities face increased regulations on disposal of organic waste, the composting industry is growing.

http://www.unh.edu/unhtoday/2015/09/what-happens-here-stays-here

**Business & Technology**

**Ethernet Alliance Hosts its Largest Plugfest at the UNH-IOL**

The Ethernet Alliance hosted its largest multi-vendor plugfest at UNH’s InterOperability Laboratory (UNH-IOL) in June, bringing together 23 companies interested in creating a testing ecosystem for 40 Gigabit (40G) and 100 Gigabit (100G) Ethernet. Since its inception, the Ethernet Alliance has worked with the UNH-IOL to host interoperability test events aimed at advancing Ethernet technologies. The Ethernet Alliance and UNH-IOL’s collaboration and commitment to producing faster Ethernet and IT technologies has been featured in articles in industry publications such as *Network Computing* and *EDN*.

http://us8.campaign-archive2.com/?u=2dda639777f7c7a1a13630863&id=54ced9bf67&e=[UNIQID]
Engineering & Physical Sciences

Faculty Spotlight: Changing the Tides at UNH with Professor Foster
Diane Foster, professor of mechanical engineering, conducts research at the intersection of oceanography and engineering – environmental fluid dynamics of our oceans. She and her students have developed expertise in coastal bottom boundary layers, sediment transport, and ocean turbulence while conducting studies as locally as New Hampshire’s Great Bay Estuary and as far away as the Netherlands. Supported by the National Science Foundation and U.S. Sea Grant, Foster’s research is helping scientists understand not only tsunamis, but also the storm waves often experienced during hurricanes.


Graduate Spotlight: Measuring Mobile Morphology with Meagan Wengrove
Working under the mentorship of Professor Diane Foster, mechanical engineering Ph.D. student Meagan Wengrove is exploring the mechanisms of extreme changes of small coastal morphology, i.e., the mechanisms that force a ripple to change size or shape rapidly. The results of her research will contribute to the development of mathematical models to predict small- and large-scale coastal change, tools that are becoming more important as winter storms, hurricanes, and tsunamis become more frequent. Wengrove’s research is supported by a three-year National Defense Science and Engineering Graduate Fellowship.


Undergraduate Spotlight: Shawn Swist, Stephanie Gilooly, Aleksandra Wojtowicz, and Eric Desjardins
Meet four UNH mechanical engineering students and learn about their research with their faculty mentors: Shawn Swist ’17, who is working to develop an autonomous, remotely operating vehicle; Stephanie Gilooly ’16, who is studying the effects of fluid erosion in wind tunnels; Aleksandra Wojtowicz ’16, who is pushing the tensile strength of materials to new limits; and Eric Desjardins ’16, who is testing the bending properties of small tubes used for biomedical uses, such as needles.


Health, Behavioral & Social Sciences

A Rare Devotion to Service
One of the nation’s most renowned researchers on child maltreatment, bullying, abduction, dating abuse and sexual assault, David Finkelhor, director of the UNH Crimes Against Children Research Center, was awarded UNH’s Charles Holmes Pettee Medal on September 25th. Finkelhor, a UNH alumnus and longtime UNH researcher and faculty...
member, was honored for his contributions to understanding violence and abuse in children’s lives, the development of the field known as developmental victimology, and the founding of the Crimes Against Children Research Center at UNH, which has helped professionals in a wide range of fields develop practices and policies to prevent abuse. The award is UNH Alumni Association’s highest honor, given to an individual whose devotion to service emulates the medal’s namesake, the late Dean Charles Pettee.

http://cola.unh.edu/thecollegeletter/2015-09/rare-devotion-service

**Although Child Poverty Declined in 2014, Persistent Racial and Ethnic Disadvantages Remain**

A recent study conducted at the Carsey School of Public Policy at UNH demonstrated that despite a decrease in child poverty over the past year in the United States, child poverty rates still remain 1.7 percentage points higher than in 2009, at the end of the recession, with black children suffering the greatest disadvantage. Beth Mattingly, director of research on vulnerable families at the Carsey School and research assistant professor of sociology, Andrew Schaefer, a doctoral student in sociology, and Jessica Carson, vulnerable families research scientist at the Carsey School, noted that child poverty differs regionally and across cities, rural places, and suburbs, and five years into economic recovery, more than one in five children still lived below the poverty line.

