Read stories this month in these UNH research areas:

Inquiring Minds - Highlights from UNH Research
The Fall 2015 issue of the University of New Hampshire Magazine highlights three research projects currently underway at UNH. Rebecca Rowe, assistant professor of natural resources and the environment, is exploring the effects humans have had on the Great Basin shrubland; Iago Hale, assistant professor of specialty crop improvement, is working to breed a commercially viable kiwiberry for New England farmers; and Joseph Dwyer, professor of physics and Peter T. Paul Chair in Space Sciences, is studying the particles that initiate thunderstorms.


Agriculture & Biosciences

No Chestnuts to Roast on an Open Fire - UNH Project Aims to Help Restore American Chestnut Tree
For the past century, American chestnut trees have been under attack by Chestnut blight, a fungal disease that has killed trees from Georgia to Maine and west to the Ohio River Valley. Now, the NH Agricultural Experiment Station is partnering with the American Chestnut Foundation (ACF) to establish an American chestnut tree plantation at Kingman Farm in Madbury. 350 potentially blight-resistant trees that the ACF developed over the course of three decades will be planted and studied by UNH researchers to determine the best ways to reintroduce these trees into natural forests.

http://colsa.unh.edu/aes/chestnuts
http://www.unh.edu/unhtoday/2015/12/no-chestnuts-roast-open-fire
http://www.unh.edu/news/releases/2015/12/lw14chestnut.cfm

Business & Technology

IOL on the Move
UNH’s InterOperability Lab (UNH-IOL), the leading test facility for data and networking communications products, has moved to a new location adjacent to the UNH campus in Durham. The new facility in the Madbury Commons will feature
expanded training space for students and visitors; dedicated space for equipment that provides ample power, cooling, and noise isolation; increased energy efficiency; and easier access for middle and high school students attending UNH tech camps, participants in K-12 STEM engagement activities and tours, and the 125 undergraduate and graduate student employees who work with such companies as Apple, Cisco, and Microsoft.

http://www.unh.edu/unhtoday/2015/12/iol-move

nTIDE Jobs Report: Employment Continues to Drop for People with Disabilities
For the third month in a row, the National Trends in Disability Employment Monthly Update, issued by the Kessler Foundation and UNH’s Institute on Disability, has revealed that fewer Americans with disabilities are finding work. This contrasts sharply with the first eight months of 2015 in which people with disabilities outpaced employment gains made by people without disabilities. In November 2015, among workers ages 16-64, the 4,097,000 workers with disabilities represented 2.9 percent of the total 141,160,000 workers in the U.S.


UNH: LESI Expands on Present Business Sentiment
According to the latest Lodging Executives Sentiment Index (LESI) for the current period ending September 2015, lodging executives have good expectations for current business conditions, although their sentiments for future hiring in the next 12 months remain flat. LESI is based on monthly surveys of more than 2.5 million hotel rooms across the country, accounting for more than 55 percent of all U.S. rooms. It is managed by the Department of Hospitality Management at UNH’s Peter T. Paul College of Business and Economics. Nelson Barber, program chair and associate professor of hospitality management, noted that the summer season was the strongest in decades.

http://www.unh.edu/news/releases/2015/12/em21lesi.cfm

YAS Foundation Grant to UNH Will Support Broadband Center of Excellence
UNH’s Broadband Center of Excellence (BCoE) has been awarded a seven-year grant from the YAS Foundation to expand the BCoE’s efforts to leverage UNH research and technology to help ensure universal and affordable broadband service worldwide. The funding will help develop technologies to better disseminate access to broadband, conduct studies to determine affordable broadband, consider practical applications for broadband, and advance research to maintain the nation’s competitive edge globally.

http://www.unh.edu/news/releases/2015/12/em07broadband.cfm
Engineering & Physical Sciences

California Dreamin’: UNH Researchers Overrun American Geophysical Union Meeting

In December, 100 UNH faculty and students attended the American Geophysical Union’s fall meeting in San Francisco, where 23,000 Earth, ocean, and space scientists gathered for five days of scientific talks, poster presentations, exhibits, lectures, and events. UNH scientists participated in more presentations, posters, and co-authorships of research projects at the meeting than many much larger institutions. UNH research shared with the members of the international science community in attendance spanned from deep below the Earth’s surface to the edge of the solar system.

