April, 2015

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
- Space Science
- Sustainability & the Environment

Research Days: Spring Brings Results to Forefront
In April, more than 1,100 undergraduate students and more than 200 graduate students showcased the results of their scholarly, engaged, and creative research as part of the UNH Undergraduate and Graduate Research Conferences. The students shared the results of their research, discovery experiences, and original work in a variety of formats, including formal oral presentations, poster presentations, demonstrations, performances, and gallery talks in more than 20 professional and artistic venues at UNH’s Durham and Manchester campuses as part of the multi-week conferences.

http://www.unh.edu/unhtoday/2015/04/research-days-spring-brings-results-forefront

Listen to podcasts featuring interviews with 27 Undergraduate Research Conference participants at https://soundcloud.com/uofnh/sets/undergraduate-research.

The Fulbright Scholars Program and a Look at UNH’s Own Faculty Fulbrighters
As the flagship international educational exchange program of the U.S. government, the Fulbright Program is designed to increase mutual understanding between the peoples of the U.S. and those of other countries. Since 1981, UNH faculty have received 70 Fulbright Scholar fellowships to conduct international research and teaching activities in 41 countries, sharing their expertise in a range of disciplines, including agriculture and life sciences, engineering and physical sciences, environmental sciences, history and American studies, health sciences, social sciences, and theater arts.

http://unh.edu/cie/newsletter/2015/spring/fulbright.html

Three Grad Students Receive Prestigious NSF Fellowships
Three UNH students have been awarded prestigious National Science Foundation Graduate Research Fellowships (NSF GRFP). Mark Anthony ‘16G, Rory Carroll ‘16G, and Herbie Smith ‘15 will use the fellowships to support their pursuit of research-based advanced degrees in natural resources, Earth systems science, and physics, respectively. As the oldest graduate fellowship of its kind, the NSF GRFP has a long history of selecting recipients who achieve high levels of success in their future academic and professional careers.

http://www.unh.edu/unhtoday/2015/04/three-grad-students-receive-prestigious-nsf-fellowships
Agriculture & Biosciences

Beehavior and Beyond: Realizations in Research – Sean Lombard
When Sean Lombard ’17 began working in assistant professor Sandra Rehan’s Bee Lab in the summer of 2014, he was excited to start building on what he had learned so far in his classes. While contributing to the lab’s study of Ceratina Calcarata, a small species of carpenter bee, he realized: “All of the fields of study that we have separated into their own ‘subjects’ are like different pictures of the world, using different lenses to get a better view.” Lombard’s introduction to research was sponsored by UNH’s Research Experience and Apprenticeship Program, which supports summer research experiences for freshmen in the Honors Program.


Diet Analysis for Wildlife Management: Protecting the Cheetah in Namibia – Alicia Walsh
In the summer of 2014, with support from a UNH International Research Opportunities Program grant, Alicia Walsh ’15 conducted research at the Cheetah Conservation Fund (CCF) in Namibia, Africa. She used genetic identification and macroscopic and microscopic analysis on almost one hundred scat (fecal) samples to identify the prey eaten by cheetahs and nine other predators. Her results, which included confirmation that cheetahs do not prey on livestock, helped provide critical data to support CCF’s efforts to manage and protect the highly-endangered animal. Walsh’s research article was published in the UNH Undergraduate Research Inquiry Journal: Spring 2015.


Effects of Audible Human Disturbances on Koala (Phascolarctos Cinereus) Behavior in Queensland, Australia and Implications for Management – Galina Kinsella
Galina Kinsella ’15 traveled to Australia in the summer of 2014 to conduct research on the possible health effects resulting from koalas’ stress response to human and human-generated noise. The data she collected will help in the management and protection of the declining populations of koalas. Kinsella’s research was supported by UNH’s Summer Undergraduate Research Fellowship Abroad program, and was published in the UNH Undergraduate Research Inquiry Journal: Spring 2015.