http://campaign.r20.constantcontact.com/render?ca=bd7fe9c-3a5d-4fc0-808d-ad6a2940221b&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
http://www.unh.edu/news/releases/2015/09/em17poverty.cfm

**Conservative and Liberal Views of Science**

An analysis of New Hampshire survey data led by Lawrence Hamilton, professor of sociology and a senior fellow in the Carsey School of Public Policy at UNH, has shown that, as expected, liberals are most likely and conservatives least likely to say that they trust scientists for information about climate change or evolution. However, contrary to hypotheses that bias against science is expressed by both liberals and conservatives depending on the topic, the survey showed that liberals were also most likely and conservatives least likely to trust scientists for information about vaccines, nuclear power safety, or genetically modified organisms (GMOs).

http://campaign.r20.constantcontact.com/render?ca=61f4335f-cac2-4d56-bc6a-98eed33d233e&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
http://cola.unh.edu/arweticle/2015/09/unh-research-finds-trust-scientists-consistently-higher-among-liberals
http://www.unh.edu/news/releases/2015/09/em01carsey.cfm
Dr. Susan Fox Appointed to National Boards
Susan Fox, associate director for the UNH Institute on Disability and co-director of the Center on Aging and Community Living at UNH, has been appointed to two prestigious national committees. This summer she served as the Policy Consultant to the Aging, Retirement, and End of Life strand of the National Goals in Research, Practice and Policy working meeting. She has also been appointed by the members of the National Academy for State Health Policy (NASHP) to serve on their Steering Committee on Long Term & Chronic Care. The appointments acknowledge Fox’s continued commitment to improving policy, education, and research to benefit the lives of individuals with disabilities, older adults, and their caregivers.

http://www.iod.unh.edu/about/news/15-09-02/Dr_Susan_Fox_Appointed_to_National_Boards.aspx

HDFS Welcomes New Faculty
The Department of Human Development and Family Studies welcomed two new tenure-track faculty members this fall: assistant professors Kimberly Nesbitt and Jill Trumbell. Nesbitt’s research focuses on the internal processes and external influences that enhance or disrupt young children’s cognitive development, and strives to use her expertise to directly impact the lives of young children through collaborations and outreach with early childhood organizations and schools. Trumbell uses multi-method approaches (e.g., behavioral, psychological, and physiological) to explore mother-child relationship processes during infancy and early childhood and understand how those processes impact concurrent and subsequent development.

http://chhs.unh.edu/article/2015/09/hdfs-welcomes-new-faculty

New Poll Results: Trump Still Atop GOP Field in NH, Fiorina Rises to Second, Sanders Surges
As the New Hampshire primary grows closer and speculation mounts, Andrew Smith of the UNH Survey Center has recently released two new reports of polls results from the CNN/WMUR New Hampshire Primary Poll. The polls, conducted through interviews with 820 randomly selected New Hampshire adults between September 17 and September 23, 2015, found that despite Donald Trump’s lead in the GOP race, he remains a controversial choice; only 1 in 10 Republican voters having decided who they will vote for. In the Democratic race, Bernie Sanders has overtaken Hillary Clinton. However, as previously found, 47% of Democratic primary voters surveyed say they are still trying to decide which candidate to support.

http://cola.unh.edu/article/2015/09/poll-results
NH Citizens Health Initiative and Regional Partners Receive Transforming Clinical Practice Initiative Award

