MINERVA
THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

Taking you places
The Honors College experience gives students the world
WELCOME TO the pages of Minerva 2016–17. Here you’ll find articles that inspire, inform and continue our tradition of highlighting the accomplishments of the students of the Honors College and events that marked the past year.

Our theme this year, “Taking You Places,” emphasizes the importance that Honors accords the many forms of learning, from physically traveling to study, doing research or working in another place or country to the more figurative travels to places of the mind that challenge us and expand our knowledge and interests.

Each fall over the past few years, Professor David Gross has proposed to the Honors 111 students that one of their central tasks is to “think hard about things that matter.” Honors helps do this in so many ways: by exploring the ideas and ideals that have shaped our society; by trying to solve technical, economic and social problems as we develop our own standards for practical action in the world; and by identifying and questioning the gap between our ideals and our practice.

It has never been more important for all of us as educators, students and citizens to create opportunities for dialogue and engagement with those who live or think differently from us. This issue of Minerva demonstrates many ways our students and faculty accomplish this: service and engaged learning, study and service trips abroad, research experiences on and off campus, hosting speakers and traveling to speak themselves.

Highlights of this issue include a conversation with Walter Macdougall ’57 about his life in Honors, first as a student and later as a preceptor; an account by Josh Roiland, CLAS-Honors preceptor of journalism, of how his first-year journalism students learned the hard way — by doing — how to create a newspaper edition on election day...and night; and a story about how the generosity of alumna Betsy ’55 and Bill Leitch has enabled hundreds of Honors students to experience the world. A profile of senior, Emily Illingworth, is another inspiring story of the transformative power of a UMaine education and the importance of opening oneself to the world.

Finally, join me in celebrating the 2016 graduates of the Honors College, and in thanking our faculty and generous supporters for all they do to create the Honors experience at the University of Maine by “igniting a passion for learning.”

François G. Amar
Dean

umaine.edu/honors
Dear Bill and Betsy
Postcards and the value of gratitude

Lessons for life
Walter Macdougall devoted to expanding horizons

Fearless fortitude
Emily Illingworth found her passion for public health in her successful student experience

The daily miracle
Journalism students take on full election night coverage

Two Marks
Distinguished Honors graduates Mark R. Haskell '82 and Mark Pettegrow '81 return to campus
DENNIS ’57 and Beau Rezendes understood the transformative impact of volunteering abroad, and generously donated to establish the Rezendes Global Service Scholarship in partnership with Global Volunteers. The scholarship supports an overseas service trip, where Honors students experience the benefits and rewards of volunteering.

In 2016, one of those students, Jaime Roy ’17, a communication sciences and disorders major traveled to Greece, where she volunteered at a local school.

“My Global Volunteers trip was the most amazing thing I have ever done,” she said of her first trip abroad. “I loved the kids I worked with. They were so excited to see us every morning, and I know that I helped make their English learning experience a fun and positive one.

“Some of my favorite memories there were visiting the ruins of Knossos, snorkeling in the Aegean sea (I saw a cuttlefish!), seeing a Greek rock concert, picking figs on our way to school, and eating all the Greek cuisine. I am so thankful that the Honors College gave me this opportunity to experience the world.”

I know that I helped make their English learning experience a fun and positive one.” Jaime Roy
B R A D Y D A V I S ’ 1 7 knew he wanted to study business management, but his interest in sustainability and community-engaged research came as a surprise. In 2014, Davis joined the Honors College Sustainable Food Systems Research Collaborative and became part of an interdisciplinary team, including community partner Orono Economic Development Corporation (OEDC), researching the implementation of a regional food hub. The experience had a profound impact on Davis, who decided to minor in sustainable food systems and undertake research on the sustainability and networking practices of Maine’s artisan cheesemakers under the mentorship of Stephanie Welcomer in the Maine Business School. Their research aims to better understand the business opportunities and challenges facing individual producers and the industry as a whole while also determining how cheesemakers practice sustainability in their operations. “Participating in this community-engaged research was extremely meaningful,” said Davis. Welcomer commented, “Brady’s most notable contributions to sustainability research show his ability to study complex relationships, engage with stakeholders, and suggest practical solutions to persistent problems.”

With support from a Mitchell Center grant, Davis helped interview cheesemakers throughout Maine, mapped the entire cheesemaker network, and is analyzing cheesemakers’ approaches to sustainability and networking.

Davis reflects, “it was eye-opening to witness how research and practice converge. As a business student with a minor in sustainability, my academic experience was enriched by hearing how business owners implemented various sustainability principles in their work. I was able to apply what I had learned in the classroom in the field. I am very grateful to have been exposed to community engaged research, and my experience has led me to seriously consider future academic study and research opportunities.”

In recognition of his work, Davis received the Senator George J. Mitchell Center’s Award of Excellence for Outstanding Contributions to Sustainability Research by an Undergraduate Student in December 2016.

Say cheese

Brady’s most notable contributions to sustainability research show his ability to study complex relationships, engage with stakeholders, and suggest practical solutions to persistent problems.” Stephanie Welcomer
MAINE HAS the highest rates of food insecurity in New England and is tied for third in the nation. For several years, students and staff from the Honors College have helped pack tens of thousands of meals during the University of Maine’s Welcome Weekend Day of Service. It is an impressive effort with tangible impacts, but Honors wants to go to the next level.

The Honors College Student Advisory Board is spearheading a campaign, The Hungry 100K: Maine Day Meal Pack-out, to pack 100,000 meals in one day at UMaine. These 100,000 meals will be distributed to area food banks, including UMaine’s Black Bear Exchange.

The impacts of the Hungry 100K will be felt not just by the many food insecure Maine families, but also in the records it will shatter: most meals packed in a single event at UMaine, most meals packed in a single day in Maine, and the most meals packed by any university in New England. And in completing the Hungry 100K, UMaine will surpass Harvard as the number one meal packing university in New England.
Dear Bill and Betsy
Postcards and the value of gratitude
by Melissa Ladenheim

ASK BILL Leitch what comes to mind when he thinks of his wife Betsy’s deep commitment to Honors and he will very likely say, “postcards.” That’s because the Leitches have received dozens of postcards over the years from University of Maine Honors College students visiting cities across the United States and abroad. Students have sent them postcards from Washington, D.C., Chicago, Seattle, San Antonio, St. Louis, and even far-flung Hungary, Tanzania and Singapore. Each postcard is unique, but united by a sense of gratitude to the Leitches for their abundant generosity, which has enabled Honors College students to attend national conferences, visit the nation’s capital and study abroad.

Betsy Pullen Leitch, who passed away on Sept.1, 2015, graduated from UMaine in 1955 and was a loyal supporter of her alma mater. Colvin Hall, now home of the Thomson Honors Center, had been Betsy’s dorm, where she and other residents were known affectionately as “the Colvin girls.”
Betsy and Bill spearheaded the Class of ’55 Reunion Fund campaign to finance the renovations that turned the former dorm into the Honors living-learning community it is today complete with the Leitch Commons and Margaret Chase Smith guest suite.

But Betsy derived the most satisfaction from supporting student travel, understanding the personal and academic benefits it could yield. “Travel is an essential part of global, interconnected life, regardless of profession or avocation,” said Bill, recalling their motivations. “You must experience other cultures, attitudes, way of life, especially if your Honors qualifications place you in leadership positions. And the Honors conference introduces UMaine participants to working with peers in a serious framework for presentation and exchange of ideas, a part of any human endeavor in Western-type societal organizations.”

Bill’s observations are echoed in the messages on the postcards. One student wrote from the National Collegiate Honors Council (NCHC) in New Orleans in 2004: “New Orleans is a wonderful city filled with so much culture. This was an opportunity of a lifetime as well as a great learning experience.”

Another wrote from Denver in 2007: “Without your generous support, I would never have gotten this opportunity to present to my peers in this amazing city.”

A postcard from NCHC in Chicago in 2015 reads: “This has been an unforgettable experience that has given me not only great memories, but also has helped build leadership skills. NCHC has given me networking opportunities I will be taking advantage of.” And from Seattle in 2016, a student said of her NCHC trip: “It was definitely one of the highlights of my Honors experiences at UMaine. It was a formative development in extending Honors ideas beyond what we do in the classroom. I made some great connections, and learned a lot from peers and faculty.”

Nicholas Cloutier ’04 likely could not imagine what he set in motion when he suggested that Honors students attending the 2003 NCHC conference in Chicago send thank you postcards to the Leitches, whose donation had made it possible for so many students to go.

“I was having a great experience and know that I was only able to attend because of the Leitches,” Cloutier recalls. “Wanting to show my appreciation, I approached Charlie [Slavin, then Dean] about sending them a postcard. He thought it was a great idea.” And a tradition was born.

Betsy and Bill responded in kind to the excitement and appreciation expressed in the postcards sent by Cloutier and his classmates, nearly 200 students since then.

“We saw a unique opportunity to give Honors students experience in travel as an educational activity, and as a perk for extra work and commitment Honors membership requires,” remembers Bill. “I was glad to support Betsy in this project. It was a real personal involvement on a scale that we could support at UMaine.”

Cloutier says his conference experience had a major impact on his views of himself as a student, much as Bill and Betsy hoped it would.

“As a guy from the middle-of-nowhere Vermont, this experience gave me more confidence in myself and helped show me that there are more possibilities out there than you think. I would have never thought that I would have been presenting at a National Honors conference, and without the Leitches, I may not have been. This conference helped me view myself as more of an academic person and pushed me to get more involved with research. Being able to present at such an event makes you feel like you are special and have something to say [about] something people want to hear about.”

In addition to supporting NCHC travel, for several years Bill and Betsy also made possible a pilgrimage to Washington, D.C. for Honors students and staff. Deeply committed to service, and the value of civic
knowledge and engagement, Bill and Betsy wanted Honors students to experience the Capitol and all it had to offer.

During March break, a busload would leave Orono for D.C., sometimes with a detour to Bill and Betsy’s home in Newtonville, Massachusetts, where, invariably, they would greet the Honors contingent warmly with bags of returnable bottles to fund a future pizza party. Donations large and small came from Bill and Betsy as they thought about ways to enhance the Honors experience.

The postcards from Washington, D.C. tell of the impact of that trip: “This trip has broadened my horizons and allowed me to better understand my country,” wrote one, while another student said: “Thank you for giving me the chance to see the Supreme Court — it was [a] lifetime dream and hopefully someday I’ll sit on the court.”

One postcard writer said: “This trip has inspired me to pursue my graduate studies in international relations here.” Another noted: “The awe of standing in the mall, looking at the National Art Gallery is like none other.”

A theme running through these brief messages is the students’ gratitude for first-time experiences: first time leaving Maine, flying and presenting at a national conference.

“NCHC allowed me the opportunity of my first flight — quite an experience for sure. I tremendously enjoyed the wonderful city of Seattle and felt that the conference gave me great insight into how to teach and how to learn.”

Bill and Betsy derived great joy from the postcards and from knowing their gifts were making such a difference in the lives of our students. Some of the postcards and letters have stood out over the years. Bill recalls a card from a NYC conference participant who went to Ellis Island to search for his family immigration records; another from a young lady who went to Singapore to study city planning and transportation. Last spring, he received a letter from a student who was in Budapest studying post-Soviet social developments, including the economic impact of mass migration.

In memory and honor of Betsy, Bill and their children, Elizabeth and Bradford, continue to support Honors student travel through the Leitch Research and Travel Fund, and through ongoing donations to the Honors College for NCHC and the newly revived Washington, D.C. excursion.

When asked what he would say to a student contemplating travel, Bill said: “Do it. Now when you are free of many family or organizational responsibilities. Now so you can see other cultures and ways of life. And political, economic and personal diversity.”

Cloutier agrees. “These trips can incite new ways of thinking and may give you ideas that you can tie into your future learning,” he says. “If the rest wasn’t enough to inspire you to apply, it is a fun trip with great people. What more could you want?”

In her own words
Aliya Uteuova

IN OCTOBER 2016, I had a chance to present at the National Collegiate Honors Council Conference in Seattle. I would like to thank the Honors College and its generous donors for providing this opportunity. My presentation aimed to propose efficient ways of integrating and attracting international students to the Honors College. The presentation was held in a roundtable discussion. This format helped build a collaborative exchange of ideas between people who were interested in my topic. It was interesting to see people from all over the U.S. and Europe join in on a discussion about a common idea. There was a lot of back and forth between participants, and many of them shared their experiences of marketing Honors to international students. The discussion concluded with a suggestion of ideas of how NCHC could facilitate and foster a network of international students in the U.S. I had the chance to attend various presentations, including a dance workshop. I met one of the presenters, Meredith Yuhas, at the Chicago NCHC in 2015. It was incredible to reconnect with her and watch her performance.
THE 80-YEAR history of Honors at the University of Maine reflects some significant changes in the institution and the program, not the least of which is the dramatic growth from about five graduates per year before 1960 to around 85 per year currently. But Walter Macdougall ’57 reminds us that the aims of an Honors education have remained constant, and that even the methods and curricular content have survived many fads.

Macdougall is a Waterville, Maine native who grew up in Bingham. He joined the UMaine community in fall 1953 and graduated with an Honors degree in philosophy in 1957. He went on to earn a master’s degree in the teaching of science and spent more than 20 years as a high school science teacher.

In 1967–68, he was a Ford Leadership Development Fellow at Harvard, where he focused on American intellectual history. He returned to UMaine and earned an Ed.D. in 1991.

Macdougall taught in the College of Education and Human Development and in Honors until his retirement in 2005.