State Recognizes UNH Fairchild Dairy as Quality Milk Producer
UNH’s Fairchild Dairy Teaching and Research Center, a NH Agricultural Experiment Station facility, has been recognized locally and nationally for the quality of milk its cows produce and its commitment to herd health, hygiene and sanitation. The NH Department of Health and Human Services honored the Fairchild Dairy as a New Hampshire Quality Milk Producer. The current accolades follow the 2014 Gold Quality Award bestowed by the Dairy Farmers of America, the nation’s leading milk cooperative, citing the Dairy’s outstanding operations that promote cow health. The Dairy develops new knowledge and management expertise to address the needs of state and regional stakeholders through research and provides experiential learning experiences to undergraduate and graduate students.

http://colsa.unh.edu/aes/article/fairchildstateaward
http://www.unh.edu/unhtoday/2015/04/unh-milk-it-does-body-gold
The New Face of Molecular Biology at UNH Manchester
Assistant professor of biological sciences Kyle MacLea is just finishing up his first year at UNH Manchester and already is making an impact. An alumnus of Londonderry (NH) High School, MacLea has begun developing an undergraduate degree program in biotechnology, and is working to form relationships with pharmaceutical companies and biotechnology firms in the region to help expand UNH Manchester students’ research opportunities.

http://manchester.unh.edu/blog/about-our-faculty/new-face-molecular-biology-unh-manchester

UNH Plant Root Research Aims to Boost Local Nursery Production, Reduce Winter Losses and Costs
Cathy Neal, UNH Cooperative Extension specialist in landscape horticulture, has been conducting experiments on root cold tolerance and plant performance in Northern nursery production systems for three years to better understand root cold tolerance in container-grown plants and the effects of cultural and environmental factors. Her research, funded by the U.S. Department of Agriculture’s National Institute of Food and Agriculture, aims to reduce nursery costs and losses by providing more comprehensive information to help greenhouse and nursery managers decide which container-grown shrubs can be left outside during winter, which need to be covered, and which should be placed in a heated enclosure. In addition to supporting the local economy, Neal’s research results will help save energy and encourage the use of native and adapted plants in one of New Hampshire’s top agricultural industries.

http://colsa.unh.edu/aes/article/roots

Business & Technology

Advantage New Hampshire?
UNH Cooperative Extension sponsored a forum, “What Makes Economic Development Happen,” at UNH Manchester on April 1st to “inform and to engage economic development practitioners in discussions about issues facing New Hampshire’s cities and towns.” Andre Garron, Extension economic development specialist, moderated the forum which found panelists from across industry and academia agreeing that the ability of communities and regions to provide quality schools and the responsive civic infrastructure needed to retain a well-educated workforce is just as important to sustaining economic development in New Hampshire as is the state’s tax code.

http://extension.unh.edu/articles/Advantage-New-Hampshire

LESI Strengthens on Present Business Expectations
The Lodging Executives Sentiment Index (LESI) showed marked growth in the three-month period ending in March. Notably, 100% of lodging executives indicated business conditions were good. The LESI, based on a monthly survey of
lodging executives from across the U.S., is managed by Nelson Barber, program chair and associate professor of hospitality management in the UNH Peter T. Paul College of Business and Economics.

http://www.unh.edu/news/releases/2015/04/em27lesi.cfm

Renowned IP Scholar Ann Bartow to Lead Franklin Pierce Center for Intellectual Property at UNH Law

Ann Bartow, a highly-regarded scholar in intellectual property law, has been named director of the Franklin Pierce Center for Intellectual Property at the UNH School of Law. Bartow also will join UNH Law’s intellectual property program -- ranked among the nation’s top 10 for the past 24 years -- as a tenure-track professor specializing in trademark law. Bartow's scholarship focuses on the intersection between intellectual property law and public policy concerns, privacy and technology law, and feminist legal theory.


UNH and Alpha Loft Host Roundtable on Leveraging Universities for Economic Development

On April 17th, UNH and Alpha Loft co-hosted a breakfast roundtable discussion, “Universities as Economic Change Agents,” featuring panelists from local industry and UNH. Recognizing the role of research universities in driving ideas and economic growth, the panelists discussed best practices and strategies to strengthen New Hampshire’s economy by helping the business community better utilize the state’s research universities. Attendance at the event was open to anyone interested in participating in the ongoing conversation about the roles and potential opportunities for faculty, staff, students, communities, and government to support and benefit economically from the ideas being developed at New Hampshire's universities.

