

MINERVA

a publication of

THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

2011



Igniting a passion for learning

NEW FACULTY SIGNAL A NEW ERA FOR HONORS TEACHING AT UMAINE

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MINERVA

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MINERVA is produced annually by the staff of the UMaine Honors College, Thomson Honors Center, Colvin Hall, Orono, ME 04469, 207.581.3263. Design Printing of MINERVA is underwritten through gifts to the Honors College.

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Front Cover: New Honors/CLAS Preceptors Rob Glover, Sarah Harlan-Haughey, Jordan LaBouff, and Justin Martin.

Opposite: Honors students enjoy the view of the Capitol Building during the Spring 2011 trip to Washington, DC.

Back Cover: Artwork by Arline Thomson.

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FROM THE DEAN



Getting it.

As you will read in the following pages, this past year has changed the Honors College teaching landscape dramatically with the hiring of four CLAS-Honors Preceptors. Their picture is on the cover, but I'm going to use my prerogative as Dean to give you some insights into why I'm so excited about this excellent group of teacher-scholars!

Recent graduates know that the first lecture of the Honors 111 course involves hearing from multiple perspectives, primarily new students, about the Honors Read – the summer reading text for incoming Honors students. I always invite a couple of preceptors to share their reactions to the text. This year, I invited our two new faculty members who taught in that course: Sarah Harlan-Haughey, the CLAS-Honors Preceptor of English and Jordan LaBouff, the CLAS-Honors Preceptor of Psychology. It was a good choice!

Each approached the text, Michael Pollan's *The Omnivore's Dilemma*, from entirely different perspectives. Sarah led us on a journey from medieval monasteries to twenty-first century Montana, discussing language, texts, and culture. And Jordan discussed why – at least in some cases – you might decide to go to a fast food restaurant and choose something off a small menu rather than shop for a healthier meal at a large supermarket with thousands of choices.

What was so exciting to me was that they got it! They understood what it is we do in Honors when we ask students (and faculty) to consider multiple perspectives and look at things from directions that sometimes are foreign to them.

Our other new hires get it, too. Justin Martin, the CLAS-Honors Preceptor of Journalism, has spent a great deal of time in the Middle East teaching at the American University in Cairo. Before Justin even arrived, he was coming up with ways our students could travel there during the summer to study journalism and politics. Rob Glover, the CLAS-Honors Preceptor of Political Science, is providing leadership to develop an Honors-specific curriculum that offers students an opportunity to understand and internalize the role of citizen-scholar.

Our four new faculty members get it, and our students are going to benefit in many ways from their energy, enthusiasm, and interests. Our current faculty and students get it, too. Do you “get” Honors? If you're reading MINERVA 2011, that's a good sign that you get it, or you want to get it!

I know our students will also benefit greatly from another new face on campus. We join the UMaine community in welcoming our new President, Dr. Paul Ferguson. President Ferguson has already demonstrated that he gets it – both his understanding and support of Honors – in several ways, including meeting with our faculty and inviting faculty members and students to meet with the Board of Visitors. I'm optimistic about the future of the College as an integral part of the University under President Ferguson's leadership.

At its core, the Honors College is about people. Our students, faculty, staff, and graduates are our most valuable asset, and they are what inspire me to constantly seek new and innovative ways to engage their collective talents for the benefit of the Honors College community. They “get” Honors, because they *are* Honors.

I hope that you enjoy MINERVA 2011 as much as I enjoy Honors every day.

Charlie

Charlie Slavin, Dean

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New Faculty, New Collaborations, New Opportunities

Four People, Endless Possibilities

Originally from Montana, Florida, Massachusetts, and Oklahoma, most recently from Virginia, Texas, New York, and Egypt, the four CLAS-Honors preceptors have landed in Orono and are revitalizing and reshaping the Honors College. National searches involving two colleges, four departments, eighteen faculty members sitting on search committees, more than twenty Honors students taking part in “mock preceptorials,” and untold amounts of paperwork resulted in the hiring of **Rob Glover** (CLAS-Honors Preceptor of Political Science), **Sarah Harlan-Haughey** (CLAS-Honors Preceptor of English), **Jordan LaBouff** (CLAS-Honors Preceptor of Psychology), and **Justin Martin** (CLAS-Honors Preceptor of Journalism). They started this past September and have already demonstrated what an impressive group they are, both in the classroom and beyond.

Jeff Hecker, Dean of the College of Liberal Arts and Sciences, and Charlie Slavin, Dean of the Honors College, initially described these positions, the first of their kind at UMaine and perhaps elsewhere, this way:

Preceptors engage undergraduate students in the classroom and beyond its walls, as teachers, mentors, and advisors. They value disciplinary and interdisciplinary teaching at all levels from first-year experiences through senior-level thesis advising. As members of the Honors College faculty, they are part of a community of scholars who together explore questions both within and beyond their various disciplines. As members of their disciplinary unit, they champion pedagogical innovation, interdisciplinary interactions, and undergraduate-involved scholarship.

It hasn't taken Rob, Sarah, Jordan, and Justin long to fill all these roles. They began teaching in Honors 111 and 211 this fall. Justin and Rob are each already co-advising Honors theses, and all of them are on several thesis committees. Along with Mark Haggerty, Rezendes Preceptor for Civic Engagement, and Mimi Killinger, Rezendes Preceptor for the Arts, they have begun thinking about thematic, interdisciplinary collaborations across the entire Honors faculty. Those six Honors faculty members and the dean have just finished an article describing and providing their seven perspectives on the conception, development, and implementation of these exciting new positions.

There is no doubt that this new constellation of Honors faculty members will fulfill the goals of this new initiative that Deans Hecker and Slavin set forth:

- **Strengthen** the Honors College by increasing the size of the faculty and growing the course offerings.
- **Increase** the opportunities for undergraduate students to involve themselves in research and creative activities.
- **Meet the demand** for instruction in the liberal arts and sciences with high-quality full-time faculty.

We can't wait to see what they will come up with next! ■ ■ ■



Meet the New Preceptors!

Rob, Jordan, Justin, & Sarah Join the Honors College

Rob is a political scientist whose primary research areas are democratic theory, human rights, international relations theory, and the politics of immigration. Prior to UMaine, Rob was a Visiting Assistant Professor in the interdisciplinary Justice Studies program at James Madison University. His current research addresses the contemporary politics of immigration and citizenship with a focus on issues of democratic legitimacy and non-citizen activism. Rob is co-editing a book examining the use of “non-traditional” media such as film, literature, music, and social media to teach core political concepts. His research has been featured in *Political Studies*, *Philosophy & Social Criticism*, *PS: Political Science and Politics*, and *The Journal of Political Science*.

Jordan is a psychologist whose research projects primarily focus on questions like: “How does religion both make and unmake prejudice?”, “What does being a humble person look like, and how does it influence people’s success?”, “What sorts of factors outside of our conscious awareness might influence our feelings and behaviors?”, and “are there such things as non-substance addictions and why do they form?” He and his wife (LaRae) both grew up in Tulsa, Oklahoma and spent the last ten years in central Texas. They are both graduates of an interdisciplinary honors program and are thrilled to be joining the community at the University of Maine’s Honors College!

POLITICAL SCIENCE

Rob Glover

Ph.D.

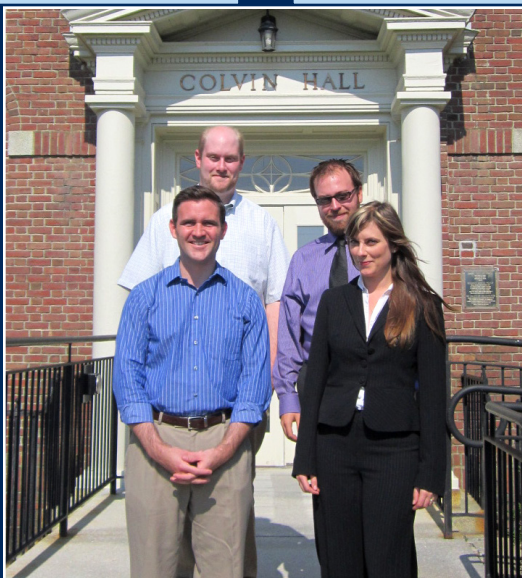
University of Connecticut, 2010

JOURNALISM

Justin Martin

Ph.D.

University of North Carolina -
Chapel Hill, 2009



PSYCHOLOGY

Jordan LaBouff

Ph.D.

Baylor University, 2011

ENGLISH

Sarah Harlan-Haughey

Ph.D.

Cornell University, 2011

Justin’s research and writing focuses on international journalism and foreign reporting. He is interested in issues of freedom of expression in the Arab world and other developing locales. A journalist himself, Justin has reported from a dozen countries, including Egypt, Tunisia, Lebanon and Israel, and he currently authors the “Borders & Bylines” column for *Columbia Journalism Review*. His reporting and commentary have appeared in over forty journalistic publications, and he has authored articles in several juried journals, including *Journalism Studies*, the *Journal of Communication*, and the *Journal of Global Mass Communication*. Justin spent 2005 and 2006 in Jordan as a Fulbright scholar, and he is fluent or conversant in several dialects of Arabic.

Sarah is a fourth-generation Montanan, from a family of farmers, musicians, and artists. She earned undergraduate degrees in English and Spanish Literature at the University of Montana, and her Master’s and Doctoral degrees in the interdisciplinary Medieval Studies program at Cornell University. Her scholarship is relevant to discussions of the environment and literature, colonial landscapes of power, and oral traditions. Sarah’s current research includes a survey of the medieval English outlaw tradition as nature writing, a study of the malignant landscape in the Anglo-Norman poet Layamon’s *Brut*, and an examination of the depictions of the insular North-Atlantic land- and seascapes in Old Norse literature and later Scandinavian balladry.

Awards Abound for Honors Students - In and Out of the Classroom

Fullbright, Pearson Awards for Rachel Binder-Hathaway '11

While researching her Honors Thesis in Bangladesh in Summer, 2011, **Rachel Binder-Hathaway '11** learned she had earned a 2011 Pearson Foundation Award. The Pearson Award includes a \$10,000 fellowship and recognizes students who distinguish themselves through commitment to community service during their undergraduate studies. The award came only months after Rachel learned she had been selected as a 2012 Fulbright Scholar. As an involved UMaine student and single mother, Rachel is earning a dual degree in business administration and economics, and majors in Financial Economics (Economics), Accounting (Business Admin) and Finance (Business Admin). She also holds a certificate in Fundamentals of Microfinance from the UN Institute for Training & Research. In 2009 Rachel founded Seeds of Change, a non-profit consulting firm addressing poverty by generating social change through education, empowerment, and economic development (consultants4good.org). Rachel's Honors Thesis is an extension of this focus. She is researching the phenomenon of entrepreneurial micro-loans from microfinance institutions as a way to extend business opportunities to millions of people who lack access to traditional financial markets, helping them break the poverty cycle. ■■■



2011 Millay Prize Awarded to Poet Jason Canniff '11



The University of Maine National Poetry Foundation presented the 2011 Frank & Helene Crohn Edna St. Vincent Millay Prize, which includes a \$1,500 award, to Maine native, Honors graduate and master's candidate **Jason Canniff '11**. Jason, a non-traditional student, teaches college composition and is poetry editor for *The Stolen Island Review*, the graduate literary magazine at UMaine. At the award ceremony, Jason and nationally known poet David Trinidad offered readings. Originally from Mid-coast Maine, Jason studied English and worked as a photography editor for *The Maine Campus* and as a part-time photographer for the *Bangor Daily News* before taking time off in 2002 to explore a career in hospitality management. He returned to UMaine in 2010 and worked with poet and associate professor Jennifer Moxley to complete his Honors Thesis while serving as the assistant to the New Writing Series. A selection from his thesis, titled "Shading Strings" was submitted for the Millay Prize Competition. ■■■

Jeremy Bender '12 Receives Dean Smith Award

Honors student **Jeremy Bender '11**, captain of UMaine's swimming and diving team, is the 2011 recipient of the Dean Smith Award recognizing student-athletes with outstanding academic and athletic achievement, along with citizenship and community service. The marine science major is a three-time Maine Scholar-Athlete Award winner and has twice been named to the America East Commissioner's Academic Honor Roll. He is member of the Senior Skulls and the student-athlete advisory committee. In 2009, he studied abroad in Australia, where he spent the semester diving and doing reef research. Jeremy has also received a NOAA Ernest F. Hollings Undergraduate Scholarship. In the water, Jeremy is a three-time team most valuable performer and holds the school record in the 400-individual medley. ■■■



Shannon Folsom '13 — Miss Collegiate America 2011

Shannon Folsom '13, an Honors student majoring in kinesiology and fulfilling pre-med requirements, was crowned in January at the Miss Collegiate America Pageant in San Antonio, TX. Shannon (pictured here with actor Patrick Dempsey) will receive a \$10,000 college scholarship and a wardrobe stipend for her year of service traveling around the nation. Like her parents, Ed and Lauren Folsom of Saco, who are UMaine graduates, Shannon is a singer. An accomplished actress, she also plays violin and twirls the baton. Her extensive list of extracurricular activities includes Crossroads Youth Center in Saco, Project AWARE youth drug awareness project, and the Children's Miracle Network of Maine. She will also be featured in a short film about childhood obesity based on her own experience being overweight as a youth. In addition to her studies, Shannon emphasizes her commitment to working with young people and promoting healthy lifestyle choices to protect children from obesity and diabetes. It's full speed ahead for Shannon at UMaine this year, though. The national organization is very understanding of the amount of work required of college students, and Shannon will not be required to take time off from school during her year as Miss Collegiate America. ■ ■ ■



Meet the Associates: Emma Atherton '11 & David Reid '07



For Emma, this time marks a new phase of life. Emma graduated in May 2011 with a degree in psychology. After graduating, she felt that she was not ready to leave Orono and the community she had grown to love. In hopes of finding a good reason to stay, she applied to the honors associate position. Emma was overjoyed to discover that she had been offered the position and hopes to be able to give back to the honors community which has already given her so much.

David Reid graduated from the University of Maine in 2007 with a BA in anthropology. For his honors thesis, David conducted investigations of archaeological sites in Peru focusing on the relationships between climate change events and human culture. Since graduating he continued working in the Andes in between jobs as a traveling archaeologist, crepe vendor, and 19th century farmer at the living history museum Old Sturbridge Village. Though abandoning his nomadic ways, he is excited to be back at the Honors College and the University of Maine. ■ ■ ■

**Attention
Honors
Graduates!**

**See your
name in
lights...**

...well not really, but with your permission, you can see your Honors Thesis online soon!

We are starting an initiative to put Honors Theses online in the Digital Commons @ UMaine:
digitalcommons.library.umaine.edu/honors/

Our goal is for all 1300+ Honors Theses to be online by 2013, and because we have most of the theses already, all we need is your permission to add yours to the Digital Commons!!

To submit permissions to put your thesis online, please fill out the form at:
www.honors.umaine.edu/ets/

If you can't remember your title, you can find it here:
www.honors.umaine.edu/academics/thesis/thesis-archives-search

Thank you for your help in making this initiative a success!

The Center for Undergraduate Research is Thriving

The Center for Undergraduate Research has been busy. Our 2nd Annual Undergraduate Research & Academic Showcase (photos below) was a resounding success! On April 14, 2011, more than 150 undergraduates, including many Honors students, presented their research papers, posters and creative works to the greater UMaine community. The event was well received, featured on the local news, and included an unexpected “drop in” by the University of Maine Board of Visitors. Comments following the event remarked on the diversity and quality of work being produced by UMaine’s undergraduates!