We caught up with Macdougall in December 2016 to ask him about his Honors journey, both as a student and a faculty member. An excerpt from his extensive interview follows.
How did you start out here at UMaine?
I started out in pre-med. I had wanted to be a doctor all my youth, but here the experience broadened, and I began to wonder whether the real issue we needed to attend to was physical or whether it was mental and spiritual. I slowly gravitated to what I thought was going to be a focus on theology. I went to see Ronald B. Levinson, then head of the Philosophy Department, which in those days consisted of two professors and almost the same number of students. He talked me into philosophy. That was one of the fundamental life-changing occurrences. I had Levinson as a tutor twice a week for three years.

By tutor, do you mean one-on-one?
Yes. What I missed is the dialogue part of students working together, and that became a new thrill when I came here much later. I didn’t get the group freshman experience of Honors until I came here to instruct. [First-year honors courses started in 1962. Before that, the Honors experience was centered in the College of Arts and Sciences, and students were invited into one-on-one, Oxford style tutorials.]

Didn’t Levinson also serve as advisor for your Honors thesis, which was a translation of a Greek text? How did that work?
I took Greek for two years. Levinson handed me a copy of Cebes’ Tablet and said “here is something I think you ought to do; you ought to translate this.” My focus had become centered on allegory, along with a concentration in English, so that worked out well. Robert Sherk was the classics scholar on campus. He became my co-mentor and, in the process, I learned that scholars don’t always think — or translate — the same way. One time I had a translation that had been corrected by Sherk, and I had a translation of the same piece corrected by Levinson, and they didn’t jibe. I got to laughing at this, and Levinson asked what was so funny. When I told him, he said: “That’s a good lesson for you, scholars don’t always come up with the same conclusions.”

Honors Read and the Maine Masonic College
THE MAINE Masonic College has been hosting a Celebration of the Arts and Sciences in the Bangor area each spring for the last six years. It invited UMaine Honors students to present short talks on their research at the daylong event beginning in 2015.

For those familiar with the Honors Civilizations core, some of the rites of masonry will resonate with our readings of Pico’s Oration on the Dignity of Man and the rational spirit of the Enlightenment, infused however with a deep humility before what alumnus Walter Macdougall called “something outside of ourselves that is far greater.”

To the periodic meeting of minds that occurs at the Masonic Celebration of the Arts and Sciences, the connections between the two colleges were strengthened when the Maine Masonic College agreed to fund the 2016 Honors Read book, The Narrow Road to the Deep North by Richard Flanagan. This book was sent to all the entering students last summer and was used as the first text in HON 111. The book remains a touchstone for this cohort of students throughout their Honors journey.
What happened after you left UMaine? Did you do graduate work here?

I wanted to go on and finish and get a master’s in English, because the plan was that I would go into the philosophy of literature. I started that master’s plan and my wife taught public school to support. When she was pregnant, I stepped into her job. That’s how I slipped into teaching public school — which I did for about 20 or 25 years — until the family had grown up. Then I came back to the University of Maine and got a doctoral degree in education. I took five years doing that and really had my own program. I went back and reviewed philosophy for five years. It was a tremendous opportunity. Plus, they paid me while I instructed educational courses. I ended up teaching philosophy of education in the graduate program.

Tell us about your experiences of teaching in the Honors College.

Of all the years of teaching, this was the great time. To work with such students was just an unbelievably fortunate experience. They wanted to know, they were anxious to share, they became teachers for me, as well. It was a wonderful way to end a lifetime of education.

What is your background and how did it influence you as a teacher?

My father was the congregational minister in Bingham for 35 years. He was a liberal, brilliant preacher. I think that if you had an image [of my influences], it would be like a tripod: Levinson was one leg of the tripod, my father was another leg, and then, probably, Sherk and classical languages was the third.

Walter Macdougall’s piece, *Remembering Ronald B. Levinson, 1896–1980*, starts with his memory of his UMaine mentor and friend looking out the window in his third-floor Stevens Hall office, repeating the opening lines from Emerson’s poem, *The Snow Storm*.

Macdougall writes, “The first stanza ends where we humans sometimes find ourselves: ‘In a tumultuous privacy of storm.’ How can we thank our teachers for gifts that last a lifetime?”

Levinson was the advisor for Macdougall’s Honors thesis: *Cebes’ Tablet: A Translation with Introduction and Notes*. Macdougall’s remembrance of Ronald B. Levinson is now published for the first time: honors.umaine.edu/levinson
Celebrating the arts and sciences with the Maine Masonic College

APRIL 23, 2016, seven UMaine Honors students joined Honors Dean François Amar and Honors Associate Molly Hunt at the Maine Masonic College’s 6th Annual Celebration of the Arts and Sciences, held at the Anah Shrine Center in Bangor.

Keynote talks centered on astronomy, with Amar taking a historical approach in his talk, “The New Astronomy and Galileo’s Logical Imagination,” while Colby astronomy professor Elizabeth McGrath spoke on her research: “A Walk Among Giants: Building the Largest Galaxies in the Universe!”

Hunt introduced the Honors students, who spoke about their research:

- Seth Raymond, Electrical and Computer Engineering: “Wireless Power and Data Transfer Using Inductively Resonant Coils”
- Jesse Clark, Political Science, “Determining an Expected Majority Using Pattern Analysis”
- Emily Whitaker, Biochemistry, “Characterization of the Mycobacteriophage Ukulele Integration System: Identification of Integration Site attP and the Role of the Integrase in Lysogeny Regulation”
- Noelle Leon-Palmer, Biology, “The Physiology of Love”
- Ciaran Coyle, Philosophy, “Reexamining the Political Ontology of Class”
- Connor Smart, Accounting and Finance, “A Conceptual Value Function to Explain the Benefits Derived from Users of Free-to-Play Video Games”
- Isaiah Mansour, Marine Sciences, “Hemocyanins of Megathura crenulata and Haliotis rufescens: A Comparative Assessment”

From my father I got my first feeling of how wonderful it is to know something about the human experience. I’m not one of the preacher’s kids who hated to go to church. I waited for those sermons. I also should mention another major part of my life: I was dyslexic before anybody knew what dyslexia was all about. My first-grade teacher wrote a note home to my parents to notify them that I would never get beyond first grade. So I grew up hating school. It was probably fifth grade before I really could read.

Given your early dyslexia were you concerned that you wouldn’t be able to progress as a student or as a teacher?

If I was a successful teacher, it is because I had that experience. Every student has something that they’re dealing with. There has to be some sort of give-and-take and the teacher has to have an “instructive tongue and an attentive ear.” Dyslexia sharpened my hearing. [Note the phrase “instructive tongue and attentive ear” refers to two of the three “jewels” of second degree Freemasonry.]

How did you become involved with freemasonry and the Maine Masonic College?

My family had deep Masonic roots reaching back into our Scottish ancestry. In addition, most of the men I respected in our community were Freemasons. When I became a Mason, I realized that one of the themes in the philosophy of the fraternity was the importance of the arts and sciences. The arts and the sciences were seen as the formative, growing architecture of civilization. Freemasonry and Maine Masonic College became an extension of my academic world and a major opportunity to expand horizons — both mine and those of the people around me.

There is a real hermeneutic flavor to masonry.

There is a deep sense of spirituality in Freemasonry because we are related to the cathedral builders. There is that sense that there is something outside of ourselves that is far greater. There is no defined picture of God that everyone has to agree on. Your perception of God is what your perception is. The Masons don’t meet you with a prescribed worldview; that is something that you are expected to build with responsibility.

For this generation of Honors students, what path do you recommend?

I would recommend the path of the scholar who, regardless of field, cares and works for the well-being of us all. The Honors program engages a student in the taking of this path. It encourages the inner discipline required, and it enriches the lives of all those involved through the wisdom of the arts and the sciences. Some years ago, one of the Honor lecturers quoted Hegel: “The owl of Minerva spreads its wings only with the falling of the dusk.” That line has continued to whisper in my mind. Playing loosely with the meaning Hegel intended, let us hope that wisdom does take wing for there is dusk enough. We need that wisdom with which Honors is concerned, along with all the fairness and beauty which wisdom brings.
In the 2007 Minerva, I wrote that I would travel across the country in a biodiesel bus. I would like to say that happened. It did not, because I had the experience of driving and working on the back of a diesel ambulance holding the hands of the dying, calming the screams of young veterans and clearing the lungs of the afflicted.

It seems surreal that it has almost been a decade since I first climbed the stairs of Holmes Hall to start my vocation and Honors Associate Rylan Shook handed me a copy of J.D. Salinger’s Franny and Zoey. Today, I have the privilege of serving in Salinger’s old unit, the 4th Infantry Division.

Looking back, I am exactly where I should be, even if my 22-year-old self could not fathom that truth. Today, I continue to be a lifelong learner trying so very hard to make the world a better place. Of course, I have had my failures, but no regrets.

After I left the University of Maine, I spent a summer as a health and wellness manager at a Girl Scout camp, and I worked as an ambulance attendant in the Chicago area. I was commissioned in the U.S. Army with aspirations to heal shell shock. The goal of becoming a doctor has taken a slight hiatus when I learned that I was expecting triplets.

Today, I find myself a wife and mother of four, a junior Army logistician, and a public health graduate student at George Washington University.

The Honors College is part of who I am and who I am becoming. Just the other day, one of my sons was home from school. I needed to finish some of my coursework on the Human Genome Project. At almost 3, he was asking questions about the double helix of DNA.

I can be a better mother because of the Honors College experience. I can be a better graduate student because I can synthesize material and make it relevant to the discussion at hand. And I can be a better leader because I learned to listen in the Honors College.

In a world that is trying so hard to pull us apart, Honors invites us to bring our innate gifts to the table and seek common ground. Only in Honors does one have an opportunity to converse with a jazz musician, a chemist, an engineer, a creative writer and a future admiral. These moments where we discuss the relevance of Sappho and Francis Bacon in the cloistered halls of dear old Maine are real, are important, are necessary.

I do not know what the future holds for us, but I do know that we are better prepared for it because of our precious moments in Honors.
WHAT IS the key to success? Emily Illingworth might say it is failure. Even when failure seems as likely an outcome as success, Illingworth is not afraid to reach.

She sees failure as an opportunity to learn and grow, and her many achievements at the University of Maine are a result of this fearlessness and fortitude.

The first-generation college student experienced more than her share of adversity before coming to UMaine. Her father died when she was a child and, as a result, her family became financially insecure. By the time Illingworth was 18, she had moved 14 times.

Such challenges might have deterred some from considering college, but not Illingworth.

Emily Illingworth found her passion for public health in her successful student experience

by Noelle Leon-Palmer
I tell my students from day one that failure is okay. In fact, it is encouraged. Emily was a student that was never afraid to initiate. She wasn’t afraid to do something new.” Sally Molloy

“I always knew I was going to have to work harder,” said Illingworth, “and so I did.”

In high school, she took AP classes, did extracurricular activities, and received good grades. She single-handedly navigated college applications and the FAFSA.

Her hard work paid off. In fall 2013, she enrolled at UMaine to major in biochemistry.

Illingworth attributes her perseverance to her mother, who taught her how to remain optimistic in the face of adversity. Illingworth describes her family as her anchor.

In her first semester, Illingworth enrolled in HON 150: Dirt to DNA, a phage genomics class taught by professor emeritus Keith Hutchison and Sally Molloy, the Honors preceptor of genomics.

“HON 150 is a class where the students learn how to learn,” Molloy says. First-year students work with mycobacteriophage — viruses that infect bacteria — and gain extensive laboratory skills.

Molloy says the science skills matter less than what she hopes the students will learn overall: to embrace the challenges that come with learning.

“I tell my students from day one that failure is okay. In fact, it is encouraged,” says Molloy, noting that the liberation allows students to get beyond the fear of making mistakes.

Illingworth stood out in her class. Molloy remembers Illingworth as “a student that was never afraid to initiate. She wasn’t afraid to do something new.”

The following year, Molloy invited Illingworth to become a research assistant in her lab. Molloy noted that she is a fast learner and skilled lab technician. Molloy guided her development as a scientist and a researcher, supporting work that has become increasingly complex and driven by Illingworth’s own discoveries.

Illingworth is also a teaching assistant for Hutchinson in the second semester of the Dirt to DNA class. She teaches the new cohort of phage students the lessons she learned in Molloy’s class — to take challenges head on, and learn from failure.

Hutchinson admires in Illingworth “her deep knowledge of the material, her confidence in her knowledge and her compassion for the students.” Molloy agrees. She notes that Illingworth has a natural ability
to connect with the students while helping them learn. “She takes care of business, but she takes care of everyone else along the way,” says Molloy.

Molloy is not Illingworth’s only mentor. Melissa Ladenheim, associate dean of the Honors College who also teaches in the Civilizations sequence, also helps Illingworth reach for more.

Il lingworth remembered a particular class with Ladenheim. It was in a pilot course on civic engagement in which students participated in a privilege walk demonstrating the ways individuals’ circumstances can advantage or disadvantage them. Students were given random scenarios to “walk” and, by chance, Illingworth ended up at the back.

Illingworth had been given a story of someone who, like her, lacked advantage and was facing an outcome very similar to her own. The privilege walk reinforced what Illingworth already knew: she had to work harder than everyone else to get to where she wanted to go. And she was quite prepared to do so.

At UMaine, Ladenheim made sure that Illingworth didn’t have to do it on her own. She puts Honors students first, and works hard to support them by providing resources and opportunities to keep them moving forward academically and professionally.

“She is always sure to send along any opportunities that may be of interest to both her current and former students, and she has been not only a mentor, but a dear friend,” says Illingworth of Ladenheim, whose open door policy makes it easy to seek guidance whenever students need it.