The Northern New England Practice Transformation Network (NNE-PTN) is one of 39 health care collaborative networks selected to participate in the Transforming Clinical Practice Initiative of the U.S. Department of Health and Human Services. NNE-PTN will receive up to $15 million over four years to equip more than 500 primary care and specialist practices with tools, information, and network support needed to improve quality of care, increase patients’ access to information, and spend health care dollars more wisely. NNE-PTN is a partnership between the New Hampshire Citizens Health Initiative at the UNH Institute for Health Policy and Practice, Maine Quality Counts, and the Vermont Program for Quality in Healthcare, Inc.

http://www.unh.edu/news/releases/2015/09/cc29healthinitiative.cfm

nTIDE Jobs Report: As Labor Day Approaches, Americans with Disabilities are Working but Slowing their Search

According to the National Trends in Disability Employment’s (nTIDE) September update, issued by Kessler Foundation and UNH’s Institute on Disability, for the eleventh consecutive month, Americans with disabilities continue to make employment gains as they enter the workforce, although the percentage looking for work in August lagged somewhat. Like their counterparts without disabilities, people with disabilities who are searching for jobs are successfully using online resources, connecting with opportunities through friends and relatives, and contacting employers directly.

http://www.iod.unh.edu/about/news/15-09-04/nTIDE_Jobs_Report_As_Labor_Day_Approaches_Americans_with_Disabilities_are_Working_but_Slowing_their_Search.aspx
**Official Poverty Statistics Mask the Economic Vulnerability of Seniors**

Andrew Schaefer, vulnerable families research associate in the Carsey School of Public Policy at UNH, and Beth Mattingly, director of research on vulnerable families in the Carsey School, have found that the official poverty measure fails to account for the role of rising medical out-of-pocket expenses in pushing seniors into poverty. The newer Supplemental Poverty Measure, which accounts for these costs, reveals that more than one in ten Maine seniors were living below the poverty line in 2009-2013. This is 2.3 percentage points higher than official estimates, highlighting the importance of Social Security and the need for further programs to support aging adults.

http://campaign.r20.constantcontact.com/render?ca=c1d33d7d-713f-4787-ba85-783fed490a82&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
http://cola.unh.edu/article/2015/09/unh-research-disregarding-medical-expenses-half-many-elderly-mainers-would-be-poor
http://www.unh.edu/news/releases/2015/09/em15carsey.cfm

**SW Professor Melissa Wells Publishes Two Child Welfare Articles**

Melissa Wells, associate professor of social work, has had two research articles published recently. The articles report the results of research on the effectiveness of child welfare agency practices that Wells conducted in collaboration with current and past New Hampshire Division of Children, Youth, and Families employees.


**UNH Experts Available to Discuss U.S. Poverty Trends**

The Carsey School of Public Policy at UNH has experts available to discuss U.S. poverty trends in advance of the release of new data on poverty by the U.S. Census Bureau. The experts include director of research on vulnerable families Beth Mattingly, vulnerable families research scientist Jessica Carson, vulnerable families research associate Andrew Schaefer, and lecturer in American politics and public policy Stephen Pimpare.


**UNH Psychology Professor Awarded Lifetime Achievement Award**

UNH professor of psychology Benjamin Harris has been awarded the 2015 Lifetime Achievement Award by the Society for the History of Psychology in recognition of his sustained and outstanding contributions to the history of psychology over the course of his 35-year career. Henderikus Stam, president of the society, noted that Harris’s groundbreaking research, which explored the history of behaviorism, psychology in mass media, and the politics of psychiatry, has pushed psychologists to reconsider their history and apply those insights to current practice.

http://cola.unh.edu/article/2015/09/BHarris

**UNH Receives Grant to Examine How Communities Build Capacity to Prevent Violence**

Researchers at UNH’s Prevention Innovations Research Center (PIRC) plan to widen the focus of their violence prevention efforts to include communities. Funded by a major grant from the Centers for Disease Control and Prevention, the PIRC researchers will evaluate strategies developed by GreenDot, Etc. that are designed to help people in communities work together to address violence. As part of the project, the PIRC team also will work with the New Hampshire Coalition Against Domestic and Sexual Violence to develop more effective strategies for preventing violence.
that incorporate recent research findings that, in addition to their peer groups’ attitudes, the characteristics of the communities where individuals live and work and study are related to how people think about problems like violence.