http://www.unh.edu/news/releases/2015/04/em02alphaloft.cfm

Engineering & Physical Sciences

Diving Deep into STEM: SeaPerch Takes Kids to the Frontier of Marine Engineering

UNH Cooperative Extension, the UNH Center for Coastal and Ocean Mapping, and the Portsmouth Naval Shipyard teamed up to host the SeaPerch Challenge on April 11th at UNH’s Swasey Pool. 150 NH youth on 47 teams competed in the exciting, hands-on engineering challenge for school- and club-based teams to build submersible robots, or ROVs (remotely operated vehicles) that can propel through water, negotiate obstacle courses, and lift and reposition items with precision. Starting with basic model kits, teams are encouraged to modify their ROV’s shape and configuration using math, science, and engineering knowledge to perform better or in innovative ways. SeaPerch is a national program that provides elementary through high school students with a deeper understanding of science principles and engineering skills; fosters creativity, teamwork, and problem-solving; and encourages students to pursue careers in marine engineering.

http://extension.unh.edu/articles/Diving-Deep-STEM

Credit: UNH Cooperative Extension
Five Years After Deepwater Horizon, UNH Oil Spill Expert Briefs Senate

Nancy Kinner, director of the UNH Center for Spills in the Environment and professor of civil and environmental engineering, joined researchers from two key government agencies working on oil spill response—the U.S. Coast Guard and the National Oceanic and Atmospheric Administration—at a U.S. Senate briefing on April 21st to provide elected officials with a clear picture of what was learned, how things have improved, and what still isn’t known regarding spill response. An expert on oil spills and, in particular, the use of chemical dispersants, Kinner has played a leadership role in creating and disseminating scientific knowledge in support of clean-up efforts in the Gulf of Mexico spill region.

http://www.unh.edu/news/releases/2015/04/bp14kinner.cfm
http://www.unh.edu/unhtoday/2015/04/unh-oil-spill-expert-brief-senate

International Collaboration in Physics Research: A Summer at CERN – Herbie Smith

Herbie Smith ’15 had the opportunity to work with scientists and students from all over the world at the world’s leading particle physics laboratory in the summer of 2014. With the support of the National Science Foundation’s Research Experiences for Undergraduates program, he conducted research and attended lectures at the European Organization for Nuclear Research (CERN). Networking with scientists and students from around the world and being part of a diverse workplace community helped Smith take a step toward becoming a globally-aware citizen and scientist.

http://www.unh.edu/inquiryjournal/spring-2015/international-collaboration-physics-research-summer-cern

Kevin Short Inducted as Fellow in National Academy of Inventors

Mathematics professor Kevin Short was inducted as a fellow into the National Academy of Inventors in March 2015. The award recognizes Short’s contributions to innovation in improving hearing aids, audio recording restoration, and developing the first music downloads to cell phones. He holds nine issued U.S patents and has additional patents pending. Short stated that the honor “highlights the importance of research done in academia and the positive effect it can have on society at large.”


Two Faculty Members Spearhead Scholarship to Assist Community College Students

Samuel Pazicni and Margaret (Meg) Greenslade, both assistant professors of chemistry, are spearheading a financial aid and academic support program for community college students transferring into UNH’s College of Engineering and Physical Sciences (CEPS). The main focus of the program, called CC2CEPS, is to use undergraduate research as an avenue for these students to be successful academically in CEPS STEM (Science, Technology, Engineering and Mathematics) majors. CC2CEPS is funded by a National Science Foundation grant and will support approximately ten students per year for the next three years.

http://www.unh.edu/unhtoday/2015/04/two-faculty-members-spearhead-scholarship-assist-community-college-students-0
Health, Behavioral & Social Sciences

Anthropology Major Dylan Kelly Receives NSF Research Funding
Anthropology major Dylan Kelly ’16 will spend six weeks this summer in Hungary excavating a Middle Bronze Age archaeological site as part of the program, Bronze Age Körös Off-Tell Archaeological (BAKOTA) Field School: Undergraduate Training in Fieldwork and Independent Research Reporting in European Archaeology. The field school is one of the Research Experiences for Undergraduates sites supported by the National Science Foundation. Kelly will receive room and board and a summer stipend from the program.

http://cola.unh.edu/article/2015/04/anthropology-major-dylan-kelly-receives-nsf-research-funding