Those sentiments are mutual for Ladenheim. “I was impressed very early on by Emily, both academically and personally. She is incredibly caring and compassionate, born in part from her keen awareness of the inequities that arise by virtue of one’s circumstances,” Ladenheim says.

Pursuing a leadership minor is a natural extension of her commitment to community service. Illingworth has a long history of helping others and her community, driven by the belief that “volunteering contributes to your overall understanding of how the world works and gets you out of your bubble.” Her work includes her service this past summer as a counselor at a camp for children with muscular dystrophy.

Illingworth embraces opportunities to hone her leadership skills, such as taking part in the Maine NEW (National

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**Discovered Phages**

IN THE supportive learning environment of the HON150/155 classroom, students develop project ownership through novel scientific discovery. The excitement of isolating a novel virus gives students the courage to learn the skills and personal effectiveness necessary for deep learning, more advanced research experiences, and the ability to tolerate the typical undergraduate challenges.

**Project ownership**

- Phage isolation from the soil
- Characterization of phage particle and plaques
- Isolation of genomic DNA and sequencing
- Genome annotation and analysis

**Learning skills and personal development**

- Applying knowledge to new situations
- Accepting challenge
- Working effectively on a team
- Thinking interdependently
- Developing a growth mindset
- Thinking and writing reflectively

**Graduates of HON150/155 have the skills and courage necessary to...**

- Write research proposals and apply for research fellowships
- Apply for independent research experiences and internships
- Embrace challenge in their future learning experiences

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Emily Illingworth explains her phage research to mentor Melissa Ladenheim

Education for Women) Leadership program, designed to educate and empower women and encourage their participation in civic life. She has been involved with the Honors College Student Advisory Board and Operation H.E.A.R.T.S (Hands-on Educational Association Reaching out Through Service).

Illingworth also volunteers for the RiSE Center’s Expanding Your Horizons, a conference introducing middle-school girls to STEM education and careers.

In recognition of her scholarship, leadership and commitment to community service, Illingworth was selected for the exclusive All Maine Women Honor Society.

Illingworth is completing her undergraduate Honors thesis, Genomic Variation and Host Range in Mycobacteriophage, on how different phage behave in alternative mycobacterial species. Her passion and dedication to biochemistry has led to her own novel research on mycobacteriophage, where she is contributing to the understanding of phage microbiology.

Illingworth has presented her research at several conferences, including the National Collegiate Honors Council Annual Conference, the Center for Undergraduate Research Academic Showcase, and at the prestigious Howard Hughes Medical Institute’s Janelia Farms Research Campus.

Illingworth’s research has been supported by several competitive scholarships including an INBRE (IDeA Network of Biomedical Research Excellence) research fellowship, the Frederick Radke Undergraduate Research Fellowship and the Helen Stinchfield ’18 Scholarship.

Through it all, Illingworth remains humble, gracious and kind, and a firm believer that failure is an opportunity, not an endpoint.

After graduation in May 2017, Illingworth plans on pursuing a Ph.D. in immunology, toxicology and molecular mechanisms at Johns Hopkins Bloomberg School of Public Health.
DICK HILL

WITH THE passing of Professor Emeritus of Mechanical Engineering Richard “Dick” Hill on July 14, 2016, the University of Maine lost a dedicated teacher, respected colleague and a renowned expert on energy matters. Hill had served the university for 46 years when he retired in 1992, and he continued to be an active figure in university life, as well as in public discussions of energy policy and conservation, most notably on his call-in radio program.

When Honors expanded from a College of Arts and Sciences program to include the other colleges in 1962, Hill was listed as the secretary — or point of contact — for the Honors committee of the College of Technology. He would remain connected to Honors for the rest of his life.

In 2010, at the age of 91, Hill served as the John M. Rezendes Visiting Scholar in Ethics, delivering a talk with the intriguing title, “Good Versus Evil: A Bag of Scary Mush.”

Among their lasting gifts to the campus, Hill and his wife Libby created the Richard C. Hill and Elizabeth C. Hill Family Fund to support research by Honors students. A few recent examples: Blaise Collett ’15, working with Rezendes Preceptor of the Arts Mimi Killinger, was supported on her trip to study organic farms in Cuba as part of her thesis research; similarly, Afton Hupper ’17 worked with Rezendes Preceptor of Civic Engagement Mark Haggerty on a feasibility study of a food hub model for the Orono Economic Development Council. A number of students have worked with CLAS-Honors Preceptor of Psychology Jordan LaBouff, including Charles Bergeron, who won a student award at the Society for Personality and Social Psychology conference for a presentation based on his 2012 Honors thesis, Imagine a Better World: Two Studies of Intergroup Contact.
Kristy Townsend teaching BIO 480: Cellular Biology with Ngunte Teumbo, a graduate student working towards his masters in zoology.
IN MARCH 2002, during my senior year at UMaine, my laptop was stolen from Hitchner Hall while I was working in the laboratory. It contained all of my writing for my Honors thesis — I hadn’t backed it up. By May 2002, I had scrambled to reproduce the entire document in time for my thesis defense, and I was thrilled to be granted highest honors by my committee. In a rare turn of events, my laptop was actually recovered by police many months later and returned to me. It’s a great metaphor for how my experience conducting Honors research has been so tenacious — it has informed and inspired my entire scientific career, and is a big reason why I’m part of the faculty at UMaine today.

By conducting independent research under the guidance of UMaine scientists Alan Rosenwasser and Carol Kim during my senior year, I learned valuable lessons about science that never would have been gleaned in a classroom: perseverance in the face of failure, determination in optimizing and troubleshooting protocols, creative thinking, the importance of proper record keeping and data maintenance, and how to work as part of a collaborative team. Beyond that, I learned how to ask a research question, state a hypothesis, design an experiment, and analyze and present data. I read the research literature, I wrote about my findings and I had many calls with tech support to determine why my antibody wasn’t working for immunostaining — a technique I honed later in my career. And this doesn’t even touch upon the actual science I learned: circadian rhythms, neurobiology and molecular biology.

These lessons stuck with me throughout my graduate degree and my postdoctoral work, and inform the training of students in my laboratory today. It is difficult to impress upon students that science is fraught with failure, but once you can get comfortable with that, the failure is incredibly informative. Failure can mean your ideas need tweaking. Failure can mean the hypothesis was incorrect.

Science is a process and we learn more through the rigorous re-evaluation of the process than the final product. For example, an unexpected piece of data in our lab from the past year opened up an entirely new and exciting line of questioning.

An Honors student, Liz Wood, was working with my Ph.D. candidate Magda Blaszkiwicz to investigate our data-driven hypothesis that genetic neural denervation of white adipose tissue would prevent the development of energy-expending brown adipocytes in the depot — that is to say, even with loss of nerves in a fat pad, we predicted brown fat cells that burn calories could not develop. Except we observed the exact opposite — the brown adipocytes were there, but not able to burn calories due to lack of a protein called UCP1 that is known to be stimulated by nerves.

To our knowledge, this is the first time a model organism exhibited morphological, but likely nonfunctional, brown adipocytes. With a new student in the lab, we are now investigating the cellular mechanism for how this occurs.

We learn from failure by objectively listening to the data, and if scientists can stay fluid and flexible while maintaining focus, the outcome, and the scientist, will benefit. Throughout all of this, it is important to sustain the passion and curiosity that brought us to science in the first place. And that is probably the best lesson to come out of my Honors project — science rewards the passionately curious. I hope I am able to instill that same lesson to the students in my laboratory at UMaine.
Journalists often refer to newspapers as “the daily miracle.” Every day in newsrooms across America, dozens of reporters set out in search of news. Some stories are scheduled events, while others are long-planned features. Journalists must also account for breaking news — unplanned incidents that demand immediate attention.

This coverage happens daily at the state and local levels, on national and international scales, in news sections and in features, sports, entertainment, and more. There are pages devoted to opinion columns and editorials. Photojournalists must accompany reporters on many stories to capture art to pair with the text. Back in the newsroom there are copy editors and page designers waiting for stories to come in so they can be read and revised before being placed on the page. Headlines need to be written, photos sized and placed, graphics added, etc.

There are thousands of moving parts that must work in unison for a newspaper to show up on neighborhood doorsteps, laptops and smartphones.

The daily miracle

Journalism students take on full election night coverage

by Josh Roiland
Ten days before the 2016 election, I told my Introduction to Journalism class that we would take on this challenge. We were going to cover the election — the busiest news night, not only of the year, but of the past four years. This assignment was not on the syllabus. It was a lark, but a serious one.

The 29 students, most of whom were in their first semester of college (including the six affiliated with the Honors College), reacted with a mix of excitement, puzzlement and trepidation. Fewer than half the students were journalism majors, and none had reported and written more than one story that semester.

I created the course as a gateway into the journalism major. I intended for the class to be a fun and challenging glimpse into the real world of journalism. There would be some reporting and writing, but much of the course focused on news media literacy and journalism ethics.

Our election endeavor was akin to a music appreciation class being given 10 days’ notice before giving an orchestral performance.

We turned our classroom into a working newsroom, replicating all the structures that one would find at Bangor Daily News or Portland Press Herald. Our editor-in-chief, Elizabeth Theriault, is a first-year student in the Honors College and a journalism major. We also had a managing editor and eight section editors that spanned campus, state, national, features, opinion and editorial, photography, design and copy editing.

Each section had a team of reporters and together they brainstormed story ideas and angles. It was only after the fact that I realized that more than half of the editorial positions were filled by Honors students. Those students helped lead the class through a long and exhaustive day of reporting and writing.

I showed up to vote at the Cross Insurance Center in Bangor at 7 a.m. on election day. As I stood in line, I saw one of our reporters already interviewing a group of voters nearby. After voting, I drove to Orono and went directly to the New Balance Field House. There I ran into Theriault and another Honors student, Maddy Jackson, the campus editor, as they were surveying the events and planning for the long day ahead.

We had class later that morning, and it was more frenetic than usual. A local television station and a university photographer came to document our project. But we had work to do. Editors confirmed assignments with reporters. Reporters did background research. We created an elaborate Google Drive system so journalists could file stories from the field, giving the phalanx of copy editors on campus instant access to their work.

As class adjourned, there was palpable excitement; the students, however, didn’t yet realize exactly how much work was ahead of them.

Each student had an individualized press pass with their name and picture with the word PRESS emblazoned across the top. Laminated with a matching lanyard, these passes, much like our newsroom, not only looked like the real deal, they were the real deal.

Our reporters covered voting on campus, and in Orono and Bangor. We had several reporters at the Republican and Democrat election parties, securing...
interviews with U.S. congressional candidates Bruce Poliquin and Emily Cain.

By early evening, students who were not out in the field showed up to Dunn Hall, home of the Communication and Journalism Department, where we took over the fourth floor. Copy editors stationed themselves in one room. Our page designer and online editor set up shop in my office. A third room streamed election coverage from an overhead projector as writers sat in the dark and worked on their stories. Finally, a fourth room was reserved for a quiet work space. I was there if students had questions or needed suggestions, but otherwise I stood back and cheered them on.

Like nearly every other newsroom in the country, boxes of pizza showed up midway through the night. Much to the chagrin of the reporters out chasing stories, those boxes were emptied of their contents much faster than poll results came in.

The final stories were filed by 1 a.m. Of the 29 students who started out the evening, 20 were still working in Dunn. Every story needed to pass three copy editors and the section editor. Then it needed to be placed on the page and on two of our unique websites: mainecmj.com and mainetelegraph.bangordailynews.com.

Most of the copy editors that evening were not assigned that job, but they stayed to support their classmates, their colleagues, and their community — traits embodied by the Honors College.
Maddy Jackson

THE HONORS College is all about social and cultural awareness. We study, in depth, the roots of our being as a civilization, but that progress of civilization never stopped. We must continue to keep studying how our civilization is evolving. The best way to do this is to read the news.

While creating the UMaine Telegraph, we were deeply involved in the news in a way that forced us to see the way our civilization was moving forward. For some of us, that was not so pleasant, and for many it was really eye-opening. For me, creating the UMaine Telegraph was a challenge.

To get the election coverage right so that it was brutally truthful, as well as respectful to those reading it, with all the chaos that night entailed, was one of the hardest things I've ever had to do. However, it was the most gratifying, as well.

I worked alongside some very intelligent and inspiring individuals. We were contributing to a part of history. We were watching the future of our country unfold and we were connecting an audience to that making of history.

We told the story of our civilization like the brilliant storytellers in our Honors texts. We had a great responsibility to ourselves, each other, our professor, and to future readers. We had to tell the story, and tell it right.

Not coincidentally, all of the Honors students were still there.

There’s a point in the evening when the project momentarily stops being fun. This happened around 2 a.m. The jokes, music and pizza had run out. All that was left was a mountain of stories still in need of editing and paginating. The hallway was quiet. In each of the four rooms students stared at screens and conferred quietly about phrasings and facts.

By 3 a.m., the election had been called for Donald Trump. What was significant, but unsurprising, was how little the results of this historic election changed the mood on the fourth floor. Students had strong feelings for both candidates, but that night they knew they were journalists — and journalists are professionals, not partisans. Plus, there was still work to be done.

Slowly, students started to peel away as duties diminished. Ten students remained at 5 a.m. They wrote headlines, cutlines and subheads. They helped determine placement and where stories would jump in the paper. One Honors student, Remy Segovia, sat alone in a dark classroom creating 50 graphics that showed how states voted in the presidential race. From the hall all that was visible through the classroom windows was a cold blue light from the overhead projector.

Remy had already written the front-page story about Trump’s victory and contributed to a national reaction piece. As the paper’s national editor, he’d overseen a team of reporters and made sure their work came in on time, was properly edited and placed in the paper. He wasn’t assigned to do graphics; he just thought they would look good in the paper.