http://www.unh.edu/unhtoday/2015/12/california-dreamin

Health, Behavioral & Social Sciences

2014 Data Indicate That Four in Ten Children Live in Low-Income Families

New research from the Carsey School of Public Policy at UNH has shown that in 2014, 44.1 percent of American children lived in low-income families, 21.7 percent were poor, and 9.6 percent lived in deep poverty. The study was conducted by the Carsey School’s Jessica Carson, vulnerable families research scientist; Andrew Schaefer, a doctoral student in sociology and a vulnerable families research associate; and Beth Mattingly, director of research on vulnerable families and research professor of sociology. The researchers noted that these findings highlight the need for a social safety net, and they recommended that policymakers consider additional efforts to assess the efficacy of such nets.

http://campaign.r20.constantcontact.com/render?ca=49e2e233-d0d9-4727-8814-5e3e8484c93c&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
http://www.unh.edu/news/releases/2015/12/em16carsey.cfm

Andrew Coppens Authors Chapters in Peer Reviewed Publications

Andrew Coppens, assistant professor of education in learning sciences, has authored chapters in two recently-published books: Advances in Child Development and Behavior and Familial and Friendship Relations and Spatial Socialities. Coppens’ interdisciplinary, multi-method research focuses on how children’s learning and development is supported by opportunities to share meaningful work with others. Much of his research examines cultural variation in whether children’s learning involves their integration in or segregation from the work of adults and other experts.

http://cola.unh.edu/article/2015/12/adrew-coppens-authors-chapters-peer-reviewed-publications
Bluebird Days for Undergraduate Exercise Scientist: UNH Senior Recognized for Research, Scholarship

Emily Larson ’16, an exercise science major, is not only a passionate member of UNH’s Nordic ski team but also a committed researcher. Under the guidance of Timothy Quinn, professor of kinesiology, Larson characterized cardiac function in collegiate Nordic skiers to try to identify any abnormalities in the electrical conduction system of the heart that would indicate increased risk for atrial fibrillation later in life. In recognition of her research, Larson was awarded both the Robert S. Axtell Undergraduate Scholarship and the Student Investigator Undergraduate Award by the New England Chapter of the American College of Sport Medicine (NEACSM). The Axtell award recognizes the most outstanding undergraduate exercise science student in all of New England, and the student investigator award recognizes the excellence of the research she conducted under Quinn’s guidance and her presentation of that research at the NEACSM’s annual meeting.

http://www.unh.edu/unhtoday/2015/12/bluebird-days-undergraduate-exercise-scientist

Chávez Publishes Book: "Nicaragua and the Politics of Utopia"

Daniel Chávez, assistant professor of Spanish, has had his book Nicaragua and the Politics of Utopia: Development and Culture in the Modern State published by Vanderbilt University Press. In the book, Chávez investigates how Nicaraguan popular culture adapted to and interpreted each of three decisive movements of social reinvention in Nicaragua: the regimes of the Somoza family; the Sandinista party governments; and the present-day struggle to adapt to a global market economy.

http://cola.unh.edu/article/2015/12/dch%C3%A1vez

Deaths Exceed Births in Most of Europe, But Not in the United States

New research by Kenneth Johnson, senior demographer in the Carsey School of Public Policy at UNH, and his collaborators shows that 58 percent of European counties had more deaths than births in the 2000s, compared with 28 percent of counties in the U.S. The research found that this natural decrease is more widespread in Europe because the population is older, fertility rates are lower, and there are fewer women of child-bearing age. Natural decrease is a major policy concern because it drains the demographic resilience of a region, diminishing its economic vitality and competitiveness. However, the impact of natural decrease can be counteracted by increased immigration of young adults of child-bearing age who have higher fertility rates.

http://campaign.r20.constantcontact.com/render?ca=266543b7-ff7d-4e3b-bde3-46c57827cc5c&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b

http://www.unh.edu/news/releases/2015/12/em15carsey.cfm
Dr. Pam DiNapoli Presented Findings from "Life of an Athlete" NHIAA Prevention Initiative

In a recent presentation to the members of the National Prevention Network, Pamela DiNapoli and Donna Arias discussed their findings during year two of the ongoing New Hampshire Interscholastic Athletic Association (NHIAA)'s prevention initiative, “Life of an Athlete” (LoA). They found that the program, which encourages high school athletes to make healthier life choices, has had a positive impact in the 37 schools participating in the program. Program athletes report they are more aware of the risks of substance use, and as a result, are more likely to avoid alcohol, tobacco, and marijuana. Other key findings include the development of leadership skills among team leaders that promote a change in social norms. DiNapoli is an associate professor in the Department of Nursing and LoA Program Evaluator, while Arias is LoA Prevention Specialist for the NHIAA.

http://chhs.unh.edu/article/2015/12/dr-pam-dinapoli-presented-findings-life-athlete-nhiaa-prevention-initiative