We have added a few updates to our web site, including “Success Stories” about our remarkable undergraduate researchers! Visit... <http://cugr.umaine.edu> ■■■



Stanhope Study Abroad Fellowship:

Making a Wish Come True for Caroline Robe '12

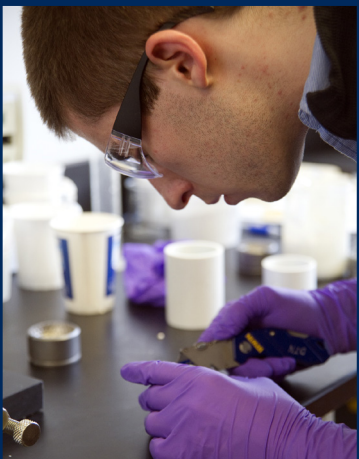


The Charles V. Stanhope '71 Honors College Study Abroad Fellowship supports Honors students who study abroad. This year's recipient is **Caroline Robe '12** (Studio Art) who is studying in Greece. In her own words, here are Caroline's thoughts on this opportunity...

The Fellowship helped me realize a long-held wish: to study at the Aegean Center for the Arts on a tiny island in Greece. It was more stimulating and rewarding than I could have imagined. My painting and drawing flourished and I found new connections with my craft. I traveled in Italy and Greece with my Art History class and stood in front of artwork I had only dreamed of and seen on slides. I connected with neighbors as the European crisis unfolded, giving me a new perspective on Euro-zone politics and modern Greek culture. I returned with a revived interest in just about everything. My time abroad means more to me than I can mentally digest, let alone express, and I am just so happy to have had this opportunity. ■■■

Reed Thesis Fellowship:

Alex Caddell '12 is Solving Current Medical Problems



The Dr. Carolyn E. Reed '72 Pre-Medical Thesis Fellowship supports Honors thesis research focused in pre-medicine, and **Alex Caddell '12** is a shining example of just that! Under the direction of Dr. Ian Dickey, an orthopedic surgeon and medical director of Orthopaedic Oncology at Eastern Maine Medical Center, and Dr. David Neivandt of the Chemical and Biological Engineering Department, Alex is exploring exciting research pertaining to an urgent clinical need facing patients in Maine and across the county: the development of a polymeric foamed-plastic implant to be used in subcutaneous and percutaneous orthopedic applications.

In Alex's own words... *This Honors thesis requires a great deal of academic research pertaining the field of medicine itself, and the act of practicing medicine. Unlike strictly lab-based research, this project entails developing a physical product to be used in a surgical application. In order to do so, hands on investigative operations will be performed to test effectiveness and potential applications. I will be exposed to the academic and the physical rigors of a career in medicine. The fact that the goal of the project is to develop a product that will improve patient well being through quicker recovery times and more effective implants mirrors the intent of the Fellowship as the research being performed "... is intended to make a positive difference in the lives of others ...". It is also my hope that this thesis will indeed be a "stepping stone" to a future career as either a physician or a biomedical researcher potentially working on clinical trials like Dr. Reed.* ■■■

Recognizing Excellence in Functional Genomics

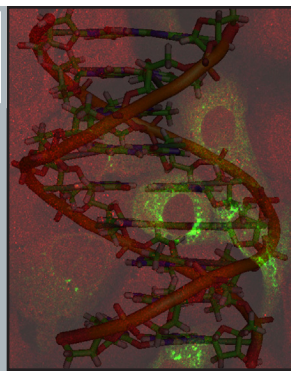
Honors Students Funded for Research as Undergraduates

The Maine IDEa Network for Biomedical Research Excellence (INBRE) is an NCRR/NIH supported network of thirteen Maine institutions with an overall goal of strengthening Maine's capacity to conduct NIH-competitive biomedical research.

Six Honors students have been selected to receive INBRE Functional Genomics Thesis Fellowships, at \$2575 each, for the 2011-2012 academic year:

Breana Bennett (Sharon Ashworth & Alireza Sarvestani, Advisors), **Geoffrey Davis** (Mary Rumpho), **Eben Estell** (Alireza Sarvestani), **Anne Campbell** (Keith Hutchison), **Richard Luc** (Carol Kim), and **Ashley Norum** (Robert Wheeler).

Also, two Honors students were awarded INBRE Functional Genomics Junior Year Research Awards at \$1000 each: **Erin Carter** (Robert Wheeler), and **Erica Hidu** (Robert Wheeler). ■■■



Getting Into Medical School as a Sophomore? Is it a Dream?

For Honors Students at UMaine, it's a Reality

The Maine Track Early Assurance program allows sophomores at all University of Maine System campuses, and Colby, Bates, and Bowdoin Colleges to apply two years early to this partnership between Tufts University School of Medicine and Maine Medical Center. The minimum eligibility requirements are rigorous. Applicants must complete at least one semester of organic chemistry and maintain a 3.5 GPA in all science courses. Competitive applicants have volunteer or employment experience in the health care field.

Early Assurance guarantees that students who meet admission requirements will be accepted into Tufts' Medical School, though they are not required to make a binding commitment. Maine Track students study in both Boston and Portland. Graduates receive a combined diploma from TUSM and MMC with the expectation that a significant number of graduates will practice in Maine.

Honors College Students have been very competitive in this program since it started in 2009...

2011 - Erica Hidu, India Stewart, Jenny MacDowell

2010 - Bradie Manion

2009 - Jonathan Pelletier, Aaron Perrault

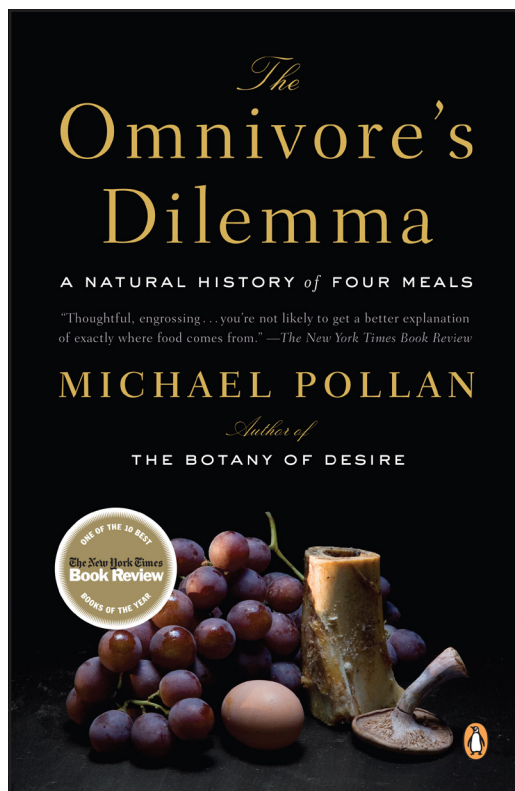
(both started at Tufts in Fall 2011) ■■■

Tufts
UNIVERSITY

School of
Medicine

Honors Read 2011— It's All About Food!

The Omnivore's Dilemma
by Michael Pollan



One of the goals of the annual Honors Read is to introduce first-year students to the nature and structure of the Honors College curriculum through their first assigned text. The book, selected by a committee of students and Honors faculty, should instigate critical thinking, open up lively discussion, and push the envelope of a student's preconceptions and world views. By this standard, the 2011 Honors Read, *The Omnivore's Dilemma: A Natural History of Four Meals*, by author Michael Pollan was a success!

Pollan offers a practical and intellectual approach to an everyday thing—food. He brings the reader along as he investigates our relationship with food— from the supermarket to the United States' industrial and organic farms. Pollan discusses the social disconnect between our ideas of food, the realities of monoculture farming and meat processing, the environmental implications of our current food system, and an individual's health and happiness.

Since the inception of the Honors Read, the first lecture of the year has been devoted to discussion of the text by all first-year Honors students. As usual, class discussion this year was lively and engaging, centering on themes of environmental sustainability, the ethical implications of eating animals, and personal responsibility. Before the discussion, two of the Honors College's new faculty members, Jordan LaBouff (CLAS Honors-Preceptor of Psychology) and Sarah Harlan-Haughey (CLAS Honors-Preceptor of English) spoke about their own readings of *The Omnivore's Dilemma*: Jordan speaking on the psychology of choice, and Sarah on her own family's changing lifestyle of farming in Montana -- both providing a great example of how we bring our own different approaches to the reading of a single text.

Though Pollan's book was often times polarizing, in the end, students agreed that food is an essential, but overlooked aspect of people's lives that is increasingly connected with ethical, political, and social choices. ■■■

The Hermon High School Scholar Diploma Program is intended to provide a rigorous academic pathway for students which encourages them to engage in challenging classes and explore learning opportunities in the real world, build incentives and rewards for high academic achievement into school culture and a support system for students to reach their maximum potential, and prepare students for personal success in college, work and community.

This program is just one example of several high schools that have joined into articulation agreements with UMaine's Honors College. Upon completion of program requirements at the high school level and being accepted to UMaine, students are guaranteed an invitation to the Honors College.

This summer, seventeen Hermon HS students (right) visited us for a day of college exploration. In addition to learning about the Honors College and UMaine (and eating lunch in Memorial Union!), the students engaged in college-level work based on their summer reading of *Stiff: The Curious Lives of Human Cadavers* by Mary Roach. A class discussion was led by ethicist and Professor Jessica Miller and Professor Irv Kornfield held an interactive tour of the forensic lab on campus. Special thanks to the program coordinator, Marcy Soucy, for bring her students for such a fun day! ■■■



Why I Teach in the Honors College



Kathleen Ellis
English

One of my first-year Honors students has begun humorously referring to himself as “my favorite Honors student.” I wouldn’t mind allowing him this claim, but he would have to share the title with dozens and dozens of highly intelligent, creative, and remarkable Honors students I have worked with since the mid-1980s. Back then, Honors Director Ulrich Wicks, invited me to give a lecture on Joseph Conrad’s *Heart of Darkness*. Ever since, I have been hooked on Honors. The energetic discussion and questions following my talk so impressed me that I was eager to continue the conversation. During the 1990s, I taught Honors tutorials on American literature, women’s literature, and multicultural literature. In addition, I served on Honors thesis committees and as advisor for several thesis projects. Since 2002, I have been leading preceptorials in the Civilizations series. It has been such a journey to explore the classics with greater acumen each year – learning as much from the discussion as any of the students. What excited me about Honors in the 1980s and 1990s is what still excites me today: the privilege of helping stimulate this ongoing conversation – not only in the Civilizations series but also in other endeavors, whether joining students and faculty in presentations at a national Honors conference or involving them in the annual Emily Dickinson birthday reading.

What mostly excites me about Honors is the third-year tutorials. I am amazed by students who enroll in a tutorial outside their major or “comfort zone” and then fearlessly engage in the topic. It has been both gratifying and humbling to read an experimental poem based on a John Cage mesostic written by a political science major, or to watch the fascination of students on a field trip to Indian Island observing a Penobscot birchbark canoe builder demonstrate his craft. Honors students are truly bright-eyed like Minerva, often wise beyond their years, frequently as discerning as many graduate students. In the end, they are the origin for my commitment to Honors ever since that fateful lecture on *Heart of Darkness*. ■■■

I’m one of those people who look forward to work on Mondays. I love to teach. The other day I was walking my dogs along the river trail near my house and I suddenly said, to no one, “I can’t believe I get paid for this.”

I think I’m a bit of a maverick. I’m not an academic, but I’m smart, articulate, interested, and I love discussing meaty issues with smart people. I’m less interested in what people know but more in how people articulate what they do know, or reflect on what they don’t know.

To tell students that they don’t hate poetry although they have just claimed they do. I say, “It’s because of how you were taught. You were told there was one interpretation, one answer. Poetry is not about an answer, it’s about a relationship. The relationship between you and yourself, through a poem, it’s not about what your teachers think. It’s about you.”

I see a lot of growth in my students. First comes honesty and next comes critical thinking. You can’t think critically until you own yourself, all that you know and all that you don’t know. Too many people tread carefully because they feel they haven’t read enough, or don’t understand, or haven’t read at all. I tell them that I need to know what I’m dealing with so I can make our preceptorials significant for my students and myself.

Then there’s the pleasure of teaching writing. Showing students that writing reflects your true, deep thinking, thinking you are now ready to do. I tell students their writing should begin on a walk, or at work, never in front of a computer screen or a piece of paper. I tell them they don’t have to begin at the beginning or avoid writing in the first person. Watching learners respond and see themselves grow and improve is an immensely rewarding experience.

A student came to see me. He showed me a paper he’d written for a psychology class, and I noticed that he had received an ‘A’. After reading it, I said, “It’s excellent, Peter.” Peter looked at me, “I couldn’t have done that without you, Chris. You got me there.” I felt moved to my soul. That’s why I teach in Honors. ■■■



Chris Mares
Intensive English Institute

Howard Hughes Medical Institute — Science Education Alliance

First-Year Honors Students Join the National Genomics Research Initiative

WARNING: SCIENTISTS IN TRAINING!

That's what the sign on the door should have read for this fall's HON 150: *Genome Discovery I: From Dirt to DNA*, taught by UMaine professors Sally Dixon-Molloy and Keith Hutchison.

The course, taught over the fall and continuing in the spring as HON 155: *Genome Discovery II: From DNA to Genes*, teaches first-year honors students how to isolate and analyze the DNA sequences of soil-dwelling bacterial viruses known as phage from locally collected soil. Given the diversity of phage, each one is almost certain to be unique, and the students get to name their newly identified life form.

Further work in the course includes characterizing their phage and extracting its DNA, analyzing and annotating the associated genomes, and contributing their data to the national GenBank database. At the end of the academic year, students will attend a national symposium to present their work. The program provides yet another opportunity for students in the Honors College to gain valuable first-hand research experience at an early stage in their academic careers.

The courses are the product of the Honors College being invited to take part in the Science Education Alliance, a national program of the Howard Hughes Medical Institute that seeks to develop innovative resources for undergraduate science educators.

"We are extremely happy to have been accepted to participate in the SEA," says Honors College Dean Charlie Slavin. "The National Genomics Research Initiative [recently renamed PHAGES, Phage Hunters Advancing Genomics and Evolutionary Science] is a tremendously exciting opportunity for our first-year students to engage in authentic scientific research, perfectly in keeping with the Honors College mission of igniting a passion for learning. UMaine students and faculty members will collaborate across the campus and across the country in an enterprise with local and global impact."

Among the many goals of the project, the program aims to introduce research to students at an early point in their college careers, retain students in the sciences, and help faculty gain experience in presenting experiment-based science teaching.