He finished at 6 a.m., but the newspaper wasn't able to use them. Remy was disappointed, but he understood: journalism is unpredictable and sometimes the best efforts don’t make the paper, this time for frustrating technical reasons.

The sun was up and classes had begun, but three students remained. Then two. Then one: Emily Szotkowski, our design editor who volunteered for the job without ever having used the layout program — Adobe InDesign. Nor had she studied newspaper design. She taught herself both over the weekend. Her creativity and fastidiousness produced a clean, sharply designed paper.

To use journalism parlance once again, we put the paper “to bed” at noon, 29 hours after the reporting began.

A week later, I passed out our printed product: UMaine Telegraph, a 12-page broadsheet with three pages of color. The room was silent for the rustle and crackle of turning pages. There was unanimity in the room: We made this! I reminded them that not only had they created this paper, but they did it with little prior training.

Instead, they coached themselves through the process.

Our websites drew thousands of visitors that first week, and the stacks of papers distributed around campus disappeared almost as soon as they were set down. But perhaps the best compliment about the quality of these students’ work came from a colleague who, upon inspecting the paper said, “It looks like a real paper!” To which I replied, “Because it is a real paper.” The students pulled off a daily miracle.
I believe in signs. And, when someone is given a sign, they should smile and graciously accept their fate. My road to the Honors College started with not one, but three signs in a single day. First, I overheard a colleague talking about a course they were teaching for the Honors College, then an advisee stopped in to get clarification on how Honors courses cover general education requirements and, finally, a student asked me to be on her Honors thesis committee. Later that day when an email came asking if anyone was interested in teaching an Honors preceptorial, I responded right back and said I’d love to.

That was four years ago, and every fall I look forward to teaching HON 111. It is, unequivocally, my favorite.

The first time I taught the class, I didn’t know anything about early Sumerian cultures, ancient religions, or presocratic philosophers. Even now, I’m not sure I know all that much about the topics. But to me, that is the magical part of being an Honors preceptor — I don’t have to be the expert, because I’m not responsible for imparting knowledge. I’m an active and equal participant in creating it.

Together, my students and I think deeply and talk diligently about things that matter. We debate ideas, we wrestle with understanding each other’s varied and diverse points of view, and we ask tricky and sometimes downright difficult questions while all the time respecting each other. We laugh a lot.

We “tweet the Torah;” quote Plato, the Kardashians and former President Obama, all within a single conversation; wonder if there is anything new under the sun; and discuss what human traits would make Pinocchio a real boy. And, most importantly, we learn about ourselves and what it means to be an engaged human being in this fast-paced, ever-changing world. What could be better than that?
Mark Pettegrow (left) and Mark R. Haskell (right)
Two Marks

Distinguished Honors graduates return to campus

by François G. Amar

It is very exciting for us when alumni return to campus to reconnect with Honors and to tell the community about their accomplishments. Starting in 2002, with support from TIAA, the Distinguished Honors Graduate Lectureship was designed to allow distinguished alumni to join us to give a talk related to their field, share their experiences as professionals and discuss the value of a liberal education with students.

In fall 2015 and 2016, those distinguished lecturers were a lawyer and an artist. Despite disparate interests and career paths, Mark Haskell and Mark Pettegrow share much more than their first name. Both were students at UMaine in the late ’70s and early ’80s. Both came from small towns in Maine to find academic and cultural opportunities at the university.

Haskell ’82, a partner in the Washington law firm Cadwalader, Wickersham and Taft, returned in November 2015 to share his expertise in energy regulatory law with a talk, “Federal Regulation of Oil and Natural Gas: 30 Years of Shifting Regulatory Paradigms, Broken Crystal Balls and Conflicting Policy Priorities.” His talk presented fascinating and important history, and explored the challenges of working in this changing legal landscape.

Haskell was a political science major who remembered a number of his professors with fondness: he
provided an appreciation of Professor of History Emeritus Jay Bregman in the 2015 Minerva. He spoke highly of his Honors experience and also talked about the opportunity the program afforded a young man with roots in French Island and Dixmont.

Haskell’s outstanding academic career at UMaine earned him a Truman Scholarship. He was inducted into Senior Skulls and Phi Beta Kappa. He took his law degree at Harvard in 1985 and has practiced law since that time.

During his visit, Haskell and his wife Katherine — also a lawyer — met with students in the Pre-law Program to share experiences of law school and the legal profession.

This year, Honors was pleased to announce that Douglas Newton ’18 was the first recipient of the Mark R. Haskell ’82 and Katherine Zeitlin Haskell Scholarship established for Honors students in political science.

In September 2016, Mark Pettegrow ’81 came back to campus as this year’s Distinguished Honors Graduate Lecturer. Pettegrow’s talk, “Fairing the Edge: In Search of Eloquent Form” traced his career as an artist and his aesthetic sensibility.

Pettegrow brought several of his sculptures to campus for a temporary installation in the President’s House. The Honors College hosted a public exhibit of the work followed by a reception; the next day the same location was used for Pettegrow’s guest appearance in HON 180: A Cultural Odyssey.

Pettegrow spoke about growing up in Machiasport and the opportunities he found at UMaine as student of art. He also discussed how Honors opened windows on the world.

His talk explored some key moments in his artistic studies: his Honors thesis project, supervised by Deborah Demoulpied; graduate school at the University of Pennsylvania; and finding his personal aesthetic and artistic voice.

Pettegrow said he also dealt with the tensions between producing commissioned art versus creating art that expresses the deepest personal interest in form and expression.

As a sculptor, Pettegrow emphasized the tactile as well as visual elements in his approach to making art.

Pettegrow retains strong connections to Maine, with a studio in Kennebunkport, and is making plans to interact further with UMaine students and faculty.
JAYMI THIBAULT, a political science major from Lisbon, Maine says “Bangor wants to know how to communicate with you.” Effective communication with residents is crucial for many municipal governments, including Bangor’s. Yet with many social media and web-based communications, as well as more traditional methods, it can often be difficult to know what is working. Finding out is the research focus of Thibault’s Honors thesis, advised by Rob Glover, a professor in the Honors College and Political Science Department.

Thibault worked with Bangor to study its ongoing outreach efforts and assess how residents access information from the city. She developed a survey of more than 500 Bangor residents and conducted focus groups.

Thibault found Bangor is successfully reaching its population through a mix of communication platforms. Bangor City Manager Cathy Conlow said Thibault’s research adds value to their decision-making, an outcome Thibault finds rewarding.

“It is an incredibly fulfilling experience to have completed a year-long study with findings that will actually be of value to the city of Bangor in crafting policy at the local level,” Thibault says.

Glover, whose research focuses on community engagement, says Thibault’s project is “a perfect example of the ways that the talented students within the Honors College are utilizing their intellect to collaborate with and positively impact local communities.”

“Projects such as these produce positive dividends for our community partners that extend well beyond their initial creation, and leave students well-poised to transform and shape their society upon graduation,” Glover says.

Thibault is one of UMaine’s inaugural John M. Nickerson Scholars. The merit-based scholarship is awarded to juniors and seniors majoring in political science who are Maine residents, and who have demonstrated scholarship of the highest order, have the greatest potential to serve the public.
Through the years

Class of ’17

CONNER LAJOIE
Biochemistry

AS A biochemistry major and pre-med student, I have taken many large lectures that teach a linear thinking style. However, in the Honors College, I am recognized as an individual and encouraged to contribute my own interpretations to the material.

The Honors College has taught me to approach problems creatively and take intellectual risks. Honors has a diverse group of students and faculty with different interests who have helped me think more critically about important topics — whether they be renowned books or current events. The Honors curriculum has afforded me opportunities I would not have had otherwise and has uniquely prepared me for my career by shaping me as a well-rounded scientist.

Class of ’18

MARIE-FRANCE GEORGES
Finance and Marketing; International Business

BEING A member of the Honors College means that I belong to an active community of students interested in creativity, research, interdisciplinarity and making the most of their baccalaureate experience.

The Honors curriculum has helped me understand the world is culturally diverse and that technology has made unavoidable a daily contact with that diversity. The UMaine Honors College has remained faithful to the idea that a true student is not one who passes examinations, obtains a job and closes all books. Being a student means studying life and not simply reading the few books required by the program of study; it involves looking at everything throughout life, not a few things in a given period. I have been fortunate to have preceptors that appreciate all opinions equally and encourage broadening our horizons. Joining the Honors College was indeed the best choice.
Four students, four stages of the Honors journey in their own words

Class of ’19

JACK BROWN
Psychology; Sociology

THE GOALS of college courses are all pretty much the same: learn the material. Many of the college courses taken throughout my undergraduate career have been formulaic — read the textbook, attend a lecture, do the homework and study to do well.

The Honors College departs from this well-beaten path. The goal of the Civilizations sequence is not to have students mindlessly memorize and recite lines of text, but rather to encourage empirically driven free-thinking and questioning; critical and objective observation, not just of ancient texts, but also the world around them; and the development of a transcultural perspective.

In addition to the value of its courses, the Honors College provides a platform for students to engage with both their university and community, and creates and facilitates opportunities of every sort. Through the Honors College, the professors and the close-knit student group, I have been fortunate enough to become involved in the Student Advisory Board, Student Senate, the Sophomore Owls and graduate-level psychological research.

Class of ’20

MAURA PHILIPPONE
Communication Sciences and Disorders

I BELIEVE that Honors is a virtuous dedication to the pursuit of knowledge. Through the Honors College at UMaine, I have accomplished more than I ever thought possible in my freshman year. Not only have my intellectual horizons been broadened by the incredible lecturers, but I have also created an academic mentoring program in the Honors College. It has been a truly enriching experience, and such an opportunity would not have been presented to me had I chosen not to pursue an Honors education. I am excited to learn even more as I continue my studies in the Honors College.
AS a history major, I have had little experience studying animals or the environment. The "animals in the city" course at Tembusu expanded the applications of animal sciences and zoology to the humanities. My travel partner, Donncha Coyle and I were lucky to meet and hear lectures from South East Asia’s leaders on animal conservation and ecology: one was by the founder of Animals Asia, an animal rescue nonprofit; another was by one of the world’s leading scholars on the famous naturalist Alfred Russel Wallace (a contemporary of Darwin).

The breadth of our curriculum was wide, while still getting the specificity and intense detail the Honors tutorial is known for. Our time was well spent living and learning with students from around the world, broadening our perspective, and learning about the environment of Southeast Asia and beyond.

The bond between Tembusu College at the National University of Singapore and UMaine’s Honors College is stronger than ever.
SARAH ELIZABETH DEAN ’17  
International Affairs  
I CHOSE to go to Bulgaria because I wanted to break completely out of my comfort zone and learn to be more comfortable with confronting challenges. One of the most important things I learned from the Honors College was to think outside of the box. With my decision to travel to Eastern Europe, I was determined to go to a place where they not only spoke a different language, but used a different alphabet.

With the help of the Stanhope Fellowship, I traveled Europe for the first time and attended an international school, where I met people from places as diverse as Zimbabwe, Russia and Iceland. It was incredible to live in a country as old as some of the first texts we read in the *Civilizations* sequence, and to see with my own eyes how ancient cultures have shaped the Balkan region, in particular.

The Honors College taught me to think deeply about the things we see and experience, and to use those thoughts to construct a well-informed and open-minded perspective on the world. By traveling abroad, I have been able to build on the knowledge I’ve gained from the Honors program, which has really been a valuable and life-changing opportunity.

ERIC LEVASSEUR ’18  
Biology  
STUDYING ABROAD at the University of East Anglia in Norwich, England, I thoroughly enjoyed my experience and will hold on to those memories for years to come. It helped shape my Honors experience by allowing me to take the knowledge gained from the *Civilizations* sequence and apply it at another institution. A lot of my classes had similar structures to the Honors program, allowing me to work in a similar environment.

Experiencing another culture for five months gave me a whole new perspective on academics and different lifestyles, and really gave me a new sense of the world. In my time abroad, I also had the chance to travel and see so many historical monuments and sights. I visited France, Germany, Austria and different places in England. I’m extremely thankful for my semester abroad and glad it could complement my Honors experience.
THE UNIVERSITY of Maine’s 2016 valedictorian and salutatorian were Honors students. Valedictorian Nicholas Fried of Millerstown, Pennsylvania majored in animal and veterinary sciences, with a minor in chemistry. Salutatorian Connor Smart of Lincoln, Maine double majored in accounting and finance, and was the Outstanding Graduating Student in the Maine Business School.

Fried is an M.D./Ph.D. student at the Louisiana State University Health Sciences Center in New Orleans. He plans to become a primary care physician in a medically underserved community and conduct research in zoonotic epidemiology. For his Honors thesis, Fried collaborated with veterinarian and associate professor James Weber to determine the genetic relatedness of *Haemonchus contortus*, a parasitic worm of small ruminants, found in domestic sheep and wild white-tailed deer in Maine. In 2013–14, Fried spent two summers as a biological field technician stationed in northeastern Montana. He also participated in the Michigan State University College of Osteopathic Medicine’s Summer Undergraduate Physician-scientist-training Education & Research (SUPER) program. On campus, Fried was a peer tutor, and a member of the UMaine Health Professions Club and Operation H.E.A.R.T.S. Fried also helped found and served as vice president of EWE-Maine Icelandics sheep club.