COLA Announces New Community Literacy Center
The department of education at UNH has announced the establishment of the Community Literacy Center (CLC). The CLC will be an active partnership between UNH and local preschool-to-12th grade educators to provide intervention services to struggling students and enhanced educator professional development. The collaborative work between university faculty, school-based educators, and families also will provide a rich context for research related to literacy learning and instruction. Initial support for the Center has been provided by gifts to UNH by three anonymous donors.

http://www.unh.edu/unhtoday/2015/04/cola-announces-new-community-literacy-center

Do you “park your car” or “pahk your cah”? – The Changing Dialect of Southern New Hampshire – Melanie Platt
Melanie Platt ’15 conducted a sociolinguistic study in the summer of 2014 for which she interviewed native southern New Hampshire men and women, aged 18 to 89. Platt’s study, which was done in conjunction with the New Hampshire Language and Life Project and supported by a UNH Summer Undergraduate Research Fellowship, focused on the prevalence of non-rhoticity, or “dropping the r.” An observation she made was that among younger speakers “there was agreement that southern New Hampshire speakers do not sound like Boston speakers, nor do they want to.” Platt’s study was published in the UNH Undergraduate Research Inquiry Journal: Spring 2015.


Forest Views: Shifting Attitudes Toward the Environment in Northeast Oregon
A recent survey of northeastern Oregon residents showed an increased interest in prioritizing renewable energy and supporting limiting development, compared to the results of a similar 2011 survey. “The shifts in public opinion appear to be due to changes in perceptions among longtime residents, rather than demographic changes, and suggest that communities may be more receptive to regulations and programs that address ecological restoration and stewardship goals, as well as climate change impacts,” concluded the study team which included researchers from UNH, the University of Colorado, the University of Louisville, Oregon State University College of Forestry extension, and Wallowa Resources. UNH sociology professor Lawrence Hamilton, who coauthored the report, noted that the Oregon findings have broader implications, since many places throughout rural America are facing similar challenges.
Ned Helms Speaks at Annual NH Public Health Association Meeting on April 8th

Ned Helms, director of the New Hampshire Institute for Health Policy and Practice at UNH, gave the keynote address at the annual meeting of the New Hampshire Public Health Association. The Association works to strengthen the public health system to more effectively protect and improve the health and safety of New Hampshire’s population. Governor Maggie Hassan attended the meeting and presented Helms with the Roger Fossum Lifetime Achievement Award in recognition of the significant contributions to public health Helms has made during his more than 30-year-long career.

New Hampshire Listens Hosts Conversations on Kids and the American Dream

New Hampshire Listens will host 12 public conversations throughout the state to involve communities in addressing the increasing challenges New Hampshire children face in trying to achieve their dreams. Attendees will learn what the gaps are between the opportunities children have today compared with those of previous generations in the state, share their perceptions of the American Dream today in New Hampshire, and discuss what policies and practices might affect these issues for future generations. New Hampshire Listens, a civic engagement initiative of the Carsey School of Public Policy at UNH, works at the local and state levels to support civil, public deliberation of complex issues affecting New Hampshire residents’ everyday lives.

Next-Door Neighbors

Sociology Ph.D. candidate Justin Young is exploring the dynamics of community relationships between residents of Manchester’s increasingly diverse neighborhoods. While other sociological research has focused on the quantity of relationships between residents in more and less diverse neighborhoods, Young, a research assistant in the Carsey School of Public Policy at UNH, focused on how relationships known as “social capital” are cultivated and nurtured, and how they benefit both neighborhood types. Young has found that the increased racial and ethnic diversity in Manchester’s neighborhoods can improve community connections, but that income inequality between residents remains the biggest barrier to advancing race relations.

Open Archaeology Day Provided Hands-On Prehistory

The UNH anthropology department hosted its second-annual Open Archaeology Day on April 24th. The public event, organized by Drs. Meghan Howey and Marieka Brouwer-Berg, provided attendees with hands-on archaeological learning experiences. In one of the activities, members of the New Hampshire Archaeological Society demonstrated flintknapping, a technique for making ancient stone tools. Open Archaeology Day was part of New Hampshire Archaeology Month, a month-long series of public events to raise awareness about archaeology and cultural heritage across the state of New Hampshire.