New Carsey Perspective: Polling and the New Hampshire Primary

Carsey Fellow David Moore and UNH Survey Center Director Andy Smith have released an excerpt from their book The First Primary: New Hampshire’s Outsize Role in Presidential Nominations. The release is the first of a series to be published by the Carsey School of Public Policy at UNH, “Carsey Perspectives.” In this excerpt, Moore and Smith discuss the inaccuracy of voter polls as well as the repercussions of the so-called Iowa Effect.

http://campaign.r20.constantcontact.com/render?ca=13dcab8b-df11-46d0-b671-4550696b600b&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b

Primary Sources

The Fall 2015 issue of the University of New Hampshire Magazine includes an excerpt from the new book The First Primary: New Hampshire’s Outsize Role in Presidential Nominations in which Carsey Fellow David Moore and UNH Survey Center Director Andy Smith discuss the role New Hampshire has played in the presidential primary elections, focusing on New Hampshire’s coveted spot since 1920 as the first of all states to hold a primary. The authors discuss the truths and misconceptions surrounding this “New Hampshire Envy.”

http://unhconnect.unh.edu/s/1518/index-1col.aspx?sid=1518&gid=4&pgid=997 (pp.30-33)

UNH Political Expert Explores Many Faces of Republican Party in New Book

In their new book, The Four Faces of the Republican Party, Assistant Professor of Political Science Dante Scala and his co-author, Henry Olsen, senior fellow at the Ethics and Public Policy Center, examine the four factions of the Republican Party. Scala and Olsen show how the factions influence the presidential nomination process, and argue that there is more nuance to the party than just “establishment” versus “outsiders.” The book is written for anyone interested in understanding, reporting on, or influencing the Republican presidential election.


http://www.unh.edu/news/releases/2015/12/rr21scala.cfm
UNH Research: Helmetless-Tackling Drills Significantly Reduce Head Impact

Amidst national concern over the effect of head impacts experienced on the football field on player health, Erik Swartz, professor and chair of the department of kinesiology, has released his findings from the first year of a two-year study that is testing whether his innovative technique, called the HuTTTM intervention program, could alter tackling behavior and ultimately reduce head injury exposure. This novel set of helmetless-tackling drills, while seemingly counterintuitive to player health, helps modify player behavior on the field and has reduced head impacts by 28 percent in just one season. If further tests confirm these results, Swartz says the eventual adoption of helmetless-tackling training could improve public health and decrease the associated economic burden by reducing the risks of football-related head and neck injuries.

http://www.unh.edu/unhtoday/2015/12/unh-research-helmetless-tackling-drills-significantly-reduce-head-impact
http://www.unh.edu/news/releases/2015/12/rr21headimpact.cfm

UNH Survey Center Finds Trump Widens NH Lead But Most Voters Not Yet Convinced

The latest CNN/WMUR New Hampshire Primary Poll, conducted by UNH Survey Center, showed that Donald Trump has strengthened his lead in the New Hampshire primary race, while Marco Rubio has moved into second place. Only eighteen percent of likely New Hampshire Republican primary voters said they have firmly decided who they will support. The results are based on the responses of 954 randomly selected New Hampshire adults interviewed by landline and cellular phone between November 30 and December 7, 2015.


Why Do the Children Flee? Public Security and Policing Practices in Central America

In a brief from the Carsey School of Public Policy at UNH, Mary Fran Malone, associate professor of political science, discussed the security crisis in Central America and successful policing strategies for confronting this crisis. She reported that Central Americans' experiences and perceptions of crime are linked to an increased likelihood of migration and noted how the establishment of community-oriented civilian police forces has helped Nicaragua and Panama reduce emigration to the U.S.

http://campaign.r20.constantcontact.com/render?ca=9379653d-5779-4866-a35c-b12f63dc0194&c=10e4c220-45a3-11e3-b9d6-d4ae5292c40b&ch=12810d00-45a3-11e3-ba92-d4ae5292c40b
http://cola.unh.edu/article/2015/12/unh-research-finds-central-americans-less-likely-migrate-if-civilian-police-force
http://www.unh.edu/news/releases/2015/12/em02carsey.cfm
Humanities & the Arts

2015 in Books and Recordings
This year-end listing of scholarly and creative works by UNH’s College of Liberal Arts faculty includes fiction that reflects upon the Iraq war, research on repression in the Stalinist Soviet Union, a study of Jewish contentedness in Sub-Saharan Africa, and an analysis of the Republican Party’s nomination process. The faculty works include books, musical recordings, journal articles, book chapters, white papers, visual art, scores, scripts, and presentations.