Smart is pursuing a career as a certified public accountant, working in the tax services department of Baker Newman Noyes in Portland, Maine. The title of his Honors thesis, advised by Matthew Skaves, was “A Conceptual Value Function to Explain the Benefits Derived from Users of Free-to-Play Video Games.” In the spring 2015 semester, Smart interned with Edwards, Faust & Smith in Bangor, Maine. Smart’s essay, *Using Utilitarian Theory to Improve Our Food Systems, Our Planet and Ourselves*, won first place in the prestigious 2016 John M. Rezendes Ethics Essay competition. On campus, he was a peer tutor and a student ambassador in the Maine Business School. Smart served as president of the UMaine chapter of the Institute of Management Accountants, and was a member of UMaine’s Black Bear Men’s Chorus.
This past fall, I went to my 10-year reunion with my wife and son. Being back on campus reminded me of how much has happened over the past decade and how I can thank my Honors education for a lot of it. Honors allowed me to explore my interests and expand my thinking beyond a traditional academic degree.

I graduated with a degree in microbiology and did what many of my classmates did — moved to Boston and got a job as a research technician. I worked at Boston College for three years studying *Toxoplasma gondii*, an intracellular parasite. During those three years, I began thinking of where I wanted to take my career and I kept reflecting back on my experiences at UMaine and in Honors.

Honors gave me the opportunity to reflect on college and the role of higher education. I got involved with UMaine’s New Student Orientation, and Honors trips to NCHC and Washington, D.C. Being close to the administration of a university started me thinking about a potential career in educational administration.

After Boston College, I could have moved to another technician position or graduate school in the sciences. Or I could make a leap and follow my interests that were fostered at UMaine and in Honors.

I chose to attend graduate school at Boston University and earned my degree in higher education administration.

The transition was frightening at times, wondering if I had made the correct decision. Luckily by this time, I had met my future wife, who was a major factor in me continuing along this chosen path.

After graduating, I learned how my technical background could serve me in this new career. I earned a position at Northeastern as an enrollment counselor for the College of Professional Studies, with a focus on recruiting pharmaceutical regulatory affairs students. They wanted someone who could speak their technical language. I fit the bill.

I spent four years at Northeastern, gaining new skills and helping better their professional health and science programs. At the same time, my passion for UMaine hadn’t subsided and I formed the Black Bears of Boston, an alumni interest group, with several other passionate grads in the area.

After Northeastern, I spent a brief stint at BU managing their mechanical engineering programs until a new opportunity presented itself. One I could not pass up.

The biology department at Boston College was searching for a new assistant director for undergraduate programs — the same department I worked for a decade ago as a technician. I now combine my undergraduate education with my career in higher education administration. I wouldn’t have been able to do this had the Honors College not allowed me to think beyond the traditional and find my own path.
CUGR Research Awards

SUMMER 2016 FELLOWSHIPS
Antonia Carroll (Chemistry)
Chase Gagne (Wildlife Ecology)

2015–16 ACADEMIC YEAR FELLOWSHIPS
Shania Evangelista (Chemical Engineering)
Grace Gould (Chemistry)
Morgan Gustin (Animal and Veterinary Science)
Katherine Lees (Psychology)
Sarah Mullis (Sociology)
Elias Pasquerillo (Chemistry)

2016-17 ACADEMIC YEAR FELLOWSHIPS
Abby Bellefleur (Communications and Journalism)
Catherine Gottwald (English)
Emma Barnes (English)
Hannah Harling Stefl (Human Nutrition)
Mackenzie Leigh Tefft (Psychology)

CUGR STUDENT TRAVEL GRANTS
Jesse Clark (Political Science)
Joseph Garcia (Engineering Physics)
Anthony Pawlicki (Wildlife Ecology)
Berkay Payal (Electrical and Computer Engineering)
Aeleah M. Granger (Psychology)
Kaelina Perron (Psychology)
Calla Williams (Psychology)

INBRE Research Awards
The 2016–17 IDeA Network of Biomedical Research Excellence (INBRE) research fellowships are supported by a grant from the NIH and are awarded for projects in biomedical research.

SUMMER 2016 FELLOWSHIPS
Emily Illingworth (Biochemistry)
Robert Soohey (Microbiology)
Ashley Soucy (Biochemistry)

2016-17 HONORS THESIS FELLOWSHIPS
Jordan Hayes (Microbiology)
Emily Illingworth (Biochemistry)
Conner Lajoie (Biochemistry)
Erica Sewell (Microbiology)
Robert Soohey (Microbiology)
Stephen Soohey (Molecular and Cellular Biology)

2016–17 JUNIOR YEAR FELLOWSHIPS
Ashley Soucy (Biochemistry)
Jackson Foley (Biochemistry)

Charlie Slavin
Research Fund Awards

FALL 2016
Jaymi Thibault (Political Science)
Sarah Mullis (Sociology)
Alexa Grissing (Animal and Veterinary Sciences)
Shireen Luick (Ecology and Environmental Science)
Abby Bellefleur (Mass Communication)
Erica Sewell (Microbiology)
Derrek Schrader (English)
CAROLYN E. REED PRE-MEDICAL THESIS FELLOWSHIP
Kathryn Asalone (Zoology)
Angela Silke (Biology)

RENDLE A. JONES ’65 AND PATRICIA K. JONES ’65 HONORS THESIS FELLOWSHIP
Leila Wojtowski Barbeau (Ecology and Environmental Science)

2016–17 FREDERICK RADKE UNDERGRADUATE RESEARCH FELLOWSHIP
Sara Smith (Microbiology)

Special recognition
The Honors College would like to recognize the following Honors students for their outstanding achievements during the 2015–16 academic year.

2016 VALEDICTORIAN
Nicholas Fried (Animal and Veterinary Science)

2016 SALUTATORIAN
Connor Smart (Accounting; Finance)

OUTSTANDING STUDENT, COLLEGE OF NATURAL SCIENCES, FORESTRY, AND AGRICULTURE
Elizabeth Wood ’16 (Biology; Pre-Medical)

OUTSTANDING STUDENT, COLLEGE OF LIBERAL ARTS AND SCIENCES
Hilary Warner-Evans ’16 (Anthropology)

OUTSTANDING STUDENT, COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
Jade McGuire ’16 (Elementary Education)

OUTSTANDING STUDENT, MAINE BUSINESS SCHOOL
Connor Smart ’16 (Accounting; Finance)

DOROTHY CLARKE WILSON PEACE WRITING PRIZE
Antonia Carroll ’17 (International Affairs; Chemistry)

THE JOHN M. REZENDES ANNUAL ETHICS ESSAY COMPETITION
1st Place: Connor Smart ’16 (Accounting; Finance), Using Utilitarian Theory To Improve Our Food Systems, Our Planet, and Ourselves
Runner-Up: Antonia Carroll ’17 (International Affairs; Chemistry), White Normativity as a Bioethical Dilemma

STEINMETZ BOOK AWARD
Stanley Small ’19 (Computer Science)
Kimberly Crowley ’19 (English)
Cody Stevens ’19 (Civil Engineering)
Chantal Bussiere ’19 (Ecology and Environmental Science)

CLAS SENIOR RECOGNITION AWARDS
Elizabeth Grant (Chemistry)
Alan Bennett (Communications and Journalism)
Taylor Cunningham (English)
Sophia Lataille (Modern Languages and Classics)
Ciaran Coyle (Philosophy)
Mitchell Benoit (Physics and Astronomy)
Ilana Silver (Psychology)

CLAS JAMES S. STEVENS OUTSTANDING JUNIOR AWARDS
Abby Bellefleur (Communications and Journalism)
Heather Cross (Psychology; Sociology)
Jill Hein (International Affairs)
Maryam Kashkooli (Mathematics and Statistics)
Ruth Leopold (New Media)
Jaymi Thibault (Political Science)

HONORS COLLEGE SERVICE AWARD
Abigail Feuka ’16 (Wildlife Ecology)

Scholarships and Fellowships

ROBERT B. THOMPSON MEMORIAL THESIS FELLOWSHIP
Natalie Goding ’17 (Political Science)
Jenya Damsky ’18 (Studio Art)

ASPIRATIONS SCHOLARSHIP
Callie Greco ’18 (Biology)
STANHOPE STUDY ABROAD
Sarah Elizabeth Dean ’17 (International Affairs)

MARK R. HASKELL AND KATHERINE Z. HASKELL SCHOLARSHIP
Douglas Newton ’19 (Political Science)

PROFESSOR MELVIN GERSHMAN SCHOLARSHIP
Isaiah Mansour ’17 (Marine Science)

DR. MELAINE GERSHMAN-TEWKSBURY ’77 SCHOLARSHIP
Meghan Frisard ’18 (Zoology)

REZENDES GLOBAL SERVICES SCHOLARSHIP
Jaime Roy ’17 (Communication Sciences and Disorders)

REZENDES CONFERENCE ON WORLD AFFAIRS AWARD
Jill Hein ’17 (International Affairs)

HELEN LOUISE STINCHFIELD ’18 MEMORIAL SCHOLARSHIP
Emily Illingworth ’17 (Microbiology)

DR. JOHN MITCHELL NICKERSON ’59 MEMORIAL SCHOLARSHIP
Allyson Eslin ’17 (Economics; Political Science; Psychology)
Jaymi Thibault ’17 (Political Science)

2015 National Collegiate Honors Council Conference — Chicago, IL

PRESENTATIONS:
How is Science Effectively Incorporated into a Liberal Education?
Emily Illingworth

Towards Understanding the Host Range of Ollie, a Novel A3 Mycobacteriophage
Emily Illingworth

Is Honors the Key for Nurses Who are Seeking to Make No Small Plans?
Emma Corbett, Josie Champagne

Fostering Community and Communication: Honors Student Advisory Board
Abby Bellefleur, Maude Meeker, James Robe, Kathryn Asalone, Aliya Uteuova

Small Change and Big Shifts: Agency, Group Dynamics, and Organization Development in the Honors Classroom
Dr. Edie Pratt Elwood, Abby Bellefleur, Kathryn Asalone

In Fatter News: Identifying and Evaluating Framing of Obesity and Obesity-Related News Coverage in Maine
Alan Bennett

A Trivial Pursuit? Creative Alternatives to the Paper-Writing Process
Dr. Josh Roiland, Gwen Walsh

A Comparative Study of the Hemocyanins of the Giant Keyhole Limpet (Megathura crenulata) and the Red Abalone (Haliotis rufescens)
Isaiah Mansour

Making Big Plans: Building a Sustainable Food Systems Collaborative Through Courses, Research and Community Engagement
Dr. Melissa Ladenheim, Dr. Mark Haggerty, Dr. François Amar, Alan Bennett, Danielle Walczak

Why Honors Programs Need Medieval Studies
Dr. Sarah Harlan-Haughey

Striving and Thriving in Honors: Professional Incentives for Honors Deans and Directors
Dr. François Amar

Master Class Showcase
Isaiah Mansour

2016 National Collegiate Honors Council Conference — Seattle, WA

PRESENTATIONS:
The Transdisciplinary Benefits of Laboratory Science Based Research Courses in an Honors Curriculum
Matthew Sullivan, Jasmine Waite, Dr. Melissa Ladenheim
Going to the Gap for More Than Genes
Matthew Sullivan, Jasmine Waite

Muslim and Arab Prejudice: Understanding Our Emotions Across Cultures
Aeleah Granger, Dr. Jordan LaBouff

Opportunities and Challenges: Integrating Honors College Student Leadership With Student Government
Brady Davis, Christopher Gilbert

Community Food Hub: A Business Model to Fight Hunger
Brady Davis, Afton Hupper

Expanding Your Borders to Know Yourself: Synergizing Honors and Study Abroad
Cleo Barker, Courtney Jurson, Dr. Jordan LaBouff, Dr. Rob Glover

Know Yourself: Exploring Fear, Failure, and Intellectual Risk-Taking Through the Creative Process
Samantha Jones, MFA, Dr. Melissa Ladenheim

Political Stigma and Student Success in Honors
Dr. Jordan LaBouff

Honors and the Cult of Personality: Exploring the Ethics of Undergraduate Mentorship and Research
Dr. Rob Glover, Ed Medeiros, Amy Lyons, Dr. Josh Roiland

Expand the Journey: Marketing the Honors College to International Students
Aliya Uteuova

Emotion in Stanzas: A Poetry Presentation (Master Class)
Kimberly Crowley

Losing Our Breath: Articulating a Hermeneutic Pedagogy in an Honors Seminar
Dr. Nico Jenkins, Donncha Coyle, Tyler Hicks

Diversity as an Empowerment Tool: Views from a Puerto Rican and a Colombian at the University of Maine
Dr. Stefano Tijerina, Emily Duran-Frontera

Honors College Scholar-Athletes 2015–16

Nicole Arnold (Political Science)
Delaney Baxendale (International Affairs)
Sean Driscoll (Zoology)
Sarah Gisler (Marine Science)
John Kay (Finance)
Beatrix Lavigneur (Athletic Training)
Daniel Lesko (Bioengineering)
Carolyn Menges (KPE – Exercise Science)
Lauren Nightingale (Bioengineering)
Sarah Coye (KPE – Exercise Science)
Faythe Goins (Marine Science)
Kayla Greenawalt (Ecology and Environmental Sciences; Management)
Isaac Mazzeo (Sustainable Agriculture)
Mariya Pominova (Economics)
Amanda Shuman (Marine Science)
Eleanora Hubbell (Physics)
Samantha Brown (Bioengineering)
Alexis Dietrich (Civil Engineering)
Steven Longfellow (Mechanical Engineering)
Berkay Payal (Electrical Engineering; Computer Engineering)
Justin Courtney (Management)
John Carlucci (Marine Science)
Makaila Kowalsky (Marine Science; Ecology and Environmental Sciences)
Hannah Stefl (Food Science and Human Nutrition)
Benjamin Hebert (Engineering Physics)
Noelle Leon-Palmer (Biology)
Amber Murray (Food Science and Human Nutrition)
Elizabeth Wood (Biology)
Addison LaBonte (Mathematics)
Two Distinguished Honors College alumni were honored recently by the University of Maine Alumni Association for their contributions to the university and to their professions.