New Hampshire Archaeological Society member Terry Fifield shows a student how to make ancient style stone tools.
Credit: UNH College of Liberal Arts
Post-Conflict Peacebuilding in Bosnia-Herzegovina – Hannah Waller

Hannah Waller ’15 traveled to Bosnia-Herzegovina to interview residents about their experiences during and after the Yugoslav Wars of 1992-1995, in which an ethnic cleansing campaign killed over 100,000 people, the majority of whom were Muslim Bosniaks. Through a series of semi-structured interviews and participant observation, Waller explored the roles of truth, memory, and justice in rebuilding a post-conflict society in Bosnia-Herzegovina—essentially, on peace building since the war ended in 1995. Waller’s research was supported by an International Research Opportunities Program grant from UNH’s Hamel Center for Undergraduate Research and was published in the UNH Undergraduate Research Inquiry Journal: Spring 2015.


Professor Jenkins Tucker Publishes Commentary

Professor of human development and family studies Corinna Jenkins Tucker has coauthored a commentary in the prestigious journal The Lancet Psychiatry with David Finkelhor, sociology professor and director of the UNH Crimes against Children Research Center. The journal asked Jenkins Tucker and Finkelhor to comment on a study addressing the effects of bullying. In their commentary, Jenkins Tucker and Finkelhor argue that the current response system for child maltreatment, abuse, and bullying is too fragmented to be fully effective.

http://chhs.unh.edu/article/2015/04/professor-jenkins-tucker-publishes-commentary

Taking a Deeper Look into the Lives of Disadvantaged Children through Visual Content Analysis – Julianne Shimer

During the summer of 2014, Julianne Shimer ’15 worked with the Healthy Schools Programme in Ireland, analyzing over 200 disadvantaged children’s drawings to gain insights into the connection between depression and how the depressed portray their family life. The results of Shimer’s research will help inform the Programme’s efforts to improve the health and well-being of children attending disadvantaged schools, as well as to increase their access to primary care services. A Summer Undergraduate Research Fellowship Abroad grant from UNH’s Hamel Center for Undergraduate Research allowed Shimer to undertake her research, which is published in the UNH Undergraduate Research Inquiry Journal: Spring 2015.


The Institute for Health Policy and Practice and NH Medical Society Release Population Health Podcast Series for Clinicians

The New Hampshire Medical Society and the Institute for Health Policy and Practice at UNH have teamed up to create Population Health for the Clinician: A Podcast Series. The Podcast Series is a learning tool for clinicians that will introduce listeners to the principles and practices of population health, and share resources to help clinicians incorporate population–based strategies into their practices. Contributors include leading academicians and medical educators, senior leadership from the Centers for Disease Control and Prevention and state health departments, the Chief Medical Officers of a safety net clinic and a Pioneer Accountable Care Organization, and several practicing physicians who have undertaken leadership roles. The podcasts are available on the Medical Society’s website at https://www.nhms.org/pophealth.
What Will Health in NH Look Like in 2020 and 2030?
The NH Citizens Health Initiative, a program of UNH’s Institute for Health Policy and Practice, has developed MapNH Health. MapNH Health is a web-based tool that combines data and resources to inform public policy and community conversations about the state’s health future. The goal of MapNH Health is to “start a conversation that everyone can join, from policy makers to health care providers, business and industry leaders, and every resident of the state” about public policy and future plans that will impact health in their regions and around the state.


Humanities & the Arts

Creativity Exposed
Music education major Dominic Ryder ‘15 analyzed the work of Greek-French composer Iannis Xenakis and performed one of Xenakis’ short pieces for solo percussion. An on-line video of his performance and oral presentation of the results of his research at Naked Arts: Creativity Exposed, a UNH Undergraduate Research Conference event, is available.

http://www.unh.edu/unhtoday/2015/04/creativity-exposed
http://cola.unh.edu/article/2015/04/video-music-student-performs-research-conference

English Professor’s New Book Practices Nature and Narrative Cures
English Professor and women’s studies core faculty member Diane Freedman has had a new book published: Midlife with Thoreau: Poems, Essays, Journals. Influenced by the work of Henry David Thoreau, the book combines memoir, critical essays, journaling, and poetry. In the book, Freedman practices the nature cure and the narrative cure as tools to make sense of the experience of her middle years.