Brian Chu, Professor of Art – Taiwan and China
With the support of a grant from UNH’s Center for International Education, Brian Chu, professor of art, traveled to Taiwan and China during the summer of 2015 to conduct research, teach, and begin the development of a new international education opportunity for UNH students. Chu traveled extensively within the countries, visiting museums and archeological sites, which helped him come to a new understanding of the multifaceted Chinese culture and its long history of evolution and integration. Chen also taught art and pedagogy at Chengdu University, gave lectures about his own work, and planted the seeds for future J-term opportunities for UNH students at Chengdu.

http://unh.edu/cie/brian-chu

Changing Minds: Isabelle Beagen ’18 Studies an Intriguing Slice of Theatre History and Finds a New Passion
Isabelle Beagen ’18, a theatre major, is pursuing her passion for Norwegian playwright Henrik Ibsen by researching his work and its relationship to the suicide of Eleanor Marx, the youngest daughter of Karl Marx. Funded through a Research Experience and Apprenticeship Program fellowship, Beagen is working under the mentorship of professor of theatre David Richman to better understand how Marx, a strong, outspoken feminist and one of the first people to introduce Ibsen to the English-speaking world could be driven to suicide, not unlike many of Ibsen’s female characters.

http://www.unh.edu/unhtoday/2015/12/changing-minds

Emeritus Andrew Merton Publishes Second Book of Poetry
Professor Emeritus of English Andrew Merton’s second full-length book of poetry, Lost and Found, has been published. In this collection, Merton details an autobiographical journey spanning from conception to beyond the grave. The poems, full of his signature, personable humor, have been published previously in various journals. His first book of poetry, Evidence that We Are Descended from Chairs, was named Outstanding Book of Poetry for 2013-2014 by the New Hampshire Writers’ Project.

http://cola.unh.edu/article/2015/12/amerton
McKinsey Publishes New Translations of C.P. Cavafy, Major Figure in 20th Century World Poetry

New translations and essays related to the works of Greek-Egyptian poet C. P. Cavafy have been published in a book by Martin McKinsey, associate professor of English. *Clearing the Ground: C. P. Cavafy Poetry and Prose, 1902-1911* is an amalgamation of private confessions, public pronouncements, journal entries, and philosophical thoughts that illuminate a crucial decade in Cavafy’s artistic development which began in near-crippling stasis but led to the success of his celebrated poem “Ithaca.”

http://cola.unh.edu/article/2015/12/mmckinsey

Modern Mythology

Professor of Classics R. Scott Smith is an avid Star Wars fan as well as a scholar. He asserts that while elements in the series taken from classical mythology have helped make the films successful, it is the promise of new developments to the mythological formula that keep fans like him coming to see the films. In his study of myth, Smith’s focus is not just on origins, but examines the question: “Why is it inherently compelling?” Regardless of when they occur in time and where on Earth — or in space — these stories draw the reader, listener, or viewer in.

http://www.unh.edu/unhtoday/2015/12/modern-mythology

New Holiday CD Produced and Created by UNH Alumni, Teachers, Students

A collaborative project between UNH alumni, current and past teachers, and students, with help from executive producer and UNH music supporter David King, has resulted in the Department of Music’s release of a new holiday jazz CD. “Swinging for the Holidays” includes performances by 8 vocalists and a variety of instrumentalists, and features Dave Pietro, a former UNH student and head of the New York University jazz department on lead alto sax; Nate Jorgensen, the new director of jazz at UNH, on second alto sax; and Jay Daly, a UNH alumnus, on lead trumpet. The CD was produced by Ryan Parker ’96, and arrangements were made by Steve Guerra ’97, head of the University of Miami Henry Mancini Institute, and Chris Humphrey ’87.

http://cola.unh.edu/article/2015/12/new-holiday-cd

Robert Macieski Releases Newest Book: Picturing Class

Robert Macieski, professor of history at UNH Manchester, has released a book that examines the art of Lewis W. Hines and his advocacy on behalf of child laborers as part of the National Child Labor Committee between 1909 and 1917. *Picturing Class: Lewis W. Hine Photographs Child Labor in New England* explores the historical context of Hine’s photographs and the social worlds of his subjects. Focusing on Hine’s work in New England, Macieski provides detailed analyses of many of the images and the stories behind their creation and the lives of their subjects.

http://manchester.unh.edu/blog/about-our-faculty/robert-macieski-releases-newest-book-picturing-class

Credit: University of Massachusetts Press
The Art of Humanity: Kaye Reflects on Performing One-Man Show About Peace as Paris News Unfolded

Just as professor David Kaye, chair of the theatre and dance department, was about to take the stage and perform his one-man play “How I Brought Peace to the Middle East?” at New York’s United Solo theatre festival, details began to surface about the terrorist attacks in Paris on November 13th. The play, based on his experiences during the six months he spent living near the Gaza Strip, is a story about never losing hope. Kaye proceeded onstage despite the attacks, because he believes that during such times we need to remind each other of our humanity.