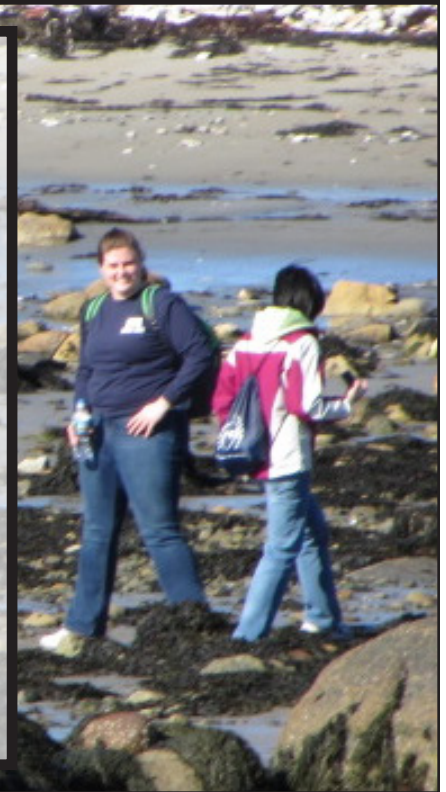
The University of Maine is one of 26 educational institutions to have been accepted this year through a competitive application process. The invitation to apply for membership in the Science Educational Alliance was offered to Maine institutions participating in the IDeA Network of Biomedical Research Infrastructure (INBRE), a statewide coalition funded by the National Center for Research Resources at the National Institutes of Health. The goal of the INBRE program is to enhance research capacity and competitiveness in Maine by expanding student training opportunities, supporting infrastructure improvements, and funding scientific research. ■ ■ ■



Engaging Nature: Honors Students “Take a Hike!”



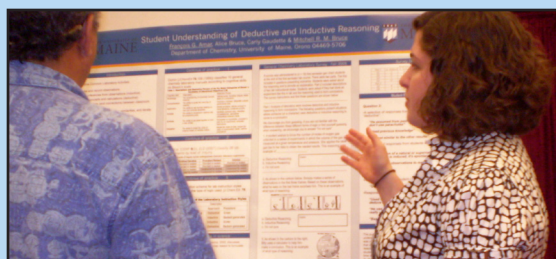
Honors Rezendes Preceptor for Civic Engagement Mark Haggerty’s Fall 2011 tutorial, *Engaging Nature*, looks at human engagement with nature through time and space, focusing on how humans experience and understand nature. Students examine stories from multiple cultural perspectives presented through books, movies and art. The intention is to examine alternative practices of nature through readings, writing, and related class field trips. For example, reading Thoreau’s *Maine Woods* (Ktaadn) led to experiencing Maine’s outdoors as described in the book. Examining photographs by Ansel Adams in the classroom inspired a nature hike and photo excursion led by nature photographer David Small. These photos are from their fall semester trip to Petit Manan Wildlife Refuge. ■■■



POSTCARDS FROM HONORS



Hello from Washington, DC!! Twenty-two Honors students had the chance to travel to Washington, DC over Spring Break for a chance to explore our nation's capital. Some students met with US Senator Olympia Snowe (pictured above), others visited the Pentagon, the White House, Library of Congress, and countless museums, monuments, and memorials. This trip is made possible because of the generosity of Betsy and Bill Leitch, who continue to support undergraduate research and travel through the Honors College. ■ ■ ■



Hello from Kansas City, MO! Thanks, again, to the generosity of Betsy & Bill Leitch, 15 students, 3 faculty, and 4 staff members presented the following sessions and posters at the 2010 NCHC in Kansas City!

Jazzing it Up: Promoting Faculty/Student Interaction outside the Classroom
Melissa Ladenheim, Samantha Paradis, Keri West

Music in the Honors Classroom

Mimi Killinger, Bradie Manion, Breana Bennett (left, bottom)

The Book of Choice: The University of Maine Honors Read
Mimi Killinger, Matt Cavanaugh, Kalie Hess, Hogan Marquis, Charlie Slavin

Keeping Current: Honors on the Radio
Ben Goodman, Elizabeth Kevit

From Thinking to Writing: Finding the Rhythms and Navigating the Currents
Mark Haggerty, Kalie Hess, Melissa Ladenheim, Bradie Manion, Kerri West

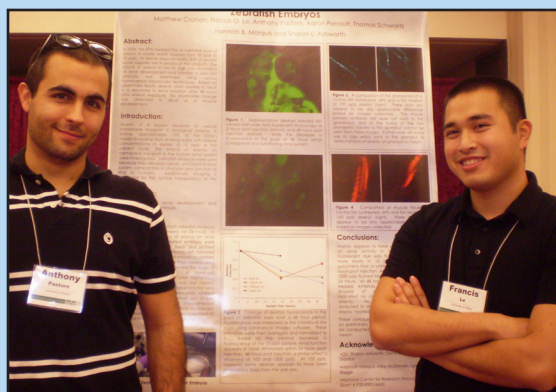
Student Understanding of Deductive and Inductive Reasoning
Carly Gaudette (left, top)

Turning Indian: A study of Mary Jemison and the White Captive Experience During the Revolutionary War Period
Julie Herbert

The Effect of Experimental Acidification on Ovenbird Territory Spacing
Matthew Pintar

Effects of Arsenic on Renal Development and Function in Zebrafish Embryos
Francis Le and Anthony Pastore (left, center)

Creativity of Children in Malawi
Solomon Nkhalamba



Ariel Berthel '13 — Zoology
Brisbane, Queensland, Australia

Jenna Bowley '12 — International Affairs/ Spanish
Ecuador

Shannon Brown '12 — Marine Science
Lewes, Delaware

Kathryn Chenard '12 — Wildlife Ecology
Hamilton, New Zealand

Brody Cullenberg '12 — International Affairs
Istanbul, Turkey

Lauren Daley '12 — Communications
London, England

Katy Deegan '12 — Management & International Business
Perth, Australia

Brianna Duhaime '13 — International Affairs
Florianopolis, Brazil

Brie Evans '13 — Nursing
Barcelona, Spain

Honors Students Study Away

Found in countries and cultures near and far, Honors students expand their classrooms to living, learning, and exploring the globe!

>>>

Sarah Pacheco '12
 Financial Economics
Lancashire, England



Caroline Robe '12
 Studio Art &
 History
Paros, Greece

∨
∨
∨

∧
∧

Ariel Berthel '13
 Zoology
**Brisbane, Queensland,
 Australia**



Molly Flanagan '13 — Marine Science
Boston, Massachusetts

Alisha Gagnon '12 — Psychology
Salzburg, Austria

Rebecca Gott '13 — Secondary Education
Konstanz, Germany

Emily Hinkle '12 — Biology, Nutrition
San Ramon, Costa Rica

Redyn Keller '12 — Anthropology
Valparaiso, Chile

Shelbe Lane '13 — Business Administration/ Pre-Law
Augusta, Maine

Sarah Lockhart '12 — Athletic Training
Falmouth, Maine

Jennifer MacDowell '13 — Biochemistry
Auckland, New Zealand

Amy Michaud '12 — Biology
Norwich, England

Mary Nalley '13 — Elementary Education
Norwich, England

Samantha Owens '13 — Psychology
Gold Coast, Australia

Sarah Pacheco '12 — Financial Economics
Lancashire, England

Rachel Porter '12 — Business Management
Gold Coast, Australia

Caitlin Powell '13 — French
Grenoble, France

Caroline Robe '12 — Studio Art, History
Paros, Greece

Alexandra Settele '12 — Animal Science
Mondragone, Italy

Sarah Watts '13 — Environmental Science
Bilbao, Spain and Cork, Ireland

Nathaniel Wildes '12 — Political Science
Washington, DC

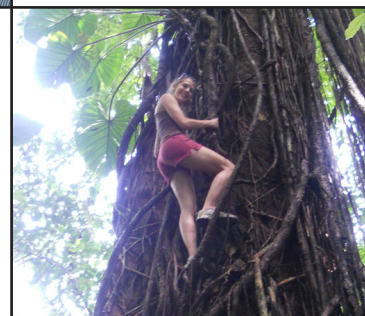
<<<

Nathaniel Wildes '12
 Political Science
Washington, DC



>>>

Emily Hinkle '12
 Biology, Nutrition
San Ramon, Costa Rica



John Burns '01: Honors in Translation

Teaching UMaine's Honors traditions



This fall, Honors students had the chance to share breakfast and conversation with Honors graduate John Burns. After graduating from UMaine in 2001 with degrees in both English and Spanish, Burns received his Ph.D. at the University of Wisconsin-Madison in 2009. Currently a professor of Spanish at Rockford College, IL, Burns returned to the UMaine to give a lecture entitled, "Rebels and Prophets in Latin American Poetry," and to perform with music faculty members Nancy Ellen Ogle and Ginger Yang Hwalek in "America in the Poetic Imagination," a concert with commentary.

It was as a high school student in Orono that Burns fell in love with poetry and literature. The Latin American poets Pablo Neruda, Federico García Lorca and César Vallejo further convinced Burns to immerse himself not only in poetry, but also in the Spanish language. He says, "I decided I needed to get myself somewhere in the Spanish-speaking world so I wouldn't have to read these texts in translation." While still in high school, Burns became an exchange student, living for a year in Chile — a country that he now brings his own college students to visit and study.

Burns shared his memories of his time at UMaine and the Honors College. After studying abroad in Santiago de Compostela, Spain, Burns became interested in Galician literature and poetry. His UMaine Honors thesis was a translation and introduction of the avant-garde Galician poet Manoel-Antonio's book of poetry *De catro a catro* (*From Four to Four*). Burns continues to professionally translate poetry in and out of Galician, Spanish, and English, and is now finishing an extensive anthology of Beat poetry, co-translated into Spanish with notable Mexican poet Rubén Medina, to be published by Editorial Aldus in Mexico City.

Burns related how Honors was influential in his own teaching, "At Rockford College I've had the opportunity to do interdisciplinary teaching and research that I don't think I would have been prepared for without Honors. I think the exposure to many disciplines (performing arts, philosophy, history, sociology etc.) helped me think of ways I could reach out beyond my own discipline in very hands-on ways." Burns has worked with colleagues in the departments of History, English, and Philosophy at Rockford, teaching and developing classes on such themes of Mexican History taught through the medium of the novel, digital media and rhetoric, and Latin American philosophy. Burns has been involved with the Honors Program at Rockford, helping to develop the program and being a guest lecturer on subjects such as Don Quixote and Christopher Columbus — clearly carrying the tradition of UMaine Honors to his new academic home. ■■■



Jason Houle '05... has been accepted to the Robert Wood Johnson Health & Society Scholars program. The HSS program focuses on building U.S. capacity for research, leadership and policy change related to population health. Up to 18 outstanding individuals per year who have completed doctoral training, are able to engage in a two-year program at one of six prominent universities. Jason graduated from UMaine in 2005 in Sociology (Honors thesis: *Should I Stay or Should I Go? The UMaine Honors College: Who Drops Out and Who Stays In?*), and graduated in 2011 from Penn State (Dissertation: *Out of the Nest and Into The Red: Three Essays on Debt in Young Adulthood*) with a dual PhD in Demography and Sociology. He is now studying at the University of Wisconsin through HSS. When asked about UMaine Honors, Jason says, "Honors was probably the most important formative experience of my college career. There's nothing else quite like it... most importantly, Honors taught me to think, deeply and critically—about the BIG questions. That's what I value the most. That's what made Honors special for me, and that's what made it stick with me." ■■■

"Honors was probably the most important formative experience of my college career"



Photo credit: Harold Shapiro

Honors Associate Update: Jennifer Saucier-Sawyer '04

It is an honor to update you on my life since graduating from UMaine (Chemical Engineering) and the Honors College in 2004, and as an Honors College Associate from 2004-2005. Since then, I have had the chance to explore exciting opportunities and interests while applying skills that I acquired at UMaine.

I married Andrew Sawyer, one of my UMaine classmates, and moved to New Haven, CT. I worked as a laboratory manager and researcher in the Department of Biomedical Engineering at Yale University performing translational research focusing on the development of therapeutics for cancer and disease. In addition to research, I took part in creative endeavors to assist the department including (because of my MINERVA experience) producing an annual magazine for the Department of Biomedical Engineering.

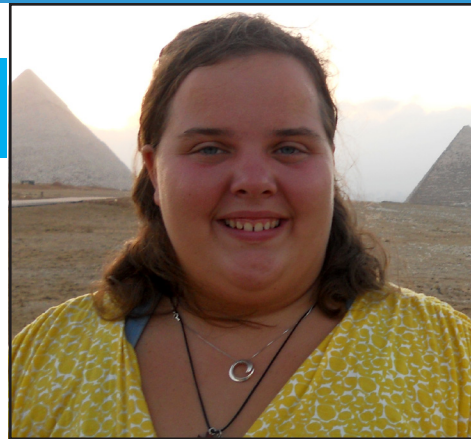
After so much lab experience, I knew that I wanted to pursue a career in Biomedical Engineering. With the resources available to me, and the ability to work and learn in an extremely translational environment, I chose to stay at Yale for graduate school. I am now in my third year as a PhD candidate. I work with engineers and clinicians to find solutions for current problems in the medical field. In the lab, I am working towards a better delivery system for chemotherapeutics in the treatment of cancer, specifically brain cancers. We are designing new delivery vehicles to help eliminate major side effects that go along with current cancer therapies while better targeting tumors and investigating promising new therapeutic agents.

Much of what I do today is made possible from the skills I learned as an Honors student in Chemical Engineering, and as an Honors Associate. Although more of my time is now spent reading scientific journal articles than classic literature, I will never forget the Honors experiences that allowed me to open my mind beyond engineering. I miss Maine, where I hope to return to work and live, but I am looking forward to the road ahead and keeping up with all of the exciting new opportunities available through the Honors College! ■ ■ ■

Current Student Perspective: Heather Ledoux

Honors student **Heather Ledoux, '13** spoke at the UMaine Foundation's 2011 Charles F. Allen Society Luncheon and we liked her talk so much that we asked to publish her words here... enjoy!

My name is Heather LeDoux. I am a third-year Biology and Social Work dual-degree with minors in Spanish and Pre-med from Milwaukee, WI, and a student in the Honors College. When people ask what my major is and I respond with that list, they stare at me like I'm crazy. I say, "I just can't decide," but it is really because UMaine has ignited my passion for learning and adventure. I chose UMaine because it was somewhere I had never been and a new adventure. The culture, hospitality, and the green space (never seen in Milwaukee) were worlds away from the life I was living. Even though almost everyone in my family had attended UNC Chapel Hill, I knew my twin sister and I had to go to separate places to gain our own identities. It was difficult to go against my family's Tar Heel traditions, so I sent in the acceptance to UMaine without telling them first. I knew it would be alright when my sister said, "I'll be ok; plus, how many people can say their best friend is a black bear?" I know I made the right choice. My mom visited and all she said as she left was: "It broke my heart to see you not go to UNC, but being here visiting you, I understand."



Because of UMaine, I have studied abroad with Semester at Sea; become an RA; taken part in Alternative Spring Break and Sophomore Eagles. I have the best job: welcoming new students to UMaine as part of Team Maine, and I have started Operation H.E.A.R.T.S, a medical outreach organization that explores the medical culture. And nothing beats the roar of the crowd at a UMaine sporting event. I have seen the ruins of the ancient world, taken classes like Taxonomy of Vascular Plants, Organic Chemistry, and Honors *Civilizations*. As a tour guide I often get asked "Do you like UMaine?" I just smile and think of the memories I am making. These opportunities will never be forgotten. I truly understand why the *Stein Song* ends with: "the college of our hearts always." I will always be a UMaine Black Bear. ■ ■ ■

Distinguished Honors Graduate Lecture 2011 Bruce Stanton '74

Dr. Bruce Stanton '74, the 2011 Distinguished Honors Graduate Lecturer, highlighted the public health dangers associated with exposure to arsenic during his lecture, *Arsenic: a global public health crisis*. Dr. Stanton focused much of his talk about the current situation in Maine, in addition to global perspectives.