http://cola.unh.edu/article/2015/04/midlife-thoreau

History Professor Jack Resch Receives Fulbright Award to Japan
Jack Resch, professor of history and program coordinator of humanities at UNH Manchester, has received a prestigious Fulbright award. With the Fulbright’s support, he will spend the spring 2016 semester at the University of Ryukyus in Japan teaching courses in American history and exploring possibilities for student and faculty exchanges.

http://manchester.unh.edu/blog/about-our-faculty/history-professor-jack-resch-receives-fulbright-award-japan

Keeping Up: A Literature Professor is Weighed Down by All the Books He Hasn’t Read
During the 2015 Lindberg Lecture at UNH, English and humanities professor Michael Ferber lamented the sheer volume of books that he hasn’t read, and suggested to all those who share his feelings that perhaps one way to cope is to develop a bucket list of the top books to read. UNH’s College Letter, the newsletter for the College of Liberal Arts, caught up with Ferber to find out what titles are on his list. A video of his Lindberg Lecture also is available.

http://cola.unh.edu/thecollegeletter/2015-04/keeping
MFA Writing Professor’s New Collection of Stories to Be Published
Tom Paine, associate professor of fiction in UNH’s Master of Fine Arts in Creative Writing program, has completed a new collection of stories. The release of A Boy’s Book of Nervous Breakdowns by LSU Press is planned for fall 2015.


Nathan Faro ’15 Discusses His Research: “Rediscovering Revolutions – Amy Beach and Bulgarian Folk Song”
Nathan Faro ’15 is featured on a podcast discussing the musicology research he conducted in an independent study titled, “Rediscovering Revolutions: Amy Beach and Bulgarian Folk Song.” Faro presented his findings at the UNH Undergraduate Research Conference in April.

https://soundcloud.com/uofnh/nate-faro-rediscovering-revolutions

On Point: A New Dance Professor Sets the Bar High for His First Ballet at UNH
Assistant professor of dance Assaf Benchetrit wanted to make his choreography debut at UNH a memorable experience. So he decided to direct UNH dancers in Don Quixote, which is, in his words, “this huge, masterpiece classical ballet.” An online video features Benchetrit and his cast working behind the scenes since fall 2014 to prepare for the ballet’s premiere on April 1-3, 2015. In the video, Benchetrit and the dancers talk about how the dramatic, humorous, romantic show came to life.

http://cola.unh.edu/thecollegeletter/2015-04/point
http://www.unh.edu/unhtoday/2015/04/behind-scenes-don-quixote

Simic Publishes New Collections of Poetry and Prose
Charles Simic, English professor emeritus and former Poet Laureate of the U.S., has completed two new books. The Lunatic: Poems is a collection of 70 pieces of poetry, while The Life of Images: Selected Prose collects Simic’s best essays from the past 25 years. Both were published by Ecco, a division of Harper Collins.

http://cola.unh.edu/article/2015/04/simic

UNH Holds Symposium on Don Quixote
On April 23rd, international scholars came together at UNH’s Dimond Library to celebrate the 400th anniversary of Miguel de Cervantes’ Don Quixote. The symposium featured panel discussions analyzing Don Quixote and its imagery and global influence, as well as an exhibit of rare editions of the text held in the Special Collection of UNH’s Dimond Library. The event, sponsored by the UNH Center for the Humanities, the Office of the Provost and Vice President for Academic Affairs, and the Spanish Program, was open to the public.

http://cola.unh.edu/article/2015/04/unh-hold-symposium-don-quixote
UNH Potters Ed and Mary Scheier

“Pioneers of the modern studio pottery movement” Edwin and Mary Scheier collaborated for over 50 years, spending 20 of those at UNH. Several of their pieces are on display in UNH’s Dimond Library, and their work continues to capture the interest of collectors and art enthusiasts. Ed & Mary Scheier: Mid-Century Modern New Hampshire Artists, a new retrospective of their work, opened on April 30th at Discover Portsmouth. The exhibit runs until October 2nd.