Marine & Ocean Sciences

Diane Foster – Exploring the Boundary Layer and Sediments to Protect Coastlines, Beaches and Bays

Professor of Mechanical and Ocean Engineering Diane Foster’s research takes her from studying the effects of estuarine bay tides and nearshore waves to studying how tsunamis may shake up ocean bottoms. But what connects these different projects is her focus on the boundary layer, which is the layer of fluid through which the energy of the tides, waves, and tsunamis transfer down to the sediment beds. Understanding these boundary layers in bays and oceans has many potential applications, such as learning to predict the vulnerability of coastal structures to approaching tsunamis, approximating the extent to which beaches erode or build due to waves, and even predicting estuary health.


UNH Research Finds Ventless Lobster Trap Effective in Monitoring Populations

Research funded by New Hampshire Sea Grant and conducted by Abigail Clark ’12 and Win Watson, professor of zoology, has shown that the ventless traps used by biologists to catch and count lobsters in the Gulf of Maine do, in fact, provide more accurate numbers than standard traps, which have vents allowing smaller lobsters to escape. The study results, published in the journal Fisheries Research, offer definitive, third-party evidence that biologists throughout New England are using the best available science to study lobster populations and conduct the surveys used to inform management practices.

http://www.unh.edu/news/releases/2015/12/rr10lobster.cfm

Abigail Clark ’12 checks a lobster trap at one of the study sites, Wallis Sands State Beach, Rye, NH
Credit: Christopher Chambers
Space Science

UNH Scientists Launch NASA Rocket into Auroral "Speed Bumps" Above Norway

A team of scientists led by Marc Lessard, associate professor in the UNH Institute for the Study of Earth, Oceans, and Space and the department of physics, launched the RENU 2 rocket from Norway’s Andøya Space Center on December 13th to measure the complex, underlying physics of the northern lights and a process known as upwelling, the heating of the very high altitude thermosphere. Upwelling contributes to the phenomena of "satellite drag" that slows satellites down and can eventually make them fall back into Earth’s atmosphere. RENU 2, or Rocket Experiment for Neutral Upwelling, is funded by the National Aeronautics and Space Administration (NASA). The team of investigators includes collaborators from the Aerospace Corporation, Dartmouth College, Cornell University, the University of Oslo, the Kjell Henriksen Observatory (KHO, operated by the University Center of Svalbard), the EISCAT Svalbard Radar, and the SuperDARN radar.

http://www.unh.edu/news/releases/2015/12/ds15nasa.cfm

Sustainability & the Environment

Climate Change Cooperation: Experts Weigh in on the Paris Summit

As leaders from across the globe met in Paris for COP21, the United Nations’ climate summit, several experts at UNH provided insights and their hopes for the outcomes. Catherine Ashcraft, assistant professor in the department of natural resources and the environment; Jeannie Sowers, associate professor of political science; Lawrence Hamilton, professor of sociology and Carsey School senior fellow; and Tom Kelly, UNH’s chief sustainability officer and executive director of UNH Sustainability Institute, shared their varied perspectives on the efforts to create international agreement on how to address the impacts of climate change.

http://www.unh.edu/unhtoday/2015/12/climate-change-cooperation
http://cola.unh.edu/article/2015/12/sowers-hamilton-weigh-paris-climate-summit

Nutrition Innovator Miriam Nelson Joins UNH Sustainability Institute in March 2016

Miriam Nelson, a leading researcher and author on nutrition and physical activity, will become the deputy chief sustainability officer and director of the Sustainability Institute at UNH. Nelson, who is moving to UNH after twenty-five years at Tufts University, is the founding director of the John Hancock Research Center on Physical Activity and Obesity Prevention, has published extensive scholarly work on food policy, public health, and civic engagement, and has authored 10 books, including the New York Times bestselling Strong Women Stay Young. Her research serves as the foundation of the StrongWomen Program, a public health program for women that has been implemented in 35 states.

http://www.unh.edu/unhtoday/2015/12/nutrition-innovator-miriam-nelson-joins-unh-sustainability-institute
http://us1.campaign-archive1.com/?u=f961de241cfc5cbfcd3dd440&id=afa52b499f4&e=94f85b9afa
http://www.unh.edu/news/releases/2015/12/bp03nelson.cfm