"150,000 Mainers ... drink well water that is contaminated with arsenic," Stanton said. "Just because your neighbor's well is safe does not mean your well is safe."

Citing EPA research and agricultural practice, Stanton made it clear that there are methods and ways to test for and address arsenic levels in water sources. "Like they say in toxicology, 'It's the dose that makes the poison,'" he said. "Like everything else, you try to minimize your exposure to toxins."

Dr. Stanton graduated from UMaine in 1974 with a bachelor's degree in biology, and went on to earn his Ph.D. in physiology from Yale University in 1980. He is currently Professor of Microbiology and Immunology, and of Physiology and Neurobiology at Dartmouth Medical School, where he also directs the Center for the Environmental Sciences, as well as heading the school's Lung Biology Center and Cystic Fibrosis Research Development. In 2010, Dr. Stanton was named the Andrew C. Vail Memorial Professor. ■ ■ ■

THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

2011 DISTINGUISHED HONORS GRADUATE LECTURE SERIES

Bruce A. Stanton

ARSENIC

A GLOBAL PUBLIC HEALTH CRISIS

**How safe is
our water and food?**

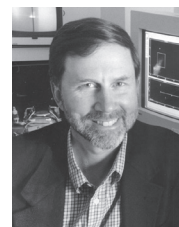
Wednesday, February 23, 2011

Reception: 3:30 pm

Andrews Leadership Hall, Buchanan Alumni House

Lecture: 4:00 pm, McIntire Room, Buchanan Alumni House

Bruce A. Stanton '74, is a professor of Microbiology and Immunology and of Physiology and Neurobiology at Dartmouth Medical School. He was named the Andrew C. Vail Distinguished Professor and is currently the director of the school's Center for the Environmental Health Sciences.



The Distinguished Honors Graduate Lecture series was established in 2002. Each year this award highlights the accomplishments of a UMaine Honors graduate. The Lectures serve as an opportunity for the University community to recognize the individual's accomplishments, vision, and connection with the University.

In complying with the letter and spirit of applicable laws and in pursuing its own goals of diversity, the University of Maine System shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, national origin or citizenship status, age, disability, or veterans status in employment, education, and all other areas of the University. The University provides reasonable accommodations to qualified individuals with disabilities upon request.

Questions and complaints about discrimination in any area of the University should be directed to the Executive Director of Equal Opportunity, The University of Maine, Room 101, 5754 North Stevens Hall, Orono, ME 04469-5754, telephone (207) 581-1226 (voice and TDD).

The University of Maine is a member of the University of Maine System.

Honors
College
AT THE UNIVERSITY OF MAINE

THE UNIVERSITY OF
MAINE

Deborah Small

The Welcoming Smile of Honors for Twenty-five Years, and Counting



Guess who celebrated her 25th year in Honors in 2011??? The person who has become the face of Honors: Deborah Small, our college Administrative Assistant.

In Deborah-like fashion, she celebrated her milestone with Honors quietly and humbly. She may seem quiet, but Deborah is a power house when it comes to dealing with faculty, staff, parents and students alike.

Deborah began as a part-time secretary in the Honors Program, having just recently moved back to Old Town from Fort Kent with her husband David, 12-year old son and 7-year old daughter. She was looking for a position where she could work outside of the home, but still be available for her children when they came home from school. It turned out to be a perfect match, since at the time the position fit into her schedule and into the Honors Program's needs as well.

Right from the start, Deborah became the first person you would see when you entered the Honors Center. Back then, the Honors Center was a small wooden building situated behind the Memorial Union. When you opened the door, there she was, greeting you with a smile. Today, she is just inside the entrance of the Robert B. Thomson Honors Center in Colvin Hall, but she is still the first person to be seen when you enter, and still with a huge smile!

Deborah is the calm in the constant chaos of Honors College activity. On any given day you will see her at the front desk, with a whirlwind of activity around her. Deborah's office is where the pulse of the Honors College is truly felt. Faculty come to check mail and make copies, students come for forms and to ask for help, classes whiz by in and out of our classrooms, the phone rings, the printers buzz, the fax machine beeps... and that's just a typical morning! Deborah handles the calls, questions, and support for faculty and students with an ease that comes with many years of practice.

Deborah approaches every request of her in Honors with a determination not to disappoint, but being a central part of Honors is just a little piece of her life.

If you have ever spent time around Deborah's desk you will notice all the photos she has displayed. They are all animals, and nature pictures. She is a true lover of both, and spends a lot of time hiking and exploring Maine's beautiful landscape with David. Many of those photos are courtesy of David's photography skill.

The incredible growth that Honors has experienced over the past 25 years certainly would not have happened so smoothly and efficiently if Deborah had not been there to keep things calm and organized. Thank you, Deborah, for your continued dedication to all who pass through the doors of the Honors Center. ■ ■ ■



Special Recognition

The Honors College would like to recognize the following Honors College students for their outstanding achievements during the 2010-2011 academic year. Congratulations!

Outstanding Student, Natural Sciences, Forestry & Agriculture:

Jonathan Pelletier '11 (Microbiology)

Outstanding Student, Education & Human Development:

Alexandra K. Fish '11 (Elementary Education)

The Honors College annually recognizes Honors students with these special awards:

The John Ferdinand Steinmetz Memorial Award was established in 1962 through a gift from the family of the late John Ferdinand Steinmetz '43. The income of this fund is to be used annually as an award for first-year Honors students demonstrating outstanding characteristics and appropriate need.

Ariel Bothen '14 **Kyle Franklin '14** **Alex Pinkham '14** **Rachel Wilkinson '14**

The Robert B. Thomson Memorial Awards were established in 1984 by family and friends. The income from the fund is awarded to outstanding Honors College juniors majoring in Political Science and in Art.

Cameron O'Brien '12 (Political Science) **Caroline Robe '12** (Studio Art)

The Professor Melvin Gershman Scholarship Fund was established at the University of Maine in 1998 with gifts from family, friends, and associates. The income from the fund shall be used to provide scholarship assistance to meritorious science students enrolled at the University of Maine. Preference shall be given to students in the Honors College whose curriculum includes a strong emphasis in the humanities.

Amanda Chaney '12 (Animal & Vet Science: Pre-Vet)

Breana Bennett '12 (Biochemistry)

Erin Carter '13 (Molecular & Cellular Biology, Biochemistry)

Geoffry Davis '13 (Biochemistry, Secondary Education: Physical Sciences)

Christine Kissinger '12 (Animal & Vet Science: Pre-Vet)

The Honors College Service Award is presented to one or more graduates of the Honors College for outstanding commitment and contributions to the University of Maine Honors community. The award is supported by gifts from our graduates.

Carly Gaudette Matthews '11 (Chemistry)

Nolan Gareth Southard '11 (Mechanical Engineering)

HONORS INDEX*

2011 Honors Graduates at a Glance

- Percentage of graduates in Phi Beta Kappa: 33
- Percentage of graduates in a Greek Organization: 8
- Percentage of graduates involved with music/theatre/dance: 16
- Percentage of graduates who attended at least one Honors trip: 26
- Number of graduates who presented at an academic conference: 27
- Percentage of graduates who were officers in a student organization: 49
- Number of graduates on the Residence Life staff: 6
- Percentage of graduates with a family member who graduated from UMaine: 31
- Number of graduates who were officers in Student Government: 4
- Percentage of graduates who worked while in school: 72
- Number of graduates who lived in Honors housing at least one semester: 44
- Number of graduates planning to attend graduate school: 56
- Number of graduates who studied abroad: 15
- Number of graduates who completed a tutorial alternative: 13
- Number of graduates who had the Dean of the Honors College on their thesis committee: 6
- Percentage of graduates with a double major: 20
- Percentage of graduates with at least one minor: 43
- Average GPA of 2011 graduates: 3.696
- Number of graduates from the College of Natural Sciences, Forestry, & Agriculture: 27
- Number of graduates from the College of Liberal Arts & Sciences: 43
- Number of graduates from the College of Business, Public Policy, & Health: 1
- Number of graduates from the College of Engineering: 10
- Number of graduates from the College of Education: 4
- Number of graduates from Maine: 62
- Number of graduates from states other than Maine: 14
- Number of states represented by Honors 2011 graduates: 11

The Honors College Class of

2011



KATHERINE ELIZABETH ANDERSON
Human Nutrition
Dietetics

Morrill, ME
Bangor High School

***Fortification of Blueberry Fruit Leather
with Omega-3 Fatty Acid-Containing Fish Oil***

Advisor: Denise Skonberg

Thesis description: The project involved developing a blueberry fruit leather and then fortifying it with different levels of omega-3 fatty acids using a fish oil emulsion. All of the treatments (there were 3 different levels and a control) were tested for pH water activity and color differences over the period of a month. In addition a consumer testing study was conducted to see what people thought about the product!

Future plans: I plan on attending graduate school, traveling, getting my license to practice as a registered dietitian.



MARYAM IRAN ANSARI
Biology
French

Brunswick, ME
Brunswick High School

***The Influence of Propionate on Uranium Mobilization
& Microbial Community Composition
from Maine Granitic Bedrock***

Advisor: Paula Mouser

Thesis description: Approximately 3% of supply wells in Maine experience elevated levels of uranium exceeding maximum contaminant levels. The objective was to determine how available organic carbon in the form of propionate affected pH dissolved oxygen content and uranium concentrations in groundwater mixed with granite rock samples. Uranium leaching through time was assessed under abiotic and biotic conditions in laboratory microcosm experiments. Samples were profiled to identify microorganisms essential to uranium mobilization in groundwater aquifers.

Future plans: I will attend the Ohio State University to pursue a masters degree in environmental science.



ROBIN F. ARNOLD
Earth Sciences

Orono, ME
Bangor High School

*Determining Seabed Activity with Pb-210 Dating
in Belfast Bay ME's Giant Pockmark Field*

Advisor: Joseph T. Kelley

Thesis description: Pockmarks are a newly discovered landform in muddy seabed environments and found on quiet, passive margins. Through studies conducted around the world these features are generally associated with the escape of fluid (i.e. gas pore-fluids and groundwater). It is important to understand pockmark formation given their potential hazard to seabed activity such as offshore emplacement including oil rigs, LNG terminals, offshore wind turbines, utility cables, and pipelines. This study used Pb-210 to analyze sediment accumulation patterns in Belfast Bay, one of North America's most studied giant pockmark fields.

Future plans: I plan to attend graduate school and work in the field of marine sciences (coastal processes).



EMMA ROSE ATHERTON
Psychology

New York, NY
Convent of the Sacred Heart

*Comfort Levels When Presented with Interpersonal Stressors
as a Function of Sibling Status*

Advisor: Michael Robbins

Thesis description: This thesis examined differences between college students with and without siblings, focusing on how they handle stressful situations. We proposed that only children are less comfortable dealing with stress, based on the assumption that the majority of only children have had to deal with these situations less often than children with siblings. When put in a situation of interpersonal tension we hypothesized that only children would show greater increases in blood pressure and self-report higher levels of stress and anxiety. The hypothesized outcome was not supported, and we found the opposite to be true. Based on blood pressure and self-reporting, children with siblings were more stressed in situations of interpersonal tension.

Future plans: I love being an Honors Associate and can't wait to see what's next!



ANDREW KARAM BALDACCI
Political Science
Psychology, Philosophy

Bangor, ME
Bangor High School

Informing the Drug Policy Reform Debate

Advisor: Mark Brewer

Thesis description: The purpose of this research was to explore the major issues related to drug policy reform, and highlight the issues that need to be explored and researched further in order to support meaningful debate on the subject. This thesis also provides a plan for how additional research should be designed, and a roadmap on how to gain political support for reform. Research is crucial in order to evaluate the successes and failures of our current drug policies compared to potential alternative policies.

Future plans: I plan on moving to Boston, continuing to play poker competitively, starting an internet company, and having an exciting future.



MARSHA HILLARY BARTLEY
Secondary Education, History

Bucksport, ME
Bucksport High School

*Technology and Digital Media
in the Social Studies Classroom*

Advisor: John Maddaus

Thesis description: "Where is the Internet?" Asking this question to a group of ninth grade geography students yielded interesting results. I used my student teaching experience to research how social studies teachers can meaningfully integrate technology into the classroom. I created lesson plans that encouraged students to apply their social studies knowledge using digital technology. I used instructional planning standards set by the International Society of Technology in Education to gauge my research by evaluating the wide array of uses technology has in the social studies classroom.

Future plans: I plan to work at the Woodlawn Museum in Ellsworth and begin teaching social studies in the fall.



JENNA MARIE BEAULIEU
Communication Sciences & Disorders
*Child Development &
 Family Relations*

Gray, ME
 Catherine McAuley High School

Clear Speech: Duration in Dialogue Between Hearing Loss Patients and their Communication Partners

Advisor: Amy Engler Booth

Thesis description: With a diagnosis of hearing Loss (HL) many people face communication challenges. With the help of hearings aids some residual hearing may be restored, but this is not always enough. Researchers have focused on Audiologic Rehabilitation (AR) as a tool to help hearing aid users become more successful while in conversation. One AR method is called Clear Speech (CS). Research shows that HL patients have increased comprehension when the communication partner uses CS rather than conversational speech. Since many of the findings favor the use of CS it now leads the researcher to the next step: once CS is taught, how long is CS used in conversation?

Future plans: I will attend Central Michigan University for a Doctorate in Audiology.



JEREMY PAUL BENDER
Marine Science

St. Paul, MN
 Highland Park Senior High

Explaining the Distribution and Abundance of the Bonnethead Shark (*Sphyrna tiburo*) in Gulf of Mexico Nursery Areas Based on Environmental Variables and Human Impacts

Advisor: Yong Chen

Thesis description: The bonnethead shark (*Sphyrna tiburo*) is a small hammerhead species abundant in coastal waters throughout the Gulf of Mexico. I used Gillnet surveys taken as part of the National Marine Fisheries Service GULFSPAN (Gulf of Mexico Shark Pupping and Nursery) project to evaluate abundance of *S. tiburo* in five known nurseries in the panhandle region of Florida. I found nursery areas near high levels of human development had lower catch rates than sites near less developed areas. A habitat model was developed to explain spatial distribution of *S. tiburo* and the analysis investigated the effect of human development on bonnethead populations in adjacent nursery grounds.

Future plans: I will follow my passion for the outdoors while contributing to fisheries management and conservation.



SAMANTHA KATE BOND
Marine Science

Temple, ME
 ConVal High School

The Effects of Nutrient Availability on Cellular Division Growth and Length of Diatom Chains

Advisor: Lee Karp-Boss

Thesis description: Diatoms are single-celled primary producers in freshwater and marine environments that account for 50% of primary production in the oceans and serve as an important food source. Diatoms can form chains, but the functional role(s) of chain formation is not clear. This paper investigated effects of nutrient availability on chain length and division of two species, *Stephanopyxis* and *Lauderia*. I concluded that both species grew until nutrients were depleted, but growth rates differed. Chain lengths of both were maximal during the exponential phase of growth and decreased when nutrients became depleted. Cellular division was synchronous within each species, but percentage of cells in day and night hours differed.

Future plans: I will work at the Gulf of Maine Research Institute before earning my doctorate in marine biology.