Charles Stanhope, '71 of Southwest Harbor, Maine, received a 2016 Black Bear Award in recognition of his “outstanding service to increase or enhance public awareness of the University.” Stanhope co-chaired the UMaine 150th anniversary celebrations and spearheaded efforts to interview alumni about the impact of their UMaine education on their personal success, and the institution’s importance to our state. He was the 2014 Margaret Chase Smith Distinguished Policy Fellow and chairs the Maine Arts Commission. Stanhope is a generous supporter of the Honors College where in 2008, he established the Charles V. Stanhope ’71 Honors College Study Abroad Fellowship. He remains actively engaged as a member of the Honors College Board of Advocates and mentor to the Stanhope Fellowship recipients. Stanhope’s membership in the President’s Club, Stillwater Society and Charles F. Allen Society reflect his generosity to UMaine and Honors.

David Bronson, ’69, grew up in southern Maine and now resides in Moreland Hills, Ohio, received the 2016 Alumni Career Award for outstanding lifetime achievement in the field of medicine. The Career Award is the most prestigious recognition given by the University of Maine Alumni Association. From his earliest professional experiences at the University of Vermont Medical Center Hospital, to his more recent ones as President and CEO of the Cleveland Clinic Community Hospitals and President of the American College of Physicians, Bronson has demonstrated exceptional skill, professionalism, leadership, character, concern for his patients, and dedication to his profession and community. His many accomplishments have been recognized and acknowledged by both his peers in the field of medicine as well as by his patients and his community. Bronson has also been the recipient of the Phillips Medal for Public Service (2012) and the Cleveland Father of the Year “Living Legend Award” from the Center for Families and Children (2011), among others.
Insights

2016–17 HONORS ASSOCIATES

THE ASSOCIATE office in Estabrooke is home to the very different perspectives of Noelle Leon-Palmer ’16, a Canadian-born soccer captain driven to work in the medical sciences and Sean Cox ’15, a Maine-raised “band geek” with aspirations to teach environmental history. Together, with their diversity of interests and skills, they are able to support Honors students from a wide range of backgrounds and majors.

Leon-Palmer graduated with a degree in biology, and a minor in chemistry. From co-teaching the introduction to thesis research class to educating prospective students on the benefits of Honors, this position has allowed Leon-Palmer to stay in Maine and give back to the Honors College. After she completes her term as an Associate, Leon-Palmer plans on pursuing a masters in Bioethics and hopes to eventually become a physician.

Cox graduated with a degree in history, with minors in anthropology and music. After working on Cadillac Mountain with Friends of Acadia for a summer, temporarily teaching K–8 music classes, and spending a winter with the admissions department, Cox found his way back to Honors. After his time as an Associate, Cox hopes to enroll in a Ph.D. program for American environmental history.

The Associates work together to assist prospective students, advise current Honors scholars, and support faculty members. They fill unique positions as liaisons between the student body and college administrators, helping one to better communicate with the other to achieve a holistic liberal arts experience within the diverse Honors community.

REZENDES ETHICS LECTURE

ON APRIL 20, 2016, the Honors College had the pleasure of hosting Christine Mitchell, director of the Harvard Medical School Center for Bioethics as the 2016 John M. Rezendes Visiting Scholar in Ethics. Mitchell spoke on Real World Questions in Clinical Ethics, explaining how citizen and patient boards can help improve hospital practice and raise awareness of patient and family concerns that are not obvious to health care practitioners. Trained as a nurse, Mitchell founded the ethics program at Boston Children’s Hospital over thirty years ago and is heavily involved in teaching clinical ethics and in training students, residents and fellows. The visit and talk represent one part of the John M. Rezendes Ethics Initiative created over 15 years ago by Dennis Rezendes ’57 and his wife Beau in honor of his father. Dennis passed away in 2015 but Beau was in attendance at the lecture along with Dennis’ daughter, Cheryl. At the lecture, philosophy professor Jessica Miller delivered a moving remembrance of Dennis and his impact on the world and UMaine. She also announced the winner of the John M. Rezendes Ethics Essay competition, Connor Smart ’16 for his essay, Using Utilitarian Theory to Improve Our Food System, Our Planet, and Ourselves.

FACULTY AWARDS

AT THE 2016 Welcome Weekend Day of Service (August 27), Associate Dean Melissa Ladenheim was presented the 2015-2016 Dean Lucy Award, which is given to "a faculty or staff member who has gone out of her way in service to the University of Maine community and surrounding area."
## 2016 Honors index

77 graduates from the 2016 Honors class at a glance

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THESIS: Diversity of Small RNA Expression During Zebrafish Caudal Fin Regeneration
ADVISORS: Keith Hutchison; Benjamin King
THESIS DESCRIPTION: This thesis examined the differential expression of small RNA sequences that play a regulatory role in the regeneration mechanisms of the zebrafish caudal fin following amputation.

Emily Anderson
Ecology and Environmental Sciences
Middlebury, Maine
Middlebury Union High School
THESIS: Environmental Features Influencing Myotis Bat Presence in the Penobscot Experimental Forest
ADVISOR: Shawn Fraver
THESIS DESCRIPTION: Several species in the Myotis bat genus are state and federally listed as threatened. This thesis explored the influence of Myotis bat presence in a particular forest location within the active Maine forest industry, providing a baseline for future regional studies.

Campbell Belisle Haley
Biochemistry; Spanish
Yarmouth, Maine
Yarmouth High School
THESIS: Characterization of Transcriptional Control Elements in Cluster E Mycobacteriophage Ukulele
ADVISOR: Sally Molloy
THESIS DESCRIPTION: Mycobacteriophage are viruses that infect mycobacterium, and are of interest because of their ability to teach us about viral diversity and evolution. This thesis worked to identify and characterize the DNA sequence elements involved in controlling transcription of mycobacteriophage Ukulele.

Lucy Algeo
Biology
Raymond, Maine
Windham High School
THESIS: The Role of Neutrophil Cytosolic Factor 1 in the Innate Immune Response to Influenza A Virus
ADVISOR: Carol Kim
THESIS DESCRIPTION: This thesis explored the immune response to Influenza A virus (IAV) in zebrafish by examining the neutrophil cytosolic factor 1 (ncf1). The research concluded that ncf1 is critical in the survival of IAV-infected zebrafish and plays a vital role in the innate immune response to IAV infection.

Alan Bennett
Journalism
Gray, Maine
Gray-New Gloucester High School
THESIS: Extra! Extra! This Just Thin: Identifying and Evaluating Framing of Obesity-Related News Coverage in Maine
ADVISOR: Eric Peterson
THESIS DESCRIPTION: Within a neoliberal context, this thesis examined the framing of obesity through Maine print news media to explore the current discourse surrounding obesity, with specific relevance to where blame and responsibility are placed for the condition and how this framing works to perpetuate cultural values of national identity and citizenship.
Mitchell Benoit
Physics
Hampton Falls, New Hampshire
St. Thomas Aquinas High School
THESIS: Stochastic Modeling of U.S. Equities
ADVISOR: Dean Astumian
THESIS DESCRIPTION: A non-linear Langevin equation was employed to approximate the behavior of the S&P 500 Index intraday price movements. Price changes were assumed to be a function of supply/demand offsets that resulted from new information. The equation focused on the sensitivity of the market to supply/demand offsets; the liquidity of the market; the memory effects of recent returns; and the memory effects of the volatility of recent returns.

Alexis Bowman
Microbiology
Waterville, Maine
Waterville Senior High School
THESIS: Characterizing the Neutrophil Response to Influenza A Virus Infection
ADVISOR: Carol Kim
THESIS DESCRIPTION: This thesis aims to clarify the role that neutrophils play in response to IAV infection and to characterize the neutrophil response to IAV infections by utilizing the zebrafish model organism.

Taylor Brackett
Spanish
Auburn, Maine
Edward Little High School
THESIS: La Representación de La Violencia en México Contemporáneo
ADVISOR: Carlos Villacorta
THESIS DESCRIPTION: This thesis analyzes the depiction of violence in contemporary Mexican film, literature, and popular music in an attempt to better understand the rising problem of violence within the country.

Victoria Calabrese
Elementary Education
Prescott, Arizona
Patagonia Union High School
THESIS: The Effects of Emotional and Instrumental Support on Students’ Mathematical Attitudes
ADVISOR: Eric Pandiscio
THESIS DESCRIPTION: This study tests to see if a correlation exists between students’ attitudes towards mathematics and teacher pedagogy through emotional and instrumental support. The overall findings of this study illustrated that emotional and instrumental support did affect students’ overall attitudes with mathematics.

Ashley Brackett
History; French
Auburn, Maine
Edward Little High School
THESIS: Reconstructed
ADVISOR: David Kress
THESIS DESCRIPTION: This thesis takes the opposite approach to the typical cancer narrative. Instead of witnessing the diagnosis and subsequent decline of a character, the reader is presented with a woman seeking to rebuild herself. She begins her journey fearing that her physical changes have altered her identity. She feels distanced from everyday life and the things she once enjoyed. As she begins to heal from this traumatic period, she must face the reality of the situation and redefine what it means to be herself.

Joseph Clarr
Nursing
Orono, Maine
Orono High School
THESIS: An Analysis of the Services Offered to Cancer Patients in the State of Maine
ADVISOR: Mary Shea
THESIS DESCRIPTION: This thesis compared the different cancer support centers and their responsiveness to the needs of the people affected by the disease. The research clarified which services the patients found the most beneficial.
**Jesse Clark**
Political Science
Calais, Maine
Calais High School

**THESIS:** Determining an Expected House Majority Using Pattern Analysis

**ADVISOR:** Richard Powell

**THESIS DESCRIPTION:** This thesis seeks to understand the impact of the current redistricting methods on the partisan makeup of the U.S. House of Representatives. Advanced geographic information system (GIS) software and demographic voting trends were used to compare current election results to predicted results in simulated districts, uncovering the natural partisanship of the U.S. House of Representatives.

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**Rachel Claussen**
Kinesiology and Physical Education: Exercise Science
Granby, Connecticut
Granby Memorial High School

**THESIS:** Relationship Between Health and GPA When Comparing Traditional Undergraduate Students at the University of Maine in Orono

**ADVISOR:** Christopher Nightingale

**THESIS DESCRIPTION:** By conducting surveys of UMaine traditional undergraduate students, this thesis explores the primary relationship between health and academic performance.

---

**Andrew Closson**
Bioengineering
Hampden, Maine
Hampden Academy

**THESIS:** Citrate Ions’ Effect on Gold Nanoparticle Growth Kinetics

**ADVISOR:** Michael Mason

**THESIS DESCRIPTION:** Gold can be grown into nanometer sized spheres. This thesis explores how the growth of these extremely small spheres is affected by hardness or softness of one of the chemicals used to create them.

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**Alexandra Courtney**
Human Nutrition and Dietetics
Saco, Maine
Thornton Academy

**THESIS:** Nutrition Education Training for 3rd–5th Grade Educators

**ADVISOR:** Kate Yerxa

**THESIS DESCRIPTION:** This thesis surveys elementary school teachers to assess how nutrition education resources already available through state-agency and non-profit nutrition education providers are being utilized by teachers to help them provide nutrition education with sustainable programming. The goal is to assess whether or not teachers should be provided with more support for teaching nutrition education in their classrooms.

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**Ciarán Coyle**
Philosophy; History
Lebanon, New Hampshire
Lebanon High School

**THESIS:** Reexamining the Political Ontology of Class

**ADVISOR:** Kirsten Jacobson

**THESIS DESCRIPTION:** This thesis explores the concept of class in Marxist theory to try and understand what constitutes a class in Marxism and what implications this class ontology has for political theory with regard to the idea of class-struggle and revolution.

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**Audrey Cross**
Ecology and Environmental Science
Brunswick, Maine
Brunswick High School

**THESIS:** The Real Food Challenge and Student Democratic Engagement

**ADVISOR:** Mark Haggerty

**THESIS DESCRIPTION:** To focus on the process of student organizing, this thesis introduces a framework called student democratic engagement (SDE) — both in the context of the Real Food Challenge UMaine group and between the University of Maine and Real Food Challenge UMaine.
Taylor Cunningham

English; Anthropology
Beverly, Massachusetts
Bishop Fenwick High School

THESIS: Persuading the Secret: In Search of Maine’s Hermits

ADVISOR: Sarah Harlan-Haughey

THESIS DESCRIPTION: This thesis is a creative collection of nonfiction and fiction pieces, which survey tales of Maine’s most famously idiosyncratic hermit characters. While moving between two realms — the imaginary and the real — it explores how people in Maine understand the lives of these reclusive personalities and what their stories can tell us about local identities, aspirations, and anxieties.

Marley Dewey

Chemical Engineering
Falmouth, Maine
Falmouth High School

THESIS: Nanocellulose Conduits for Peripheral Nerve Regeneration

ADVISOR: David Neivandt

THESIS DESCRIPTION: This thesis explores cellulose, the most abundant and naturally occurring polymer and how it’s production on the nanoscale could be used as new materials for conduits, which aid in the regeneration of peripheral nerves. Designs were produced at the University of Maine while testing was performed by colleagues at Harvard University.

Erin Eldridge

Mechanical Engineering
Brunswick, Maine
Brunswick High School

THESIS: Analysis of Flow of Compressed Natural Gas through a Fuel Injector

ADVISOR: Michael Peterson

THESIS DESCRIPTION: This thesis describes the collection and comparison of mass flow rate data of Compressed Natural Gas (CNG) through a fuel injector using three methods — a computer model, a calculation, and an experiment solution. The three methods explore how the inlet pressure to the injector affects the mass flow rate of CNG.