http://cola.unh.edu/article/2015/09/grant-prevent-violence
http://www.unh.edu/news/releases/2015/09/em29violence.cfm

UNH Study Finds Bystanders Support Victims of Harassment and Bullying More Often Than Commonly Thought
The Crimes Against Children Research Center at UNH has published the results of a National Institute of Justice-funded study that show 70 percent of youth victims of bullying report bystanders trying to make them feel better. The article, coauthored by research associate professor of psychology Lisa Jones, research assistant professor of psychology Kimberly Mitchell, and professor of sociology Heather Turner, was published in the Journal of Youth and Adolescence. In the article, the researchers call for a broadening of the definition of “bystander” to include anyone with both knowledge of the bullying and the ability to act.

http://cola.unh.edu/article/2015/09/ccrc
http://www.unh.edu/news/releases/2015/09/em08ccrc.cfm

Unique Partnership Seeks to Increase and Retain K-12 STEM Teachers in the State
UNH has partnered with Albany International Corp. to address New Hampshire’s need for STEM (Science, Technology, Engineering, and Mathematics) teachers, launching a pilot program in Rochester schools and advancing a statewide initiative to meet the needs of businesses for a skilled workforce. Albany International Corp.’s three-year grant to UNH will support a master teacher to lead the STEM Teachers Collaborative, which will help develop New Hampshire teachers K-12 teachers’ expertise in STEM fields and extend the impact of STEM teachers to more students throughout the state.

http://www.unh.edu/news/releases/2015/09/em23albany.cfm

Humanities & the Arts

Musicologist Peter Urquhart and the Conference “Laus Polyphoniae 2015: Petrus Alamire Meerstemmigheid in Beeld”
Peter Urquhart, associate professor of music, gave lectures and conducted a rehearsal at a conference in Antwerp in August that focused on 50 lavish, Renaissance-period music manuscripts. The manuscripts were created by the scriptorium of the Hapsburg rulers Margaret of Austria and Emperor Charles V which was run by the scribe, musician, and occasional international spy, Petrus Alamire. Urquhart’s ensemble, Capella Alamire, has sung from copies of the manuscripts regularly for years. UNH emeritus professor Keith Polk also attended the conference, presenting a lecture on the instrumental music of the period.


Credit: UNH College of Liberal Arts
Space Science

To the Moon and Back: SURF Grant Helps UNH Undergrad Work to Make That Possible Again

Tamir Blum ’16 is a mechanical engineering major who hopes that his work with space robotics will one day reignite national interest in going back to the moon. Blum currently is a member of a multinational team vying for the coveted Google Lunar XPRIZE which awards a $20 million grand prize to the first team to land a privately funded rover spacecraft on the moon, have it travel 1,640 feet (500 meters), take high-definition videos and images, and transmit them back to Earth. With the support of a Summer Undergraduate Research Fellowship (SURF) from UNH’s Hamel Center for Undergraduate Research, Blum spent the summer at Tohoku University in Sendai, Japan studying robotics and integrated software and hardware solutions for Team Hakuto’s rover system. Blum is one of 15 undergraduate and graduate students from all over the world who are members of Team Hakuto, which is led by Tohoku University professor of aerospace engineering Kazuya Yoshida.

http://www.unh.edu/unhtoday/2015/09/moon-and-back

Sustainability & the Environment

Island Time: Innovative Interns Increase Sustainability on Appledore

Every summer, UNH and Cornell University send four students to Appledore Island to gain practical experience in water and sanitation engineering and sustainable power. Students learn how to apply sustainability technologies to the operations of the Shoals Marine Laboratory, helping enhance the sustainability of the Lab’s remote island environment. This video provides a look into their work.

http://www.unh.edu/unhtoday/2015/09/island-time

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http://www.unh.edu/research/UNH-Research-Digest