JEREMY BRUCE BOULIER
New Media
English

Blaine, ME
 Central Aroostook Jr/Sr High School

An Exploration of Creativity in Videogames

Advisor: Joline Blais

Thesis description: My thesis is a short film that used a videogame engine as a means to present a narrative. By using a premade videogame engine I saved time and money, but could still be as creative as possible and have ample opportunity to play with the narrative and editing. The goal of my thesis was for someone who is not at all familiar with videogame culture to be able to watch this film and walk away with a much deeper understanding of this "reclusive" culture.

Future plans: In the long-term I want to settle in Maine, and I will eventually settle down and attend graduate school if the opportunity presents itself.



JACLYN LILIAS BOUSQUET
Art Education
Art History, Studio Art

South Berwick, ME
 Marshwood High School

Chinese Shadow Puppetry and Intangible Culture

Advisor: Laurie E. Hicks

Thesis description: This thesis contributed to ChinaVine, a collaborative research project that seeks to make Chinese culture available to an English speaking audience. Research for the project included working with ethnographic data generated from interviews, photographs, and videos to explore the nature of Chinese art forms, specifically Qibao Shadow Theater. Written and visual information on Chinese Shadow Puppetry was created and organized and will be accessible at ChinaVine.org to a broad array of audiences interested in Chinese Shadow Puppetry. Additionally, educational materials were developed in order to facilitate a complete understanding of traditional and emerging Chinese culture related to Shadow Puppetry.

Future plans: I will travel to view artwork using a travel grant awarded to me at the annual 2011 Student Art Award Ceremony. I hope to substitute teach before applying for teaching position.



KATHERINE LEIGH BROWN
Marine Science

Coventry, CT
 Coventry HS

***Cooperative Research in New England:
 Perceptions of Goals Process and Success***

Advisor: Teresa Johnson

Thesis description: Cooperative research plays an important role in incorporating the knowledge of fisherman into the work of scientists who study fisheries. This study examined the differences and similarities between those two groups in their perceptions of the goals and successes of cooperative research. A statistical analysis of survey responses from fisherman and scientists working in type of research was conducted. Results showed that fishermen and scientists agree on the importance of working together, but disagree about the frequency in which fishermen participate in designing, analyzing, and communicating research. This demonstrates a shared value in cooperative research and identifies areas for improvement going forward.

Future plans: I plan to attend graduate school to earn a Master's degree in Marine Biology at Western Washington University.



ERICA DAWN BROWN
Molecular & Cellular Biology
Psychology, Philosophy

Durham, ME
 Brunswick High School

***The Characterization of Ccr5 Deficiency in the
 NOD-scid IL2rgnull Ccr5null Mouse Strain***

Advisor: Carol Kim

Thesis description: Phenotypic characteristics of a Ccr5 deficient mouse strain and a corresponding control strain were compared. Humanized mice, created by genetically knocking out components of their immune system thus rendering them immunodeficient, can engraft human hematopoietic cells and form a functional human immune system, thus enabling research on in vivo human biology. Ccr5 is involved in the trafficking and function of T cells, macrophages, and immature dendritic cells. It was predicted that the Ccr5 mutation would slow migration of macrophages responding to chemotactic stimuli thus improving levels of human cell engraftment, allowing for a better establishment of a human immune system.

Future plans: I will be attending the Tufts University School of Medicine in the Maine Track program.



JASON AARON CANNIFF
English, Political Science

Bath, ME
 Morse High School

Shading Strings (Poems)

Advisor: Jennifer Moxley

Thesis description: My thesis, *Shading Strings*, was a collection of poems that primarily deals with the themes of resistance and loss and the challenges of language in addressing "what is not there." Playing on poet Robert Kelly's notion of the "dark sound," I re-appropriated this idea to include grief, which becomes elusive and vague in my work. Each poem acts as a note, a shading string that resonates to eventually form the image of grief.

Future plans: I will enter the UMaine Master's Program in Creative Writing to continue my work in poetry and teach College Composition. My eventual goal is to be a published poet, and perhaps earn a MFA or PhD. I will also continue my life-long fascination with cooking and growing things, and hope to combine these into a Maine artisanal product, like salsa or goat cheese.



MELISSA ERIN CARTER
Modern Languages

Princeton, ME
Woodland Jr/Sr High School

Of N'er-Do-Wells and Good-for-Nothings

Advisor: Madelon Köhler-Busch

Thesis description: This thesis looks at how nature is viewed by the protagonists of Mark Twain's *The Adventures of Huckleberry Finn* and Joseph von Eichendorf's *Aus dem Leben eines Taugenichts* [Memoirs of a Good-for-Nothing] each novel, and then compares their reactions to a broader cultural understanding of why they have that view. I address three questions: why are young men outside of their societies portrayed as the ideal individuals to experience nature?; why and how, despite the similarities between the stories, is nature shown to be a benevolent, dangerous, or capricious entity; and what conclusions can be drawn about the attitudes of the authors and their societal contemporaries towards nature and society?

Future plans: I hope to travel abroad and work in translation or interpreting before attending graduate school.



MATTHEW EVAN CAVANAUGH
Political Science

Rockport, ME
Camden Hills Regional High School

Religious America, Secular Europe: A Multitude of Modernities

Advisor: James Warhola

Thesis description: This thesis examined how and why religion has remained an important political and social force in the United States but has declined in Europe. I asserted three main reasons: distinct institutional, philosophical, and social structures in each region which have all contributed to this phenomenon. The most significant of these factors is a divergence in Enlightenment thought regarding the relationship between church and state. In Europe the Enlightenment emphasized reason at the expense of the Church and freedom from religion was seen as true freedom. In the US, the Enlightenment was concerned with freedom and personal liberty resulting in freedom of religion, rather than from it.

Future plans: I hope to work in Washington, DC and eventually attend graduate school in law or economics.



MEREDITH MCHUGH CHERRY
Political Science, Women's Studies

Machias, ME
Machias Memorial High School

The Unelected Advisor: A Look into the Role of the First Lady in Presidential Decision Making

Advisor: Richard Powell

Thesis description: The First Lady of the United States is often overlooked. However the truth of the matter is that the first lady is the one person who has the greatest access to the President of the United States. The purpose of my paper was to evaluate the influence of the first lady on presidential decision making particularly focusing on the lives of Anna Eleanor Roosevelt and Hillary Rodham Clinton and to prove that although historically the first lady has been seen as a social figure not a political one she does in fact factor into many decisions that affect the American people.

Future plans: I plan on moving to Washington, DC in hopes of finding a job working in a congressional office. Ideally I would like to work for a member of Maine's congressional delegation.



ASHLEY ELIZABETH CLARK
Nursing

Brunswick, ME
Brunswick High School

Capturing Caring in Nursing Practice Through Electronic Documentation

Advisor: Ann Sossong

Thesis description: My thesis reviewed current nursing literature to determine if electronic documentation captures caring in nursing practice and makes the patient's story accessible. I incorporated Dr. Jean Watson's Theory of Human Caring as the theoretical framework for my thesis. Her theory emphasizes caring as the foundation of nursing practice and provides the language to allow nurses to document in a holistic way. Electronic Documentation continues to be an important piece of nursing practice and quality patient care. As such it is essential that we keep making the changes necessary for it to reflect the caring nature of nursing.

Future plans: I will become a licensed registered nurse and apply for positions in acute care facilities in Maine. I look forward to a future of learning, growing, and developing as a nurse.



ALEXA JORDAN COLEMAN
Psychology
Child Development & Family Relations

Rockport, ME
 Camden Hills Regional High School

***How Do We Assess Quality in Early Childhood Programs?
 A Review and Critique of Current Measures***

Advisor: Peter LaFreniere

Thesis description: Developmental professionals recognize that early childhood experiences have a significant impact on the subsequent development of children. It is critical to ensure that the quality of early childhood programs provides a strong foundation for child development, and a method of assessment to determine program quality is needed. This thesis examined early influences on the quality movement in early child care, but the primary focus is a methodological examination of the three most widely used measures in the assessment of these programs. Adult-child ratios, teacher education, and teacher salary were also explored to determine the nature of their association with program quality ratings.

Future plans: I will earn a Master of Arts in Teaching degree from UMaine, and then begin my teaching career.



GEORGE COOPER
Biology
Mathematics

Buxton, ME
 Maine School of Science & Mathematics

***Ant Colony Fission and Dispersal Over Various Types of
 Landscape: An Agent-Based Computer Model***

Advisor: Frank Drummond

Thesis description: My project described the fission and expansion of European fire ant colonies across different kinds of landscapes by different methods of dispersal. It is a computer model that implements a methodology inspired by agent-based models like Sugarscape as well as traditional numerical methods previously used to describe ant societies.

Future plans: I plan to apply to graduate school and hope to eventually research bees or ants.



BRIAN NORWOOD CROCKETT
Biology

Ellsworth, ME
 The Liberty School

***Multiple Nest Construction of the Virginia Rail
 (Rallus limicola)***

Advisor: Brian Olson

Thesis description: Nests are used to protect eggs and offspring, but many birds construct multiple nests throughout breeding season for reasons including mate selection, predator deterrence, and chick brooding. The Virginia Rail is a small marsh bird native to North America known to construct multiple nests that are not for incubation. No quantitative studies have described purposes for these additional nests. My research identified physical differences of placement and construction between nests built by a single Virginia rail. I found discrepancies between incubating and non-incubating nests, which indicate unique functions for each nest type.

Future plans: I plan to work in ecology and wildlife conservation before attending graduate school in Behavioral Ecology so I can pursue my love of nature and education in my career.



MATTHEW SHAW CRONAN
Biology

Veazie, ME
 Bangor High School

Biomimicry: Nature's Innovative Designs

Advisor: Frank Drummond

Thesis description: Biomimicry is a problem solving approach where inspiration and solutions to human problems are found by studying how natural systems overcome similar obstacles. I investigated several examples of current projects that have roots in biomimicry, including the antifouling properties of shark skin, the superhydrophobicity of the lotus leaf, and the efficiency of geometries found in nature. My thesis described the inspiration behind these research interests; explained the biophysical and biochemical bases of each phenomenon; presented possible human applications; examined some biomimicry-inspired commercial products; and described recent efforts by the Biomimicry Guild to form relationships among scientists, engineers, business people, and architects.

Future plans: I will be attending Tufts Dental School starting August 2011.



INDIGO ROSE CURTIS
English

Seattle, WA & Orono, ME
Orono High School

Attempt

Advisor: Ben Friedlander

Thesis description: I created a chapbook of my own poetry using a typewriter, mixed media, found objects, sewing, photocopy, and other various techniques.

Future plans: I plan to stay out of purgatory.



RYAN PATRICK DAWES
Biology
Neuroscience, Chemistry, Psychology

Belgrade, ME
Messalonskee High School

Development of an Actin Hydrogel Substrate for Fluorescence Correlation Spectroscopy of FGF Protein Transfer Across a Model Membrane

Advisors: David Neivandt & Sharon Ashworth

Thesis description: Fibroblast growth factor-1 (FGF-1) is a protein that has been implicated in normal mammalian development, in chronic inflammation, and in tumor solid mass growth. The stress-induced export of FGF-1 does not utilize the classic ER-Golgi pathway. It uses a multiprotein complex at the plasma membrane inner leaflet and translocates across the membrane. Understanding this pathway can provide greater insight into cancer pathology. My project centered on developing a more physiologically relevant model for protein secretion, using the cytoskeletal protein actin.

Future plans: I will attend the University of Rochester School of Medicine & Dentistry to pursue a PhD in Neuroscience.



ELIZABETH MARIE DELETETSKY
Biology

Portland, ME
Deering High School

An Evaluation of the Potential of Stage Island, Maine to Serve as a Site for Translocation of New England Cottontails

Advisor: Daniel Harrison

Thesis description: Since the 1960s the distribution and abundance of the New England cottontail (NEC) rabbit have declined significantly. Translocation is a necessary tool in NEC conservation. This thesis examines translocation of NEC from southern Maine to Stage Island. Theoretically, the translocated rabbits would reproduce and be used to restock mainland populations. However, high mortality rates and no reproduction resulted. I analyzed why the translocation turned out this way and whether Stage Island is a suitable habitat for NEC propagation. Finally recommendations were made to improve future translocation efforts and aid in the reestablishment of NEC in the northeast US.

Future plans: I plan to intern to help me decide what's next, but it will be graduate school in biology.



ANDREW GERALD DEMARIS
Secondary Education, History

LaGrange, ME
Penquis Valley High School

Clouds on the Horizon

Advisor: James Bishop

Thesis description: This thesis presented pre-Revolutionary New York Dutch farm life in a fictionalized narrative form. Looking through the eyes of two generations, the story tells of the strife between family members and the internal conflict that came about before the War for American Independence.

Future plans: I plan to get a job teaching high school social studies, complete my Master's of History degree and settle into a long and happy life.



BENJAMIN AULTMAN DOTY
English, Political Science

Cornville, ME
Skowhegan Area High School

***Kicking Nixon Around:
The Didactic Function of Literary Assassination***

Advisors: Jeff Evans & Timothy Cole

Thesis description: A lot of fiction exists about Richard Nixon. Many serious authors including Thomas Pynchon, Gore Vidal, Philip Roth, Hunter S. Thompson, Robert Coover, and Ishmael Reed have written about Nixon. Despite the fact that there was never a credible assassination threat to Nixon, a disproportionate amount of this literature imagines his murder. I examined this literature to determine why Nixon is such an attractive figure to fictionalize and why the assassination literature exists. I argued its function is didactic: the authors conceive of assassination as creating a shock of recognition that makes a normally unresponsive public take notice of what is happening to their country.

Future plans: I will be pursuing an MA in English beginning in Fall 2011.



SARAH BRIANN DOUCETTE
Animal Sciences (Pre-Veterinary)
Equine Science

Wareham, ME
Wareham High School

Diagnosis and Treatment of Equine Uterine Yeast Infections

Advisor: Robert Causey

Thesis description: Yeast is a eukaryotic microorganism with a variety of purposes, but if it infects the uterus of a mare, it can decrease the rate of conception resulting in an economic loss sustained by the horse breeder/owner. This thesis defined a preferred method of treatment for this condition through a two part study. First, I focused on clinical identification of yeast including observation of uterine cytology, conducting a gram stain and defining optimal growing condition. We found *C. lusitaniae* grew best on Sabouraud Dextrose Agar incubated in carbon dioxide. Second, I conducted sensitivity testing. A variety of standard and unconventional drugs, including probiotics were used.

Future plans: I plan on applying to vet school and my hopeful long-term goal is to become an equine veterinarian.



ALISSA MARGUERITTE DUBOIS
Anthropology, International Affairs

Bangor, ME
Bangor High School

Developing Better Development: How our Construction of Darfur Shapes our Foreign Aid and the Role of Development in Anthropology

Advisor: Constanza Ocampo-Raeder

Thesis description: I analyzed and critiqued the current state of foreign aid and suggest how it can be improved from an anthropological standpoint. Using many examples, but focusing on evidence from a case study of Sudan, I considered popular portrayal of aid, the point of view of humanitarian aid organizations, and reality in the aided country. I highlighted the media and celebrity stereotypes of aid, and imperialistic approaches. I questioned the success of aid organizations based upon what people actually need and want. Finally, I stressed the complexity of foreign aid in hopes of preventing future problems increasing success for the people who receive the aid.

Future plans: I plan to work for a humanitarian aid nonprofit in Maine, get a dog and attend graduate school. Ultimately I hope to work for an international humanitarian aid organization.