Abigail Feuka

Wildlife Ecology
Perry, Michigan
Perry High School

THESIS: Effects of Light Pollution on Habitat Selection in Post-Metamorphic Wood Frogs and Unisexual Blue-Spotted Salamanders

ADVISORS: Mac Hunter Jr.; Aram Calhoun

THESIS DESCRIPTION: This thesis determined the preferred habitat preference of blue spotted salamanders and juvenile wood frogs by using choice experiments that compared different combinations of dark and illuminated coniferous or deciduous litter.

James Dumas

Political Science
Lewiston, Maine
Lewiston High School

THESIS: The Absence of Activism: An Explanation of the Student Debt Movement

ADVISOR: Mark Brewer

THESIS DESCRIPTION: This thesis aims to explain the absence of a significant protest movement regarding the issue of student debt among American college students, given that the issue of student debt affects much more of this population than any other issue on college and university campuses.

Claire Fouchereaux

History; French
Yarmouth, Maine
Yarmouth High School


ADVISOR: Frédéric Rondeau

THESIS DESCRIPTION: This thesis explores the relationship between ideas, attitudes and sentiments found in popular French music of the 1960s and those that would later become important during the May 1968 protests in France.
Nicholas Fried
Animal and Veterinary Science — Pre-Veterinary
Millerstown, Pennsylvania
Greenwood High School
THESIS: Development of a Novel qPCR Protocol for Improved Borrelia Burgdorferi Detection in Mammal Tissue Samples
ADVISOR: James A. Weber
THESIS DESCRIPTION: This thesis resulted in the development of a novel quantitative polymerase chain reaction protocol for improved replication and detection of Borrelia burgdorferi (bacterial agent of Lyme disease) DNA in mammal tissue samples. The addition of small amounts of bovine serum albumin proved effective despite unknown inhibitors.

Joseph Garcia
Engineering Physics
Etna, Maine
Nokomis Regional High School
THESIS: Application of Parallel Computing to Optimize Studies of Critical Exponents in the 1-D Sznajd Model
ADVISOR: Susan McKay
THESIS DESCRIPTION: This thesis applies parallel computing techniques to simulate and characterize the Sznajd model, a one-dimensional voter-like model used to study consensus in systems where information flows outward from pairs of like-minded neighboring agents to their other neighbors. It also introduces a long-range interaction probability parameter to the systems and investigates its impact on system consensus.

Erik Gerson
Biochemistry
Melrose, Massachusetts
Melrose High School
THESIS: How Does 2,4-Dinitrophenol Compare to Triclosan as a Mitochondrial Uncoupler?
ADVISOR: Julie Gosse
THESIS DESCRIPTION: Triclosan is an antibacterial agent that is present in many household products. Recently triclosan was found to also be a mitochondrial uncoupler. The purpose of this project was to compare the efficacy of 2, 4-dinitrophenol, a known mitochondrial uncoupler, to triclosan.

Grace Gould
Chemistry
Waterville, Maine
Waterville Senior High School
THESIS: Synthesis of Ferrocene-Oxadiazole Complexes and a Determination of Their LogD Values
ADVISOR: Alice Bruce
THESIS DESCRIPTION: This thesis describes attempts at the synthesis of one or more ferrocene-oxadiazole complexes which are water-soluble. Both ferrocene and oxadiazoles demonstrate an interesting array of anticancer and antimicrobial properties, and designing a molecule that is adequately soluble in human blood is the logical first step towards determining the overall medicinal properties of these molecules.

Elizabeth Grant
Chemistry
South Portland, Maine
South Portland High School
THESIS: Quantification of the Cyanogenic Glycosides (R)-Prunasin and (S)-Sambunigrin in the Sambucus L. (Elderberry)
ADVISORS: Barbara Cole; Angela Myracle
THESIS DESCRIPTION: This thesis contributed to the toxicology information on Maine elderberries by quantifying their prunasin and sambunigrin using HPLC-UV. These compounds release HCN, a toxin, when ingested and can cause symptoms such as dizziness, fatigue, nausea, mental confusion, and even death.

Oleg Gross
Biology
Scarborough, Maine
Scarborough High School
THESIS: Interaction of Shading and Cytokinins in the Sun-Shade Foliage Adaptation Mechanism
ADVISOR: Michael E. Day
THESIS DESCRIPTION: Plants adapt to the specific conditions of their environment as they grow and develop. This study examines how cytokinin hormones and sunlight (or lack thereof) interact to influence the development of leaves in high and low light environments.
**Morgan Gustin**
Animal and Veterinary Sciences  
Merrill, Maine  
Southern Aroostook Community School  
**THESIS:** Efficacy of Maine Lobster Shell as Treatment for *Haemonchus Contortus* Parasitism in Sheep  
**ADVISORS:** James A. Weber; Robert C. Bayer  
**THESIS DESCRIPTION:** In this thesis, lobster shell (LS), a chitin-based material, was applied to the ova, L3 and L4 stages of larval maturation of the ruminant nematode *Haemonchus contortus* to assess nematicidal effects on the parasite. Results indicated that LS may be effective as a treatment to help decrease exposure of sheep to infective larvae on pasture.

**Mary Hamilton**
Studio Art  
Old Town, Maine  
Old Town High School  
**THESIS:** Direct Descendant, Documenting Disenrollment in The Penobscot Nation  
**ADVISOR:** Michael Grillo  
**THESIS DESCRIPTION:** This thesis is a short documentary that addresses the cultural repercussions that are currently emerging as important issues with a Native American Tribe that disenrolls its members at a blood quantum of less than 1/4 Indian Blood. The film follows a personal journey as the author discusses her own experience of growing up in the Marsh Island and Indian Island area, as the first generation in her paternal lineage to be considered “Non-Native” by the Penobscot Nation.

**Grace Kiffney**
International Affairs; Anthropology  
Portland, Maine  
Deering High School  
**THESIS:** A Comparison of the Experiences of Economic Adaptation and Integration for Refugees and Asylum Seekers in Maine  
**ADVISOR:** Robert Glover  
**THESIS DESCRIPTION:** This thesis compared how refugee or asylum seeker immigration status affected how newcomers adapted to life in Maine. While the discourse surrounding refugees and asylum seekers often focuses on a lack of resources to share with non-U.S. citizens, this thesis explores how refugees and asylum seekers also used social capital within their communities to support themselves.

**Meghan Labbe**
Psychology  
Cumberland, Maine  
Greely High School  
**THESIS:** Personality Traits of Travel and Cultural Awareness  
**ADVISOR:** Michael Robbins  
**THESIS DESCRIPTION:** This thesis explored the relationship between 5 key personality traits — openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism with individuals’ desire to travel, as well as travel experience with levels of cultural awareness within college students.

**Neal Harrison-Billiat**
Electrical Engineering Technology  
Appleton, Maine  
Camden Hills Regional High School  
**THESIS:** Campus Electrical Map: Financial Repercussions of Failures  
**ADVISOR:** Paul Villeneuve  
**THESIS DESCRIPTION:** This thesis is a case study, centered around finding the costs of electrical outages from a student cost perspective of three main building classifications: Academic, Dining and Dormitory. The thesis goes on to consider the sustainability future of the campus, and the potential need for a more robust grid to support potential changes coming in the near future.

**Addison LaBonte**
Mathematics  
York, Maine  
York High School  
**THESIS:** The Mathematics Behind Sudoku and How to Create Magic Squares  
**ADVISOR:** Benjamin Weiss  
**THESIS DESCRIPTION:** This thesis contains answers to some common questions about Sudoku puzzles such as the minimum number of starting clues needed to produce a unique solution and how to solve Sudoku via graph coloring. The paper also talks about how Sudoku relates to multi-magic squares and an algorithm for how to produce them.
Cain Landry
Music
Saco, Maine
Thornton Academy
THESIS: For beste of bon and blod: Three Medieval English Lyrics Composed for A Cappella SATB Choir
ADVISOR: Beth Wiemann
THESIS DESCRIPTION: This thesis is a choral composition written for advanced or professional chamber choir, using three separate lyrics in Middle English as a text. Together, the three lyrics form a cohesive narrative of Christ's crucifixion through the resurrection. The piece was performed by Euphony, Orono’s chamber choir.

Sophia Lataille
Secondary Education; French
Hampden, Maine
Hampden Academy
THESIS: A Study of Arabic-Speaking English Language Learner’s Spoken Comprehensibility
ADVISORS: Jane Smith; Chris Mares
THESIS DESCRIPTION: This thesis studied the factors that most affected the spoken comprehensibility of Arabic-speaking English language learners. Interviews with four Arabic-speaking English language learners were analyzed by the principal investigator, as well as 15 people whose first language is English. The goal of this analysis was to identify the key factors that most affected the spoken comprehensibility of the language learners.

Katherine Lees
Psychology
Saco, Maine
Thornton Academy
THESIS: Prosociality: The Effects of Religion and the Government
ADVISOR: Jordan LaBouff
THESIS DESCRIPTION: Past research indicates that an individual's intention to help others can be promoted by various institutions in our society, such as government, religious institutions, and nonprofit organizations. This thesis focuses on actual prosocial actions, not just intentions, and how those actions are affected by religion, civic duty, and personality traits.

Noelle Leon-Palmer
Biology
Ajax, Ontario, Canada
Pickering High School
THESIS: The Physiology of Love
ADVISOR: Kristy Townsend
THESIS DESCRIPTION: This thesis explores the physiology, endocrinology and neurobiology of love. The thesis is formatted in a short story with science laced within- the goal being to make it accessible to non-scientists and scientists alike.

Renee Levasseur
English; Studio Art
Plymouth, Maine
Nokomis High School
THESIS: The Sapphire Mirror
ADVISOR: Gregory Howard
THESIS DESCRIPTION: This creative thesis is a young adult paranormal novel. It is an exploration of friendship and relationship conflicts among teens, as well as the concept of death and different perceptions of it; in particular, the idea of 'teenage invincibility' and how an adolescent might cope with it, both with positive and negative results.

Sara Lyons
Sustainable Agriculture
Auburn, Maine
Ellsworth High School
THESIS: Black Bear Food Guild: From Roots to Fruition
ADVISOR: Marianne Sarrantonio
THESIS DESCRIPTION: The University of Maine's Black Bear Food Guild (BBFG) is the only entirely student-run community supported agriculture in the U.S. The BBFG is a fundamental and essential asset to the University of Maine and greater Orono community for a variety of reasons. However, changes need to be made in order to ensure the program’s sustainability and continued success into the future.

honors.umaine.edu/minerva
THESIS: Increasing the Resolution of the Last Glacial Maximum Record in the Tropical Andes Using $^{10}$Be Cosmogenic Surface-Exposure Dating in the Cordillera Carabaya, Peru

ADVISORS: Gordon Bromley; Brenda Hall

THESIS DESCRIPTION: This thesis involves dating when glaciers met their maximum extent in the tropical Andes in the last glacial cycle. This includes measuring the abundance of an element ($^{10}$Be) in quartz. $^{10}$Be is produced from interactions with cosmic rays. We can use the amount of $^{10}$Be in quartz to achieve an exposure age when these boulders were deposited by glaciers.

THESIS: Preservice Teacher Self-Efficacy for Teaching Mathematics

ADVISOR: Sid Mitchell

THESIS DESCRIPTION: This thesis aimed to find out whether or not the University of Maine’s College of Education and Human Development’s teacher education program was doing enough to help elementary education majors feel confident in their abilities to teach math in the K–8 grade levels.

THESIS: Analyzing Student Opt-out of Standardized Testing in Maine

ADVISOR: Sid Mitchell

THESIS DESCRIPTION: Under current educational policy in the U.S., standardized assessment is a required element of K–12 education in order for schools to receive federal funding. However, in recent years families in several states, including Maine, began opting their students out of standardized testing. This study aimed to discover any possible trends associated with opting out, such as socioeconomic status or student achievement.

THESIS: Electronic Music Improvisor

ADVISOR: Jon Ippolito

THESIS DESCRIPTION: This thesis is designed primarily as a tool for DJs, letting them improvise songs from scratch during a live show. It is a musical instrument that splits control of the music between a human performer and a computer. The human triggers notes, but the computer decides the pitch of each note.

THESIS: The Role and Rhetoric of Interest Groups in Obergefell v. Hodges’ Amicus Briefs

ADVISORS: Mark Brewer; Nathan Stormer

THESIS DESCRIPTION: This thesis explores the expression of polarization surrounding the most recent same-sex marriage case in the Supreme Court, Obergefell v. Hodges. 28 amicus briefs, submitted from interested groups and concerned individuals in support of either the petitioners or the respondents, were analyzed for the major points of concurrence and disagreement.
Erika Morin
Mechanical Engineering
Fairfield, Maine
Lawrence High School
THESIS: Acquisition and Spectral Analysis of Acoustical Data from a Mobile Platform
ADVISOR: Michael Peterson
THESIS DESCRIPTION: This thesis is a system to be used to help patrol the border. Acoustical data was stored on a micro SD card. The data was then loaded into a computer program that processed the data and provided graphs of the frequencies. These graphs could then be studied to find the spectrums of each frequency.

Sarah Mullis
Sociology
Corinna, Maine
Nokomis Regional High School
THESIS: Alleviating Social Isolation and Food Security Through Community Gardening: How the Orono Community Garden Impacts Seniors
ADVISORS: Melissa Ladenheim; Mark Haggerty
THESIS DESCRIPTION: This thesis focused on the Orono Community Garden, a volunteer-based garden in Orono that donates all of it's produce to seniors living in subsidized housing in Orono. The project incorporated participant observation, written surveys, and personal interviews to assess seniors perceptions of the garden program.