Marine & Ocean Sciences

UNH Researchers Make Breakthrough in Detecting Most Common Bacteria Contaminating Oysters

Cheryl Whistler and Vaughn Cooper, associate professors in the molecular, cellular, and biomedical sciences department, and Steve Jones, research associate professor of natural resources and the environment, have developed a new method to detect Vibrio parahaemolyticus in shellfish. This represents a major breakthrough in shellfish management and disease prevention, as V. parahaemolyticus is the most common bacterial infection acquired from seafood in the world, causing an estimated 35,000 infection cases each year in the U.S. alone. The new patent-pending detection method, developed using genome sequencing and analysis and built on UNH research begun in the 1980s of Vibrios in Great Bay Estuary shellfish and waters, is available for immediate use by researchers, shellfish managers, food inspectors, wholesalers, and retailers.

http://colsa.unh.edu/aes/article/vibriopatent
http://www.unh.edu/news/releases/2015/04/lw22oysters.cfm

Space Science

Higher Levels of Confusion: Rocket Sensors in the Northern Lights – John Heavisides

John Heavisides ’15 traveled to the University of Oslo in Norway in the summer of 2014 to work with a research team to determine if electron temperature and density data collected by two sensors that were part of the 2012 MICA rocket mission into the aurora borealis could be collected instead by a single dual-use sensor. As Heavisides stated, “The possibility that one sensor could do the work of two was enticing; the rockets flying through the aurora are relatively small, and can carry only a limited amount of weight. Frequently, needed data goes uncollected because a sensor was too heavy to fit on the rocket.” The collaboration was a natural one – one of the sensors had been built by UNH and the other by the University of Oslo. The results of the research were inconclusive, but helped Heavisides develop as a physicist and learn that in science, “questions are often more valuable than answers.”

http://www.unh.edu/inquiryjournal/spring-2015/higher-levels-confusion-rocket-sensors-northern-lights
UNH Scientist Briefs Congress on Space Weather Super Storms

Harlan Spence, director of the UNH Institute for the Study of Earth, Oceans, and Space, briefed members of Congress on March 24th on the effects of “space weather super storms” that can have profound effects on America’s economy, public safety and well-being. At the closed briefing for some 100 members of Congress, sponsored by the National Science Foundation and the American Association for the Advancement of Science, Spence detailed how violent solar eruptions can affect the performance and reliability of space- and ground-based technological systems and endanger human life and health. Spence and the other panelists also discussed work to improve risk assessment and hazard preparedness to mitigate vulnerability to storm impacts and the need for continued research to develop the basic understanding that serves as the foundation for future directions.


Sustainability & the Environment

Emeritus Associate Professor Mimi Becker Receives Lifetime Achievement Award from EPA

The U.S. Environmental Protection Agency honored associate professor emeritus of natural resources Mimi Becker with a lifetime achievement award at its 2015 Environmental Merit Awards ceremony on April 22nd. Becker, who taught for 20 years at UNH before retiring in 2014, was recognized for her work in energy, land use, watershed management, and climate planning and policy in New Hampshire. The merit awards, given out each year since 1970 by EPA New England, recognize individuals and groups in the six New England states who have shown particular ingenuity and commitment in their efforts to protect or improve New England’s environment.

http://www.unh.edu/unhtoday/2015/05/emeritus-associate-professor-mimi-becker-receives-lifetime-achievement-award-epa

Songs of Spring Underscore Importance of Vernal Pools

Kimberly Babbitt and her colleagues in the New Hampshire Agricultural Experiment Station have been studying vernal pools and their inhabitants for decades, and now are focusing on how to protect these important wetland ecosystems. Jessica Veysey Powell, post-doctoral fellow in wildlife ecology and human dimensions of environmental management, worked with Babbitt on a six-year study that has now provided the first scientific evidence that vernal pool-dependent amphibian species are threatened by nearby development, and that forested buffers wider than the current standard of 100 feet are necessary to maintain local amphibian populations.

http://colsa.unh.edu/aes/article/vernalpools

UNH Reports: New Hampshire Getting Warmer, Wetter as Climate Changes

Two UNH Climate Solutions New England (CSNE) reports, released in April, predict that by 2050, average annual temperatures in New Hampshire will rise by 3 to 5 degrees Fahrenheit and extreme precipitation events will double. CSNE, a UNH Sustainability Institute initiative, compiled the reports to assess past and potential future climate change across New Hampshire. Notes Cameron Wake, research associate professor in UNH’s Institute for the Study of Earth, Oceans, and Space and director of CSNE, “the good news is that we have the time, the tools, and the civic structures to help our communities become more resilient to future flooding events.”

http://us1.campaign-archive1.com/?u=f961de241cfeb5cbfcd3df440&id=162f610f0