JONATHAN EDWARD DUMONT
Biology
Psychology

Oakland, ME
Messalonskee High School

Characterization of the Microbial Associates of Nematodes Pathogenic to Myrmica Rubra

Advisor: Eleanor Groden

Thesis description: The European Fire Ant *Myrmica Rubra* is an invasive species that has become established in Acadia National Park. Non-chemical management solutions have been ineffective, evidence shows that the presence of pathogenic nematodes, small soil dwelling worms, may offer a biological solution to the invasive problem. Nematodes are typically associated with many bacterial and fungal species on their internal and external surfaces. They enter through the natural openings of the insect body and cause death, likely due to the bacteria they bring. Bacterial samples were isolated and identified down to species in order to understand this complex symbiotic relationship.

Future plans: I will attend grad school in Nematology or Insect Pathology, have a career doing research on insect pathology, and eventually I plan to retire, teach Biology and coach golf.



STEPHEN W. DUNHAM
Wildlife Ecology
Wildlife Science & Management

Milton, NH
St. Thomas Aquinas High School

Changing Landscapes and the Management of American Woodcock (Scolopax minor) in the Northeast

Advisor: Lindsay Seward

Thesis description: The focus of my thesis was to incorporate an historical perspective into current management techniques and population trends of the American woodcock, while also identifying aspects of current management techniques that require additional research. I studied the history of changes to the New England landscape, and the effect of those changes on the American woodcock. Additionally, I completed a hands-on study based on the diurnal (daytime) habitat use of woodcock in intensively managed landscapes.

Future plans: I will be volunteering with the Maine Department of Inland Fisheries and Wildlife as a bear capture technician. My long term goals are to continue working in the wildlife field ideally with a state or federal agency.



ZEV DAVID GOELL EISENBERG
New Media
Art History, Studio Art

Peaks Island, ME
Portland High School

Kinesthetic Computing

Advisor: Mike Scott

Thesis description: A trend in interface design is to mimic the real world through metaphors and creating onscreen representations of real objects to instinctually connect a user to a behavior. One example is the recycle bin that indicates its function is to delete files. These skeuomorphic interfaces have been shown to be easier for users to learn. In this research, we propose a more literal approach; a kinesthetic interface which is driven by a user's physical knowledge of tangible interactions. I investigated the history of multi-touch interfaces and how they can impact future computers. Additionally, a virtual deck of cards was developed using this principle and evaluated with a broad demographic.

Future plans: My work in interface and interaction design have gotten me excited to build real software. I plan to go to Boston and work on iPhone applications and interfaces either on my own or for a company.



SAMUEL WALLS ENTWISLE
Biochemistry
Chemistry

Sedgwick, ME
Maine School of Science & Mathematics

Establishing Zebrafish Skeletal Muscle Morphogenesis as a Model for Studying Calpain Function In Vivo

Advisor: Dorothy Croall

Thesis description: Calpains are enzymes that are present in all animals and are fundamental to fundamental developmental and pathological cellular signaling processes. Studying them in living organisms in vivo is essential to understand these roles. By using the muscle formation in zebra fish, I sought to specifically assess the function of calpain's enzymatic activity by using another protein, calpastatin, to specifically inhibit it. While the results were inconclusive, they could ultimately suggest one of two things: (1) calpain's enzymatic activity is important for its role in muscle formation or (2) it isn't suggesting a possibly novel non-enzymatic function.

Future plans: I plan to get a job as a lab technician for a year or two then apply to graduate school to pursue a Ph.D. in biomedical research.



CHRISTOPHER STEPHEN FARRER
Biological Engineering,
Chemical Engineering

Freeport, ME
Freeport High School

A Method for Rapid Clinical Assessment of Cancer Progression via Quantification of Interstitial Tumor Fluid Viscoelastic Properties

Advisor: Michael Mason

Thesis description: Current tumor diagnostic methods are expensive, time consuming, and rely on qualitative interpretation. A quantitative assessment of tumor cells is key because accurate staging of cancer progression effects diagnosis and treatment selection. Research suggests that tumor fluid viscosity may accurately indicate cancer progression. I designed a viscometer to accurately measure the viscosity of micro liter quantities of fluid with the sensitivity required for differentiation of samples taken from various stages of cancer progression. This could lead to an inexpensive, accurate, and rapid diagnostic method for quantifying cancer progression by determining typical interstitial tumor fluid viscoelastic properties at various stages of progression.

Future plans: I will earn a Ph.D. at the University of Rochester in Biomedical Engineering and focus on stem cell research.



ALEXANDRA KATE FISH
Elementary Education
French

West Gardner, ME
Gardiner Area High School

Incorporating the Five Cs of Foreign Language Instruction in Kindergarten French Lessons

Advisor: Chris Mares

Thesis description: I used the Five Cs of Communication, the principles around which the national standards for foreign language instruction are based, I designed an action research model to instruct two classrooms of kindergarten students in French. Based on research on the most effective strategies for teaching a foreign language at this age level, I designed and implemented lessons that would suit student needs and satisfy the Five Cs. I have concluded that teaching kindergarteners a foreign language while using the Five Cs as guidelines is both possible and successful within a regular classroom.

Future plans: I plan to search for a job teaching elementary school in the Greater Boston Area.



GABRIELLE ELIZABETH FOSTER
History, French

Oakland, ME
Messalonskee High School

The General Textile Strike of 1934 as a Turning Point for Franco-American Involvement in the Maine Labor Movement

Advisor: Richard Judd

Thesis description: During the 1930s in Maine many changes occurred in organized labor. This decade showed a rise in strikes throughout Maine's industrial centers, spurred by the New Deal, the Great Depression, and a rising labor union presence. These strikes differed from previous ones in scale, longevity, and level of involvement. This thesis focused on Franco-Americans who made up a vast majority of factory workers in Maine. They were never prone to striking, but joined the fight in the 1930s. I discovered what made the 1930s the time for many workers to join the fight and what social cultural and governmental changes can be seen coming together to make this happen.

Future plans: I will move to Washington, D.C. to intern, to take graduate classes at American University, and work towards a museum career for a more hands on application of my degree.



BENJAMIN ALLEN FOX
International Affairs (Political Science),
French

Blue Hill, ME
George Stevens Academy

The Role of Leadership in Averting Armageddon: A Comparative Analysis of U.S.-Russia START Treaty Negotiations 1981-2010

Advisor: James Warhola

Thesis description: This thesis showed why it is essential to consider the role of leadership when studying foreign policy and national security. By placing this role within the historical context of nuclear arms control, the enduring superiority of cooperation over competition and the pivotal role of personal character are made clear. I used the backdrop of the four Strategic Arms Reduction Treaties negotiated between the US and the Soviet Union/Russia between 1981-2010 to show that at every critical juncture when both sides sought to achieve consensus, success or failure hinged on the ability of leaders to demonstrate determination, willingness to compromise, and a clear vision for the future.

Future plans: I plan to attend graduate school for international security studies and hope to work for a think tank, university, government agency, or branch of the U.S. military.



ZACHERY A. GARCIA
Biology
Neuroscience, Chemistry, Psychology

Brunswick, ME
North Yarmouth Academy

Bisphenol A Exposure and its Effects on Cardiac Physiology and Reproductive Capacity in Drosophila melanogaster

Advisor: Harold Dowse

Thesis description: Bisphenol A (BPA) is a chemical that is used to harden most plastics. It has earned increased attention as multiple studies have linked BPA to cardiovascular and reproductive problems. My research focused on how BPA affects the rate and rhythmicity of the heartbeat in the common fruit fly. I also examined how BPA exposure affected the production of the courtship song in adult male flies used to initiate mating. The physiology of the fruit fly is surprisingly similar to our own and by observing what effects chronic BPA exposure causes in the fly model we hope to better understand how this chemical is affecting our own long-term health.

Future plans: I will be going to the University of Pennsylvania for a post-baccalaureate pre health program, after which I hope to enter medical school to study surgery.



JOSEPH R. GRACE, III
Electrical Engineering

South Berwick, ME
Marshwood High School

Wireless Current Detector

Advisor: Duane Hanselman

Thesis description: For my thesis, a wireless current detector was designed and prototyped. It served to detect the “ON/OFF” status of any device plugged into a standard 120V AC wall outlet and transmit this status wirelessly to a remote location. Potential applications include campus laundry facility management and home device monitoring. This product is able to detect currents as low as 1mA and adds only a negligible load the device being measured.

Future plans: I plan to get my master’s degree in Electrical Engineering while working with Professor Nuri Emanetoglu on Laser Detection and Ranging (LADAR) design. Long term, I’d like to get a job in the New England area that is specialized in either the field of sensors or radio frequency electronics.



CRAIG DANIEL HARRISON
**Computer Engineering,
Molecular & Cellular Biology
Mathematics**

Hampden, ME
Hampden High School

Trailview: A GPS Enabled Photologger

Advisor: Richard Eason

Thesis description: The Trailview system provides backcountry enthusiasts with an innovative new way to chronicle their adventures. The portable device records a trail of GPS waypoints integrated with photographs taken by a miniature digital camera. Displacement and bearing are calculated to submeter precision for each waypoint and can be displayed on a small screen in real-time. The image-enhanced waypoints are stored on a flash card for later transfer to a desktop computer. Generated map files can be explored in various mapping programs as well as shared online through Google Maps.

Future plans: I intend to pursue an advanced degree in one of the subject areas related to my majors.



JULIE ANN HERBERT
**History
Studio Art**

Rockland, ME
Rockland District High School

***To the Land of Milk and Honey: Southern California’s
Migrant Worker during the Great Depression***

Advisors: Nathan Godfried & Michael Grillo

Thesis description: My thesis analyzed what life was like for the migrant worker in California during the Great Depression as the labor force shifted from predominantly “foreign” workers to American farm labor from the Southern Plains. I considered the development of the “Okie” stereotype as it differed from the characteristic racial stereotyping of the foreign migrant laborer that preceded it and more specifically explore the distinction between “migrant” and “refugee” as it was presented to the American public through Depression Popular Culture.

Future plans: In the fall I will be attending King’s College in London for a Masters in the History of Warfare. I hope to continue on for a PhD and either teach as a professor of European Military History or work as a military archivist.



JOANNA ELSBETH HYND
English

Thomaston, ME
Georges Valley High School

A Metastable Structure

Advisor: Jennifer Moxley

Thesis description: This is a compilation of poems spanning my college career, the majority of which were written in 2010-2011. There are four sections based on theme: “The Meta,” which consists of poems influenced by an interest in meta-poetry and meta-fiction; “The Cousins,” taken from a line from Jack Spicer’s “After Lorca” discussing poems that attempt to seduce the audience into thinking a certain way; “Anti-Vatic,” poems that attempt to be the opposite of grandiose in theme and content; and “Collaborations and Conversations,” a combination of collage poems, co-written poems, and poems written in dialogue with other poets.

Future plans: Following graduation I plan to return to college for my M.A. in teaching however I first plan to take some time off to work and travel.



TIMOTHY ANDREW JENKINS
Music Performance

Dracut, MA
Bishop Guertin High School

Exploring Four Musical Periods Through Composition

Advisor: Laura Artesani

Thesis description: I am closely examining the characteristics of music from the Baroque, Classical, Romantic, and Contemporary periods. For my thesis, I focused on one style from each period and composed a piece for solo piano in that style. I composed a fugue in the Baroque style, a one-movement sonata in the Classical style, a Nocturne in the romantic style, and a rag in the Contemporary style. As part of my findings, I demonstrated how my pieces fit with each style, and showed specific traits that the pieces share.

Future plans: I will look for jobs for pianists in my area as soon as I graduate. I hope to eventually get a steady job as the pianist for a famous orchestra or some other fun musical group.



DEREK ANDREW JONES
History
Political Science

Hampden, ME
Hampden Academy

The Grand Derangement in the Context of the Eighteenth-Century British Empire

Advisor: Jacques Ferland

Thesis description: Since the 1960's there has been a fierce debate on the criminality of the deportation of the Acadian people from the Maritimes. Many historians have compared the deportation of the Acadians, also known as the Grand Dérangement, to modern acts of ethnic cleansing. However, these comparisons take the Grand Dérangement out of context. My thesis compared the Grand Dérangement to the transportation of Scottish and Irish rebels after the Jacobite Rebellion of 1745 and United Irish Rebellion of 1798. I establish that the Grand Dérangement was extraordinary in the context of the 18th-century British Empire.

Future plans: After graduation I will be beginning the joint MBA-JD program through the University of Maine and the University of Maine School of Law.



ERIN ELISE KEIM
Zoology

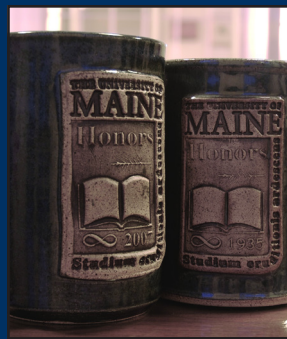
Veazie, ME
John Bapst Memorial High School

An Exploration of Elysia Chlorotica

Advisor: Keith Hutchison

Thesis description: The sea slug *Elysia chlorotica* inhabits tidal marshes from Halifax Nova Scotia to Martha's Vineyard, MA. They are interesting because of their ability to capture and maintain functional chloroplasts in their bodies for an extended period of time. Both populations exhibit this kleptoplastic relationship, though they vary in size, habitat, and bacterial symbionts. This thesis examines the relationship between two populations of *E. chlorotica* to determine if they represent two species. To evaluate speciation, the sequences of select mitochondrial and nuclear genes from wild adult individuals were compared and the level of sequence divergence between them was used to evaluate the hypothesis.

Future plans: I hope to become a researcher focusing on the effect of toxicants on diseases prevalent in New England. I also hope to become a professional musician and master the cello.



DYLAN JAMES KING
Ecology & Environmental Sciences

Yarmouth, ME
Yarmouth High School

Collaboration Among Local Land Trusts in the State of Maine

Advisor: Mark Anderson

Thesis description: Local municipal land trusts play an important and expansive role in the conservation movement and it is clear that collaboration on a more regional scale is becoming common. Through this thesis, I developed an understanding of these collaborations in Maine, whether they are worth pursuing, and to what degree? I interviewed nine conservation actors in Maine, and reviewed four case studies in addition to available literature. I showed that local land trusts are collaborating in a number of ways, but some not at all. Reasons include consolidation of tasks, finances, organizational stability, and regional perspective. Issues with collaboration are primarily differences in viewpoint and local sentimentality.

Future plans: I will spend at least one year away from academic pursuit, so I am likely moving to Colorado to be a ski bum. After that I will attend law school and study environmental law.



KATELYN CRONKITE KINNEY
Athletic Training

Bowdoin, ME
Mt. Ararat High School

Medical Coverage of High School Athletics in Maine

Advisor: Christopher Nightingale

Thesis description: The purpose of my thesis was to evaluate the quality of medical care received by high school students across Maine. I surveyed athletic directors across the state about their school's size, location, and the various aspects of health care coverage available. I then looked at the results in relation to the size of schools and the region of the state to determine where athletic health care meets pre-determined standards and where it does not.

Future plans: For the next two years I will be at the University of Oregon pursuing a master's degree in athletic training. After that I would like to work as an athletic trainer at a college or university.