Amber Murray
Human Nutrition and Dietetics
Dillon, Montana
Foxcroft Academy
THESIS: Associations Between Self-Selected Body Size Figures and Physical Activity in Young Adult College Students
ADVISOR: Adrienne White
THESIS DESCRIPTION: This thesis compared self-selected body size to levels of physical activity to see if poor body image was a barrier to physical activity. The thesis included associations between what participants picked for their own body size and what they picked as healthy, overweight, and obese. The findings suggest that we may change what we think others look like to satisfy our own opinion of what we ourselves look like.

Emma Oppewall
Anthropology
South West Harbor, Maine
MDI High School
THESIS: Gender and the Reuse Economy of Maine; Exploring Possible Correlations?
ADVISOR: Cindy Isenhour
THESIS DESCRIPTION: This thesis will examine the relationship between gender and motivation for participation in Maine’s reuse economy with the ultimate goal of taking the beginning steps required to understand one of the many intersectional motivational factors that drive Maine’s people to participate in reuse.

Margaret Pasquarella
Zoology
New Fairfield, Connecticut
New Fairfield High School
THESIS: Exploring the Mechanisms Involved in Paxillin Amelioration of Muscular Dystrophy in Zebrafish
ADVISOR: Clarissa Henry
THESIS DESCRIPTION: Studies have shown that paxillin is capable of alleviating symptoms of muscular dystrophy in zebrafish. This thesis explores the necessity of the different domains of the paxillin gene to try and determine the mechanism paxillin is involved in. This was done by overexpressing paxillin with different domains inactivated in zebrafish with muscular dystrophy to see if dystrophy was still alleviated.

John Peters
Philosophy
Lewiston, Maine
Lewiston High School
THESIS: The Ecology of Self
ADVISOR: Nico Jenkins
THESIS DESCRIPTION: This thesis attempts to close the gap between humans and nature. Through an exploration into our sense of self and the inner workings of our brains, this thesis shows that while we heavily influence the world around us it also becomes a part of who we are.

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Elizabeth Pflugradt
Molecular and Cellular Biology
New Gloucester, Maine
Gray-New Gloucester High School

**THESIS:** Preliminary Analysis of β-methylamino-L-alanine interactions with Cu/Zn Superoxide Dismutase in Amyotrophic Lateral Sclerosis Zebrafish Models

**ADVISOR:** Roger Sher

**THESIS DESCRIPTION:** Current Amyotrophic Lateral Sclerosis (ALS) studies show it's primarily triggered by environmental neurotoxins such as β-methylamino-L-alanine (BMAA). Familial ALS cases also exist, 20% of them resulting from mutations in the gene for copper-zinc superoxide dismutase (SOD1), an enzyme that breaks down free radicals.

Bryanna Plummer
Psychology
Bridgton, Maine
Lake Region High School

**THESIS:** The Association Between Reflective Ruminaton and Related Constructs

**ADVISOR:** Emily A. P. Haigh

**THESIS DESCRIPTION:** Reflection is considered to be a subtype of ruminaton that may be adaptive. Individuals who reflect may try to understand the reasons for their moods. This thesis examined the relationship between reflection and related constructs, like depression and mindfulness in order to clarify previous mixed findings. The results show that reflection is still not well-understood and should be examined further.

Catherine Pouliot
Animal and Veterinary Science
South Berwick, Maine
Marshwood High School

**THESIS:** The Effect of Management Strategies on *Haemonchus contortus* Infections of Sheep and Goats on Intensively Grazed Pasture

**ADVISOR:** James Weber

**THESIS DESCRIPTION:** This thesis determined how the management strategies used by producers on sheep and goat farms in Maine, New Hampshire and Vermont could affect the fecal egg counts of a parasite, *Haemonchus contortus*, in their animals. *Haemonchus contortus* is a roundworm that can cause anemia, hypoproteinemia, and death in small ruminants.

Abigail Pratico
Political Science
Falmouth, Maine
Falmouth High School

**THESIS:** Personality and Traditional Participation in Young Adults, 18–24

**ADVISOR:** Mark Brewer

**THESIS DESCRIPTION:** This thesis evaluates whether young adults with certain personalities and attitudinal traits are more likely to participate traditionally in politics by joining political parties or voting in an election. This thesis shows that young adults with a negative world view and low self-confidence are less likely to participate than any other age group.

Robert Potts
History; Political Science
North Yarmouth, Maine
Greely High School

**THESIS:** The Triad of Nationality Revisited: The Orthodox Church and the State in Post-Soviet Russia

**ADVISOR:** James Warhola

**THESIS DESCRIPTION:** This thesis examined the relationship between the Russian Orthodox Church and the Russian government which developed in the aftermath of the collapse of the Soviet Union. Ultimately, it focused on two main flash points of the 1991 KGB coup attempt and Russia’s 1997 religious freedom law, with consideration given to the legacies of both events.

Seth Raymond
Electrical Engineering; Computer Engineering
Bucksport, Maine
Bucksport High School

**THESIS:** Wireless Power and Data Transfer Using Inductively Resonant Coils

**ADVISOR:** Nuri Emanetoglu

**THESIS DESCRIPTION:** Inductors have been recently used to transfer power (wirelessly) over short distances. The thesis investigates the feasibility of wireless device charging in comparison with current charging methods. The power transmission can be altered to represent data, giving rise to transmission protocols such as near-field communication (NFC). A deeper look into these protocols is presented.
Margaret Ross
Psychology
Hampden, Maine
Hampden Academy
THESIS: The Long-Term Impact of Chemotherapy on Neurogenesis and the Potential Use of Fluoxetine as Preventative Treatment
ADVISOR: Thane Fremouw
THESIS DESCRIPTION: This thesis investigated the underlying mechanisms that contribute to cognitive impairment experienced by cancer survivors who undergo chemotherapy treatment. Impairments range from mild to severe, impacting working memory, attention and processing speed.

Megan Rounds
Communication Sciences and Disorders; Child Development and Family Relations
Kennebunk, Maine
Kennebunk High School
THESIS: Pulling Strings: The Effects of Puppets on the Language and Literacy Development of a Preschool Classroom
ADVISORS: Margo Brown; Julie DellaMattera
THESIS DESCRIPTION: This thesis looks into a dramatic play area in a preschool classroom, puppetry. Children were observed playing with puppets once per month for three months and then compared to national averages in language and early literacy development. They had significant development in their language and literacy skills compared to typical preschool growth.

Camerin Seigars
Mechanical Engineering
Gardiner, Maine
Gardiner Area High School
THESIS: Modeling a Continuously Variable Transmission and Clutching of a Snowmobile
ADVISOR: Michael Peterson
THESIS DESCRIPTION: This goal of this thesis was to state the purpose of how continuously variable transmissions (CVTs) work on a snowmobile and to create a framework of equations and an MSC Adams model to be able to tune the CVT in a more efficient and cost-effective manner.

Abigail Sennick
Economics
New Sharon, Maine
Mt. Blue High School
THESIS: Economic Impact Analysis of Climate Change Effects on the Maine Lobster Industry
ADVISOR: Keith Evans
THESIS DESCRIPTION: The purpose of this economic impact analysis is to link climate change effects to the economic impacts felt in Maine’s largest commercial fishing industry. Projecting the future of the lobster industry, which is near and dear to many Maine families, will help give an idea of the state’s economic future if climate change continues.

Ilana Silver
Psychology
Bangor, Maine
Bangor High School
THESIS: The Effects of Equine-Assisted Activities on the Attachment Security of Abused Women
ADVISORS: Cynthia Erdley; Clare Thomas
THESIS DESCRIPTION: This project invited women who had previously experienced domestic abuse to visit the J.F. Witter Teaching and Research Center for a brief encounter with a horse. The women, all lacking in horse experience, were able to meet, brush, lead, and say goodbye to one horse. Their attachment security was assessed before and after the session.
Connor Smart
Accounting; Finance
Lincoln, Maine
Mattanawcook Academy
THESIS: A Conceptual Value Function to Explain the Benefits Derived from Users of Free-to-Play Video Games
ADVISOR: Matthew Skaves
THESIS DESCRIPTION: Video games are quickly becoming one of the most dominant entertainment mediums of the modern era. However, little has been written about this industry, or the consumers within it. This thesis determines who makes up the consumer-segments for video games, and what kind of value various consumer segments are looking for in a video game product.

Matthew Talbot
Bioengineering
East Machias, Maine
Washington Academy
THESIS: Optimization and Synthesis of Silver Nanoparticles Embedded Within a Porous Substrate for Raman Spectroscopy
ADVISOR: Michael Mason
THESIS DESCRIPTION: This research focused upon aspects of the production of water quality test strips for the detection of pollutants by Raman spectroscopy. This involved the synthesis of silver nanoparticles and their incorporation into a cellulose nanofiber substrate. A number of parameters affecting particle size and dispersion were investigated.

Monique Theriault
Microbiology
Howland, Maine
Penobscot Valley High School
THESIS: Innate Immune Recognition of Candida Albicans
ADVISOR: Robert Wheeler
THESIS DESCRIPTION: Candida albicans is an opportunistic pathogen that is the third leading cause of hospital acquired infections. Candida causes a variety of diseases in immunocompromised hosts (patients who are undergoing chemotherapy, organ transplantation, or have AIDS). The goal of this thesis research was to understand how this pathogen is recognized in zebrafish, a widely used model for studying C. albicans infection.

Tamara Thomson
Mechanical Engineering
Waite, Maine
Woodland High School
THESIS: Dynamic Modeling of a Catamaran Using a Lagrangian Approach
ADVISOR: Michael Peterson
THESIS DESCRIPTION: This thesis derived a system of equations using Lagrangian mechanics to model the linear and rotational motion of a catamaran. This mathematical model can be used to help program the catamaran to navigate and avoid objects autonomously.

Spencer Traxler
Bioengineering
Newburyport, Massachusetts
Newburyport High School
THESIS: The Role of SHIP1 in the Innate Immune System During an Influenza A Infection
ADVISOR: Carol Kim
THESIS DESCRIPTION: The goal of this thesis was to find novel therapeutics for the flu. The gene studied, SHIP1, plays an important role in the immune system and preliminary data has shown that its use could be beneficial to future flu therapies.

Isabelle Vachon
Social Work
Ellsworth, Maine
Ellsworth High School
THESIS: Oral Histories of Women in the Maine Lobster Industry
ADVISOR: Robert Bayer
THESIS DESCRIPTION: This thesis is a short documentary chronicling the stories of four women who make their living in the unique world of Maine lobster fishing. It gives insight into the personal lives of a minority population in a male-dominated field, the social politics that accompany that, and their individual stories of struggle and triumph. It also offers a view into some of the complicated island subcultures off the coast of Maine.
**Steven Valentino**  
Molecular and Cellular Biology  
Wells, Maine  
Wells High School  
**THESIS:** Towards a Molecular Method for the Detection of Leaf Rust in Lowbush Blueberry  
**ADVISOR:** Seanna Annis  
**THESIS DESCRIPTION:** *T. minima*, or leaf rust, is a fungal pathogen that infects lowbush blueberry, an important crop to Maine. Currently, fungicides are ineffective as it’s hard to detect leaf rust on visualization alone, leading to inaccurate timing of sprays. This research found DNA regions that are unique to *T. minima* and could be used as targets for molecular methods of detection.

**Katrina Ventura**  
Biology  
Falmouth, Maine  
Falmouth High School  
**THESIS:** Anthocyanins Alter Endothelial Cell Dynamics  
**ADVISOR:** Sharon Ashworth  
**THESIS DESCRIPTION:** Anthocyanins are phenolic compounds found in blueberries. They’ve been shown to improve endothelial cell function in the heart, reducing the risk of cardiovascular disease. This study used bovine aortic endothelial cells to determine cytoskeletal differences in cells treated with anthocyanins, and the specific molecular pathways that anthocyanins target.

**Emily Whitaker**  
Biochemistry  
Westport Island, Maine  
Lincoln Academy  
**THESIS:** Characterization of the Mycobacteriophage Ukulele Integration System; Identification of Integration Site attP and the Role of the Integrase in Lysogeny Regulation  
**ADVISOR:** Sally Molloy  
**THESIS DESCRIPTION:** This study looks at the temperate mycobacteriophage Ukulele. Mycobacteriophage (phage) are diverse viruses that infect mycobacteria. Temperate phage encode an integrase that facilitates site-specific integration of the phage genome into the bacterial genome forming a lysogen.

**Hillary Warner-Evans**  
Anthropology  
West Bath, Maine  
Mt. Ararat High School  
**THESIS:** Themes of Identity and Power in Contemporary Topical Song  
**ADVISOR:** Sarah Harlan-Haughey  
**THESIS DESCRIPTION:** This thesis uses three case studies, songs written about Maine’s “North Pond Hermit,” those written in response to recent decisions about water metering in Ireland, and new versions of an old labor song, “Which Side Are You On” to look at the often reciprocal role the concepts of identity and power play in the content and context of the songs.

**Elizabeth Wood**  
Biology  
Catlett, Virginia  
Liberty High School  
**THESIS:** Novel Role for a Neurotrophic Factor in Adipose Tissue  
**ADVISOR:** Kristy Townsend  
**THESIS DESCRIPTION:** This thesis investigated the role that a neurotrophic factor plays in the health of adipose (fat) tissue and metabolic health in general. Multiple histological stains were used to observe changes in the tissue, including amount of innervation, presence of adipose browning, cell size, and relative levels of proteins of interest.
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