MICHAEL DEAN KREBS
International Affairs

Bremen, ME
Lincoln Academy

To Surge Is Not Enough: The Inability of the U.S. to Replicate the Anbar Awakening in Afghanistan

Advisor: Timothy Cole

Thesis description: The 2007 "surge" in Baghdad and Al Anbar in Iraq became a turning point for the U.S in Iraq, and strategists believe this can be replicated in Afghanistan. While similar parties and themes may exist, this thesis highlighted the divergences that fundamentally separated the conflicts in Iraq and Afghanistan. US success in Iraq was due to Sunni/Shiite reconciliation and good fortune, not US policy. Believing that similar results are possible in Afghanistan is naïve and the US must accept that Afghanistan will not follow the path of Iraq and that unorthodox means must be taken to achieve objectives in the region.

Future plans: I plan on attending graduate or law school to study International Politics/Business or International Law. I want to work in foreign service, or in intelligence and hope to put my knowledge of Arabic to use to make political documentaries.



NICOLAOS LEE LEMIEUX
Chemical Engineering

Winthrop, ME
Winthrop High School

The Effect of Short Time Dewatering on Permeability Coefficient

Advisor: Doug Bousfield

Thesis description: The dewatering of paper coating is important to understand when coating writing grade paper. In this study, a new method is developed to test the dewatering of paper coating on a millisecond time scale. Through experimentation the study finds that the dewatering coefficients on the millisecond time scale (which is more applicable to the industrial practices) is 10 times larger than previous testing methods. This discovery has large implications for coating applications in the paper industry.

Future plans: I will be working as a process engineer for Anritz in Glens Falls, NY to use my engineering degree as a design engineer and will be mainly focused in the area of biofuels.



EMILY ROSE LIZOTTE
Accounting
Professional Writing

Mapleton, ME
Presque Isle High School

Social Sustainability and Small Business:

A Case Study of Four Small Businesses in Bangor, Maine

Advisor: Wendy Coons

Thesis description: Sustainability in business has been researched, reviewed, implemented, and developed for years. Today environmental sustainability is popular in businesses. While the environmental dimension of sustainability is important, the social dimension of sustainability is as well. Large corporations have been the focus of sustainability research, but this thesis is a case study of four small businesses. I focused on the perception of social sustainability to each small business owner, how it is integrated in formalized processes and policies, and why each business owner is pursuing social sustainability.

Future plans: I plan to attend UMaine for an MBA in Business and Sustainability, and my husband and I are excited to become parents this year. I hope to work for a non-profit organization that shares my views on sustainability and caring for each other.



ETHAN THOMAS MALAY
Biochemistry

Sebec, ME
Foxcroft Academy

The Effect of Triclosan on Mammalian Mast Cells Stimulated Via Anti-IgE Cross-linking of Cell Surface IgE Receptors

Advisor: Julie Gosse

Thesis description: The biocide triclosan has been shown to inhibit mast cell degranulation in a variety of laboratory tests. Through stimulation of mast cells via DNP-BSA methods, our lab has shown that concentrations of triclosan below consumer levels cause a decrease in degranulation of mast cells in the lab. The purpose of this study is to examine if the inhibition is due to the triclosan acting upon the mast cells themselves, or through an inhibition of the interaction between the mast cell and the DNP-BSA. The mast cells in this study shall be stimulated via anti-IgE IgG antibodies after a sensitization of the mast cells with IgE.

Future plans: I plan to work for a year or two in a research lab and then apply to medical school or graduate school.



AYA MARES
English
Studio Art

Orono, ME
Orono High School

from the ground

Advisor: Jennifer Moxley

Thesis description: My thesis explored the word “farmer” and its relation to my own complexities. I began the process of texturing this word in the summer of 2010 working and living on small farms in North America and making scratchings in my small black notebook. When I returned from my journey I began to expand these notebook scratchings into poems and short prose. My thesis is not a documentary about organic farming as a solution or an ideal way of life. It is not an expose. My intent is to quietly make the word “farmer” my own.

Future plans: After graduation I will be experimental while riding my bicycle under birds. Cracking clams which are mouths making sounds. Reading which is riding my bicycle while shoving objects into my infinite bag. I will be kind. I will not be kind. I will obey the moon.



CARLY GAUDETTE MATTHEWS
Chemistry
Secondary Education

Nashua, NH
Nashua High School North

Teaching With Analogies in the Chemistry Laboratory

Advisors: Mitchell Bruce & Francois Amar

Thesis description: This project looked at analogies as a tool to help students learn concepts in the chemistry laboratory. A series of three lab exercises were developed to include an analogy activity to explain to students what was happening at the molecular level. Data was collected about students’ attitudes towards using analogies and several interviews were conducted to examine how students used the analogies.

Future plans: I plan to move back to New Hampshire and pursue a career teaching high school chemistry. I also plan to return to school to work on an advanced degree in either chemistry or secondary education.



AARON CURTIS MCCOLLOUGH
Electrical Engineering,
Computer Engineering

Hampden, ME
Hampden Academy

Super Wicked Awesome Nerf-gun (SWAN)

Advisor: Rick Eason

Thesis description: The SWAN Nerf-gun is a two axis of freedom turret incorporating two separate families of electronic motors, a keypad and joystick interface, and LCD screen. An AT-MEL AVR microcontroller was programmed in C to facilitate all the processes associated with this project.

Future plans: In the short term I plan to attend UMaine for graduate school to study computer engineering in the fall of 2011. After receiving my masters degree I plan to pursue a career in the field of software engineering.



HANNAH CARMEL MCDANIEL
Biology
Chemistry

Livermore, ME
 Livermore Falls High School

***Parallel Evolution of Trophic Polymorphisms
 in Redbreast Sunfish (*Lepomis auritus*)***

Advisor: Michael Kinnison

Thesis description: The study of allopatric redbreast sunfish (*Lepomis auritus*) populations provides an opportunity to assess the discrete effects of varying resource availability and other habitat features on the divergence of populations and potential ecological speciation. Redbreast sunfish colonized numerous lakes in Maine following the last major glaciations, exposing them to a range of lake types and communities. In other studies of post-glacial fishes these habitat differences are often manifest in differences in specializations linked to feeding and microhabitat use. We surveyed variation in feeding, traits, growth, and body shape in Maine populations as an initial assessment of their potential divergence with respect to lake attributes and fish communities.

Future plans: I hope to continue my education in graduate or medical school.



KATE DANIELLE MCPHERSON
Marine Science (Marine Biology)

Windham, ME
 Windham High School

***Protein Expression in the Blue Mussel *Mytilus edulis* exposed
 to the Toxic Dinoflagellate *Alexandrium tamarense****

Advisor: Rebecca Van Beneden

Thesis description: The dinoflagellate *Alexandrium tamarense* produces neurotoxins that cause paralytic shellfish poisoning in humans. Blue mussels are resistant to these toxins and continue to feed on *Alexandrium* during red tide blooms. However they experience some effects as their bodies work to rid themselves of the toxins. This thesis aimed to determine which proteins respond to the presence of paralytic shellfish toxins. Mussels were fed toxic *Alexandrium* over the course of a week, then gill and visceral tissue samples were homogenized and used in immunoblotting. Results were used to analyze changes in expression of heat shock protein 70 (hsp70) and p-glycoprotein (p-gp) using actin as a housekeeping gene.

Future plans: I will attend Tufts University's masters program in Animals and Public Policy.



JOHN PAUL MONDOR
New Media
Studio Art

Saco, ME
 Thornton Academy

***Technology in Education:
 The Integration of Technology in Classroom***

Advisor: Michael Scott

Thesis description: This thesis augmented the educational process through the use of technology. The project itself was a simulation that placed high school students in the roles of world leaders. Students learn about government types and the political spectrum. They are responsible for allocation of resources, creating relationships, managing population and technological study, and military control. By immersing themselves into this virtual world and interacting with other groups, students will obtain a better understanding of the difficulties that leaders face and the obstacles facing our world.

Future plans: I plan to continue with my project as well as developing a portfolio and working to support myself before continuing on to graduate school.



RORY DANIELLE NICKERSON
Psychology
Studio Art

Portland, ME
 Catherine McAuley High School

***An Exploration of Segregated vs. Integrated Recreation Programs
 for People With Intellectual Disabilities: Their Relation to Self
 Esteem Feelings of Competence and Community Involvement***

Advisor: Cynthia Erdley

Thesis description: My thesis was a qualitative study of the nature and availability of segregated versus integrated recreation opportunities for those with intellectual disabilities. I interviewed family members of individuals with intellectual disabilities, employees of agencies that work with such individuals, and recreation program volunteers. Insights into the benefits and drawbacks of each type of program were obtained and categorized into themes which were then presented and discussed.

Future plans: I will study abroad in 2011 in Costa Rica with the USAC program. In the future I would like to go to graduate school for Social Work and eventually be involved in some sort of expressive therapy practice.



BRIAN ADELBERT NOYES
New Media
English

Patten, ME
Katahdin High School

Lumberman's Museum Media Room

Advisor: Jon Ippolito

Thesis description: In my project I advised the Lumberman's Museum in Patten, ME on how to spend grant money to create a new media room. I then created a wide variety of media content (interviews, stories, educational videos) and an interface that can be used by museum visitors to find videos they want to watch and add them to a video playlist. In the end I created over three hours worth of content!

Future plans: My major plan is to find a job and start working! Apart from that I may do a few more videos for my thesis... a few things that I didn't have time for during the year, but I'd really like to do.



RYAN PAGE
New Media

Freedom, NH
The Community School

Etude for 9 Kinetic Sound Objects

Advisor: Nate Aldrich

Thesis description: This thesis was a musical composition that focuses on the movement of sound within three dimensions. Through the use of software and hardware configurations designed specifically for the project, sounds appeared to move around the listener and evolve over time. The work utilized a metaphor of independent biological agents for the sounds that are generated. Each sound object had its own characteristics that define its life cycle, pitch, timbre, and motion path. The concepts of spatialization and biology were harnessed to showcase movement and attempt to simulate features of the observable world currently unavailable to a composer of traditional western art music.

Future plans: I have been accepted into Mills College in Oakland, CA where I will be pursuing a master's degree in Electronic Music and Recording Arts.



MASON GAHAGEN PALMATIER
Psychology

East Rush, PA
Elk Lake High School

***Discipline and Reform:
A Learning Process for At-Risk Adolescents***

Advisor: Cynthia Erdley

Thesis description: I focused on various approaches to discipline and their effectiveness with at-risk adolescents in high school. Developing proper discipline services and support for these students is key to academic and professional success, and to promoting healthy social and emotional adjustment. A literature review is used to define the population of at-risk youth, to define three distinct approaches to discipline, and to determine the best system to change students' undesirable behaviors. Identifying the most effective methods for discipline is crucial to establishing structure and support for young adults to increase graduation rates and prepare them as productive members of society.

Future plans: After doing that "wandering thing" people do in their twenties, I plan to earn a PhD in Psychology and work in a variety of contexts before landing in a college setting.



MARGARET ELIZABETH PAYNE
Political Science, History

Orono, ME
Orono High School

Public Housing in Bangor, ME and Chicago, IL

Advisor: Mark Brewer

Thesis description: I compared various types of public housing in Bangor, ME and Chicago, IL to determine what programs work well.

Future plans: I'm moving to Oregon to work on an environmental rights campaign.



JONATHAN PELLETIER
Microbiology

Scarborough, ME
Falmouth High School

Comparative Analysis of Toxicant Effects on Several Distinct Signal Transduction Pathways that all Lead to Degranulation in Rat-Derived Mast Cells as a Model System

Advisor: Julie Gosse

Thesis description: Mast cells are immune cells related to allergic disease and in defense against some parasites. We discovered that environmentally relevant concentrations of arsenite (an inorganic form of arsenic) and triclosan (an antimicrobial found in household products) affect mast cell degranulation triggered by the pathway by which mast cells are thought to be activated in allergic disease. In addition, RBL-2H3s (a type of immortalized rat mast cells) can be stimulated to degranulate using other stimulants that work through alternative cell-surface receptors. I investigated the effects of these chemicals using alternative stimulants to understand the molecular mechanisms of toxic action of these chemicals on mast cell function.

Future plans: I will attend Tufts University School of Medicine in the Maine Track program.



AARON RICHARD PERREAULT
Biochemistry

Northfield, NH
Bishop Brady High School

Establishing Zebrafish as a Model for Pseudomonas aeruginosa Biofilm Formation

Advisor: Carol Kim

Thesis description: Most bacteria are considered to exist in two modes of life: as single individualistic organisms termed planktonic cells, or as matrix-enclosed communities, termed biofilms. It is only within the past twenty years that bacteria have been studied as biofilms. In general when bacteria are enclosed within a biofilm, their resistance to the immune system and antibiotics is increased. To this date there is no established live organism model for biofilm immunity studies. The results of this project may be utilized to study host-microbe interactions and provide a standardized model for *P. aeruginosa* biofilms.

Future plans: I will be attending medical school at Tufts University of Medicine. I have accepted a Navy scholarship for medical school and will be a naval physician upon graduation of medical school.



MATTHEW ROBERT PINTAR
Ecology & Environmental Sciences

Canonsburg, PA
Canon-McMillan High School

The Effects of Landscape Acidification on Ovenbird Growth and Territory Size

Advisor: Brian Olsen

Thesis description: I investigated the effect that 21 years of experimental whole-watershed acidification at the Bear Brook Watershed has had on leaf litter arthropods and Ovenbird nestling growth and territory size. In the acidified watershed, arthropods had lower calcium concentrations and nestlings had smaller mass and body frame size. Both minimum convex polygon and fixed-kernel density territory measurements showed that acidified territories were larger than control territories, though not a significant difference. Territory size was strongly related to prey calcium concentration, but not prey abundance. Results suggest that acid deposition could impact the abundances of breeding birds and there is a need for continued pollutant emissions reductions.

Future plans: I will be attending Texas Tech University to pursue a PhD in Biology starting fall 2011.



ANDREW W. PRINDLE
Communication
Psychology

Warren, CT
Wamogo Regional High School

***Space is the Argument:
The Motives and Consequences of Architecture***

Advisor: Nathan Stormer

Thesis description: I used rhetorical ideas of authorship and meaning-making to discuss the effect of seeing architecture as either image or space. The image perspective views architecture as a design process creating an aesthetic reality controlled by the designer's vision and his critics. The space perspective understands architecture as a design process seeking to reify cultural and individual complexities into a spatial reality supporting and invigorating positive interactions between humanity and environment. I argue that a space-based perspective is more productive for understanding how people relate to architecture and confirms the importance of architecture beyond morphological concerns by accounting for and supporting the human element.

Future plans: I plan on pursuing a career in design to explore possibilities for design to enrich and sustain communities.



KAREN ASHLEY PURINTON
**Environmental Management
 & Policy**

Topsham, ME
 Catherine McAuley High School

Recycling Rates and Participation in Maine

Advisor: Stephen Reiling

Thesis description: This project was designed to assess current recycling rates in Maine and the feasibility of composting as a possible alternative or supplement to recycling activity. The communities of Holden, Orrington, and Millinocket were chosen for their three different recycling approaches: curbside, system, drop-off center etc). I created a questionnaire and surveyed these three towns to determine resident's recycling behaviors as well as their attitudes towards, and possible barriers preventing them from composting.

Future plans: I will attend graduate school at the University of Southern Maine for a two year Master's degree with a concentration in Land Use & Environmental Planning.



ALISA EMILY RHODES
English, Romance Languages

Roscoe, IL
 Hononegah Community High School

***Grammar Class — A Translation of
 Juan L. de la Cruz's Curso de Gramática***

Advisor: Kathleen March

Thesis description: My thesis was an English translation of the work of Spanish poet Juan L. de la Cruz, who was my professor of literature and stylistics when I was studying abroad in Bilbao, Spain. He told our class that he had a book of poetry coming out, and I bought it right away. I enjoyed reading it, but didn't finish the book until I returned to the US and started looking for things to translate for my thesis. I found that I really liked the style and decided to translate it. This has been a lot of work, but it's also been interesting to see the differences between Spanish and English and to try to overcome them.

Future plans: I have a job teaching English to children in Galicia, Spain. After that I hope to go to grad school to study English as a Second Language teaching, but who knows? I'm sure life will take me down some interesting paths in the meantime.



ABIGAIL BARBARA SIEGFRIEDT
**Chemical Engineering,
 Biological Engineering**
Pre-Medical

Windsor, ME
 Erskine Academy

Evaluation of Membrane Performance on Separating Acetic Acid from Water Compared to Competing Technologies

Advisor: William DeSisto

Thesis description: Acetic acid is a byproduct of many biochemical processes with considerable commercial value. The most cost intensive portion of the separation of acetic acid from the pulp extracts is its separation from water. New research in membrane technology means a viable option for an industrial membrane would be silica-based. My research includes membrane synthesis and the comparison of a base case (distillation column) and a competing separation method (liquid-liquid extraction) to several membrane/separation column hybrids using ASPEN Plus and MathCAD simulation models. The addition of pervaporation/vapor permeation will decrease the economic burden of some current separation techniques.

Future plans: I have a job at Verso Paper as a process engineer, but first I am taking the summer to travel with my sisters.



ASHLEY ELIZABETH SMITH
Music Education

York, ME
 York High School

Maine Learning Results Past and Present: The Revision and Implementation of the Standards for the Visual and Performing Arts

Advisor: Laura Artesani

Thesis description: This thesis re-examined the Maine Learning Results (MLR) for the Visual and Performing Arts as written in 1997, and revised in 2007, specifically focusing on implementation in secondary music education classrooms. After examining the creation and revision processes, a survey was created and randomly distributed to 75 Maine secondary music educators about MLR in the classroom. Twenty-five responses were analyzed and two interviews completed with a classroom teacher and a member of the State Board of Education who were extensively involved in the revision process. My results provide an insider's look on how and why the MLR for the Visual and Performing Arts are implemented in classrooms throughout Maine.

Future plans: I plan to pursue a Master's Degree in Music Education or Choral Conducting and teach high school vocal music.



NOLAN GARETH SOUTHARD
Mechanical Engineering
Mathematics

Palmyra, ME
Nokomis Regional High School

The Design and Optimization of an Underwater Remotely Operated Vehicles Ballast System

Advisor: Michael "Mick" Peterson

Thesis description: My thesis explored the engineering design and thought process of a ballast system that was implemented on an underwater robot that would compete in the annual Marine Advanced Technology Education competition in Maine. An investigation of ballasting in the natural world, fish, and on present day submarines was done to better understand the principles behind ballasting. Stability and reliability of this system were tested to confirm design calculations.

Future plans: I start work after graduation as a Manufacturing Process Engineer at Onyx Paper, a specialty paper company in Western Massachusetts. I hope to progress professionally in the engineering culture but would love to own a brewery/vineyard/winery as my retirement plan.



KASEY CHRISTINE SPEAR
English
Education

Biddeford, ME
Kennebunk High School

The Destiny of Me: Creative Writing In Context

Advisor: Charlsye Diaz

Thesis description: My thesis was an analysis of elements currently found in popular young adult literature and their application into an original young adult didactic novel. The novel was contextualized by a description of the inspiration for this piece, a definition of young adult literature, the outline of a sequence common to all young adult novels, and the explanation of how these essentials are found in my composition. The novel was an exploration of utilizing this medium for the benefit of adolescents and provides characters that can serve as role models to their teen readers, encourage a dialogue about morals and dilemmas, all while providing an entertaining story and meaningful prose.

Future plans: I have accepted a job from the Federal Bureau of Investigation and will be joining the Boston department as a Support Services Technician. I am excited to begin a long career with them, full of interesting experiences.



LAURA MARGUERITE ST. PIERRE
Zoology, Chemistry

Houma, LA
Baton Rouge Magnet High School

Qualitative Analysis of Abandoned Nest Soil of the Fire Ant Myrmica rubra

Advisors: Eleanor Groden & Barbara Cole

Thesis description: The European fire ant *Myrmica rubra* is an invasive pest insect with a rapidly spreading range in Maine. *M. rubra* colonies spontaneously emigrate from nest sites in favor of nearby substrates and display an aversion to the soil of abandoned nests. This study investigates concentrations of ant-produced semiochemicals in abandoned nest soil as probable causes of this deterrent effect. Significant concentrations of oleic acid, an insect funeral pheromone, were identified in the nest substrates of condensed colonies and were also observed in the soil of abandoned nests coupled with a significant increase in the concentrations of pyrene fluoroanthene and other common pollutants.

Future plans: I plan to attend graduate school in biochemistry with a specialty in venom mechanisms.



JEREMY JOSEPH SWIST
Latin, History
Classical Studies

Westport Island, ME
Arlington High School (Arlington, MA)

Vergil's Inferno: The Transformation of Hell from Homer to Dante

Advisor: Tina Passman

Thesis description: I explore thematic connections across Western epic poetry in terms of the eschatological evolution from Homeric myth to Dante's Christian Neoplatonism. I argue that Dante constructed his afterlife using the literal, philosophical and political structures of Vergil's *Aeneid*, Book VI, which was constructed as a combination of Homer's myths and Plato's philosophy, both of which were virtually unavailable to Dante, who read no Greek. *Aeneid* transmitted the classical afterlife to Dante who incorporated it into a Christian scheme influenced by Augustinian Neoplatonism. Additionally, I translated all of *Aeneid VI* into English, setting it to the rhyme and meter of Dante's *Divine Comedy* to demonstrate the connection between Vergil and Dante's epics.

Future plans: I will earn a PhD in Ancient History to become a professor, and pick up a Masters in Classics along the way.



JENNIFER WAYBOER
English
Political Science

Garland, TX
North Mesquite High School

Memoirs of a Semester Abroad

Advisor: Margery Irvine

Thesis description: I did a creative thesis using my blog that I wrote when I studied abroad in Spring 2011. I turned it into a memoir and travel journal. There are two columns the left side representing the original writing, and on the right is edited text from my blog, more information on the places I went, and my own reflection on what I was going through while abroad.

Future plans: I'm applying for technical writing positions around the country and plan on going to graduate school in the next year or two to further my studies in a combination of document design and writing.



LAUREN BRONWYN WHEELER
Earth Sciences

Orono, ME
Orono High School

An Inverstigation of the Opening and Closing of the Tidal Inlet on Sand Beach Acadia National Park, ME

Advisor: Joseph Kelley

Thesis description: Rising sea level is driving small beaches landward into smaller embayments causing the tidal prism of the beach-protected estuary to decrease and reach a point where tidal inlets cannot stay open. This has ecological implications for Sand Beach Inlet in Acadia National Park. To understand this inlet, data loggers gathered temperature, salinity, and water-level data to investigate associations between water depth, tidal precipitation, and wave data. Other studies implied that the status of the inlet depended largely on seasonal variations that were easily predicted, but this was not true for Sand Beach Inlet where precipitation, wave height, tidal, and storm data all necessary on an hourly basis to predict the dynamic tidal inlet.

Future plans: I will be working towards my Masters of Science in Earth Sciences at UMaine.



KATIE MARIE WONCH
Wildlife Ecology
History

Greene, ME
Leavitt Area High School

Home Ranges, Habitat Selection and Activity Budgets of Vasectomized African Elephants (Loxodonta africana) in the Pongola Game Reserve South Africa

Advisor: Lindsay Seward

Thesis description: As a keystone species, elephants have a disproportionate effect on their ecosystem and community. The exponential growth of African elephant (*Loxodonta africana*) populations in South Africa, particularly in enclosures where home ranges are more restricted, results in the destruction of vegetation and potential decrease in biodiversity. Our study examined whether a new management alternative, vasectomization, would provide a sustainable solution by not affecting elephant behavior. Our results showed mixed results and indicated that bull home ranges and sex associations had changed but activity budgets and habitat selection remained similar to before.

Future plans: I hope to develop my career in natural resource education and likely earn a master's degree in a related area.



WILLIAM WOOD
English, Philosophy

Bangor, ME
Bangor High School

Eden Version 1.0

Advisor: Alex Irvine

Thesis description: When describing my story to someone, I usually begin by describing the world in which the story takes place. The world is meant to emulate our world of today with one minor adjustment: dreams are created. I wanted to present a very similar reality to ours today such that this minor adjustment could be seen comparatively. Everything else in the story resembles the life of a college student, with the exception of living in an apartment during Jakes first year. The reason for this similarity lies in my attempt to clash my world with the "real" world of today, questioning the authenticity of realness itself, and what specifically allows for a world to be considered real. The concept of Eden, real in every respect, except for the fact that it is a dream, provided the perfect opportunity to explore the criteria for reality. Senses deceive us as Descartes is infamous for pointing out, and Eden is the ultimate manifestation of such deception.

CELEBRATION

Honors Celebration 2011 Celebrating the Achievements of our Students & Their Supportive Advisors

The 2011 Honors Celebration was, once again, the best part of commencement weekend for the Honors College! More than 400 students, family members, friends, thesis advisors, and UMaine administrators and staff filled Wells Conference Center for brunch and a chance to recognize the amazing research and accomplishments of our graduating thesis students.

A special highlight this year was the presentation of an Honorary Honors Degree — only the second one ever awarded — to outgoing UMaine President Robert Kennedy, who demonstrated his commitment to the Honors College during his entire tenure at UMaine. In his first year at UMaine, Bob established the Provost's Commission on an Honors College, leading to the transition from Program to College one year later. And, in his final year as President, Bob initiated the CLAS/Honors Preceptorships featured on the cover of this edition of MINERVA. The Honorary Honors degree is a fitting distinction for President Kennedy, and we wish him well in his future endeavors! ■■■

Pictured, counter-clockwise, from top left: Advisor Mike Scott & Zev Eisenberg, Advisor Cynthia Erdley & Rory Nickerson, Gabrielle Foster & Advisor Richard Judd, Karen Purinton & Advisor Stephen Reiling, Advisor Lee Karp-Bass & Samantha Bond, Francis Le & Advisor Carol Kim, Elizabeth Deletetsky & Advisor Daniel Harrison, Advisor Mark Brewer & Andy Baldacci, Timothy Jenkins & Advisor Laura Artesani, Julie Herbert & Advisor Nathan Godfried, Advisor Constanza Ocampo-Raeder & Alissa Dubois.





Please tell us about yourself.

I am originally from Belgrade, ME. As a native Mainer I've enjoyed the quintessential northeastern activities like hiking, skiing, and snowmobiling. I'm also a big golfer, and this past year I began to inherit a love of cooking from my dad. During my time at UMaine I was involved as a resident assistant for two years. I also took part in two clubs: the Biological Engineering Club, which I co-founded with my friend Danielle, and the Biology Club, where I was vice-president during my senior year. On a more scholastic note, I'm very much a science and biology focused person. I'm always interested to learn more about how the human body works, and I have been lucky to work in some really great laboratories.

What brought you to UMaine & made you choose Honors?

I came to school originally with an interest in biological engineering. I knew about the strong science and engineering foundation at UMaine, and the short distance between Orono and my family made the right fit. *UMaine is a very welcoming place.* Once on campus, the friendly student community and accessibility of faculty reaffirmed my choice. I chose the Honors College for two reasons: smaller class sizes with emphasis on group discussion; and the prospect of completing my gen-eds within a coherent sequence of classes made sense to me. I also knew I could gain skills in analytical writing.

What is your thesis topic and how did you come to choose it?

My thesis work took place in the laboratories of Dr. David Neivandt and Dr. Sharon Ashworth, who were amazing mentors. *Through my thesis, I learned amazing lab skills, and invaluable practice in scientific and technical writing.* Titled *Development of an actin hydrogel substrate for fluorescence correlation spectroscopy of FGF protein transfer across a model membrane*, my research focused on the membrane-facilitated transport of a certain class of proteins that exit the cell through in a non-classical manner. The motivation for this project arose from the fact that some of these proteins have been implicated in the formation of new vasculature in tumors.



By investigating these novel secretory systems we hope that increased knowledge of the pathological pathways can lead to new therapeutics to combat the illnesses they cause. My part was to develop a novel model cell membrane supported by the cytoskeletal protein, actin, to provide a simple, physiologically relevant and controllable system with which we could study the secretion pathway. I chose this topic because of working in Dr. Neviandt's lab my first year, and began work on this research in my junior year. I really enjoyed the collaborative efforts between the Neivandt and Ashworth labs, and knew it was perfect for my formal thesis project.

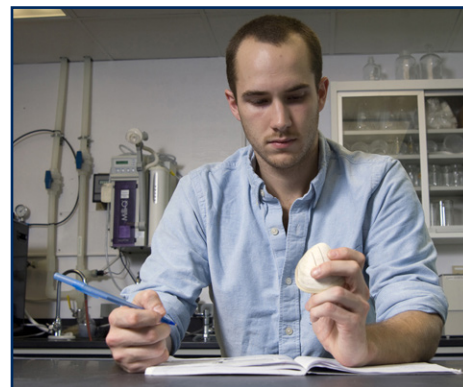
Why was Honors important?

The Honors College provided a very

different experience from the rest of my science-heavy classes. It gave me a chance to think about and discuss topics that were more qualitative and based in the human experience, which I greatly valued. The small class sizes in the *Civilizations* courses and subsequent tutorials were a welcome change from classes held in large lecture halls. These helped to promote open and free-flowing discussions. *The Honors thesis process was also invaluable to me, as it gave a small preview as to what graduate laboratory and thesis work would entail.*

What are you doing next & what advice can you give future Honors students?

I'm currently pursuing a PhD in Neuroscience at the University of Rochester Medical Center in Rochester, NY. My hope is to finish my graduate education and then begin a career as a research professor in the field of neuroscience. As for advice, I say: *Try something new.* By that I mean anything, really: a new and different class, student organization, travel destination, etc. *One of the great things about an undergraduate education is that it provides you with an opportunity to experience things that are outside your norm.* In my sophomore year, I took an introductory psychology class, just as a deviation from my other coursework. That decision led me to enter an entirely different field than I had ever considered, and I am so glad I made that choice. ■ ■ ■





ROBERT B. THOMSON HONORS CENTER
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In 2011 we celebrated the life and art of Arline Thomson (1912-2010). In addition to a generous endowment, Arline left her entire collection of artwork (including this piece) to the Honors College to benefit the fund established in the name of her late husband and longtime Director of the Honors College, Robert B. Thomson's name. Two events were held and hundreds of pieces sold. We continue to be grateful for Arline's life and work.

If you are interested in learning more about including the Honors College in your estate plans, please contact The University of Maine Foundation at 207.581.5100 or by visiting www.umainefoundation.org.

"Arline was a wonderful person whom I greatly admired. Although I may be prejudiced, the fact that she painted, in my eyes, made her an even more interesting person." JAMIE WYETH